

LED



# SemiStat® Status Indicator

Models SCB and SCC

## OEM STATUS INDICATOR

- Available in 24VAC/VDC
- Tri or quad-color models
- Available in chrome or white finish
- 100,000 hour vibration-resistant LED lamps
- Integrated sounder
- Surface mount
- Indoor use only

Federal Signal's SemiStat® Status Indicator is designed to meet the needs of the OEM market, the SemiStat is an attractive, easy-to-install and economical status indicator.

SemiStats operate on 24VAC or 24VDC. The snap fit housing cover and a standard terminal block make the installation and wiring of the SemiStat a quick job.

The attractive and durable ABS housing is available with either a white or chrome finish to complement the machine or location of installation.

SemiStat LED light modules utilize extremely bright light emitting diodes for the greatest attention-getting affect. Tri-Color SemiStat features Red, Amber and Green light modules and Quad Color SemiStat features Red, Amber, Green and Blue light modules. Clear LED light modules are available separately. The sequence of the LED light modules can be easily changed to suit the application – just pop off the housing cover, disconnect the modules and then reconnect in the desired order. Light modules can be set to flashing or steady burning mode.

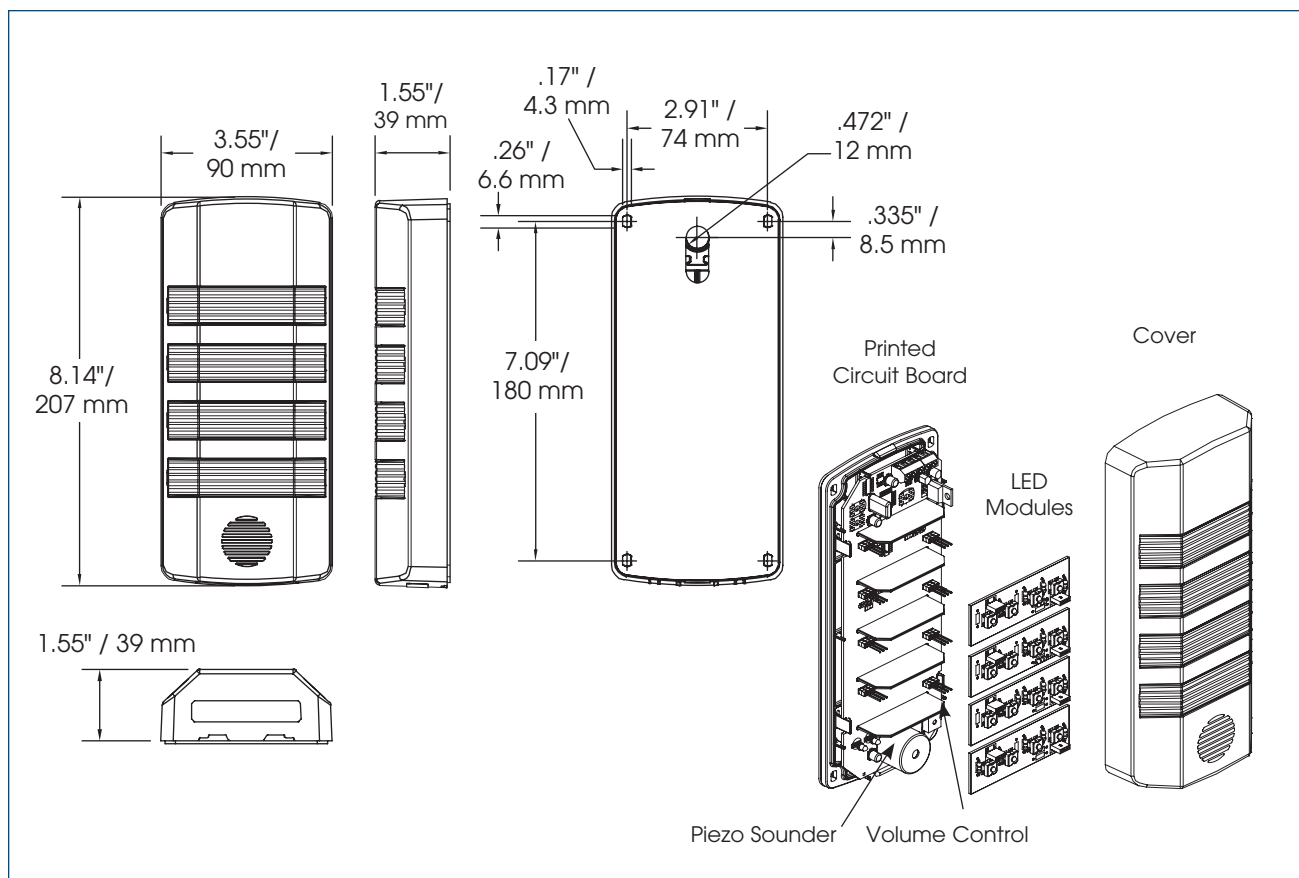
For further utility, each SemiStat is equipped with an integrated piezo sounder. SemiStat sounders produce 60dB at ten feet. A selection of two beep patterns is offered.

Model	Description	Voltage	Operating Current	Decibels @ 10'	1m	Mount
<b>SCB-024TC</b>	Tri-color, white finish	24VAC/VDC	150 mA*	60	70	Surface
<b>SCB-024QC</b>	Quad-color, white finish	24VAC/VDC	175 mA*	60	70	Surface
<b>SCC-024TC</b>	Tri-color, chrome finish	24VAC/VDC	150 mA*	60	70	Surface
<b>SCC-024QC</b>	Quad-color, chrome finish	24VAC/VDC	175 mA*	60	70	Surface

\* Amp draw measured with all colors and sounder activated simultaneously.



## SEMISTAT® STATUS INDICATOR (SCB/SCC)



### SPECIFICATIONS

Lamp Life:	100,000 Hours	100,000 Hours
Light Source:	LED Lamp	LED Lamp
Operating Temperature:	32°F to 140°F	0°C to 60°C
Net Weight:	0.7 lbs.	0.32 kg
Shipping Weight:	1.0 lbs.	0.45 kg
Height:	8.14"	207.0 mm
Width:	3.55"	90.0 mm
Depth:	1.55"	39.0 mm

### HOW TO ORDER

- Specify finish  
White/Beige (B) or Chrome (C)
- Specify and tri- or quad color
- Please refer to Model Number Index  
SCB/SCC beginning on page 368

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
PCB Assembly	K2001958A	LED Module, Red	K2001925A
LED Module, Amber	K2001925A-01	LED Module, Green	K2001925A-03
LED Module, Blue	K2001925A-02	LED Module, Clear	K2001925A-04





LED

# UniStat™ Status Indicator

Model USI and USIS

## MULTICOLOR LED TYPE 4X STATUS INDICATOR

- Available in 24DC and 120VAC
- Tri or quad-color models
- 100,000 hour, vibration-resistant LED light source
- Models available with built-in sounder
- Surface mount and integrated 3/4-inch NPT pipe mount
- PLC compatible
- Indoor use only
- Type 4X, IP66 enclosure
- Type 1 with sounder
- UL and cUL Listed

The UniStat™ is an LED (light emitting diode) based, multi-color, single-high status indicator.

Using the latest die level LED technology, this unique status indicator can produce three colors (Amber, Green and Red) or four colors (Amber, Blue, Green and Red) from a single light source.

Ideal for OEM applications, the UniStat is compact, attractive, and easy to install. The low profile UniStat produces as much light as its much larger competitors.

The UniStat offers a choice of four integrated flash patterns – steady burn, slow flash, strobe flash and SimuStrobe™. SimuStrobe simulates the attention-getting flash rate of a strobe light but with a much more color-rich output. The user can choose a total of 12 possible flash/color combinations in the tri-color models and 16 in the quad-color models.

When the application calls for an increased sense of urgency, specify the model USIS with an integrated piezo sounder. Producing 60dB at 10 feet, the USIS is the ideal attention getter in process control applications.

Like the multi-level, multi-color, multi-lamp Microstat™, the UniStat is rated Type 4X (models with sounder are rated Type 1). Each model arrives pre-assembled and ready to surface mount or 3/4-inch NPT pipe mount. Options for the UniStat include pipe mount extensions (4", 16", & 32"), a wall mount bracket and a tulip mount base (see page 16).

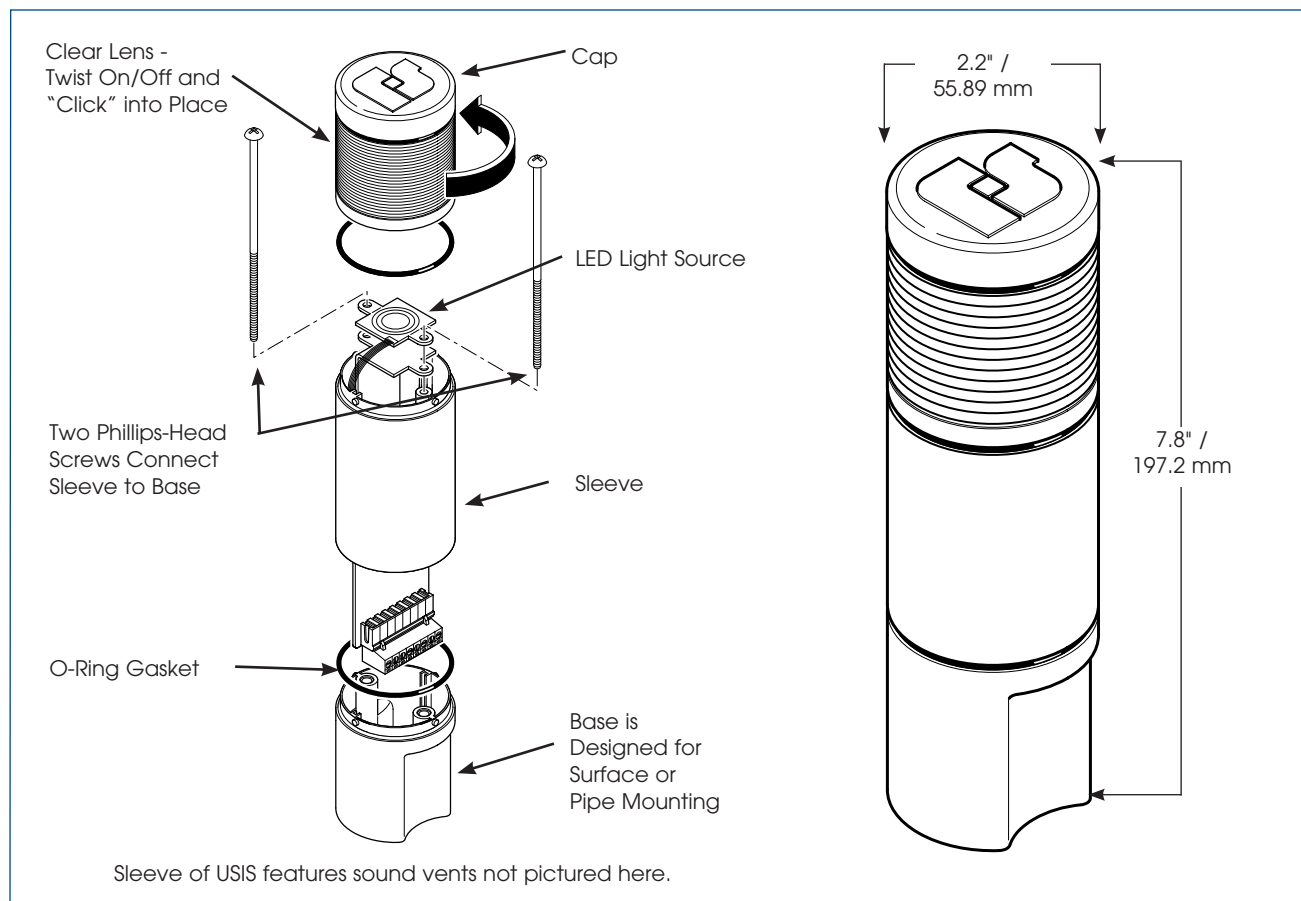
Model	Description	Voltage	Operating Current	Mount
USI/USIS-024TC <sup>1</sup>	Tri-color	24DC	100 mA <sup>2</sup>	3/4" NPT Pipe or Surface
USI/USIS-120TC <sup>1</sup>	Tri-color	120VAC	60 mA <sup>2</sup>	3/4" NPT or Surface
USI/USIS-024QC <sup>1</sup>	Quad-color	24DC	100 mA <sup>2</sup>	3/4" NPT or Surface
USI/USIS-120QC <sup>1</sup>	Quad-color	120VAC	60 mA <sup>2</sup>	3/4" NPT or Surface

<sup>1</sup> USIS indicates built-in Sounder

<sup>2</sup> Sounder draws 100 mA on all models



## UNISTAT™ WITH LED LAMP (USI/USIS)



### SPECIFICATIONS

Lamp Life:	100,000 Hours	100,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	32°F to 104°F	0°C to 40°C
Net Weight:	0.4 lbs.	0.18 kg
Shipping Weight:	0.7 lbs.	0.32 kg
Height:	7.8"	197.2 mm
Diameter:	2.2"	55.9 mm

### HOW TO ORDER

- Specify model number, voltage and tri-color or quad-color
- Specify optional sounder
- Specify Accessories from page 16
- Please refer to Model Number Index USI/USIS beginning on page 368

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Lens, Clear	K8447042A-02
Cap, Tan	K8447044A
O-Ring	K8447054B
LED Array, Tri-color	K2005328A
LED Array, Quad-color	K2005328A-01
PCB, USI 24VDC	K2005347A
PCB, USI 120VAC	K2005347A-02
PCB, USIS 24VDC	K2005347A-01
PCB, USIS 120VAC	K2005347A-03



LED

# Hazardous Location UniStat™ Status Indicator

Model USIX

## MULTICOLOR LED STATUS INDICATOR FOR HAZARDOUS AREAS

- Available in 24DC and 120VAC
- Tri or quad-color models
- 100,000 hour, vibration-resistant LED light source
- Surface mount
- PLC compatible
- Type 4X, IP66 enclosure
- UL and cUL Listed

The UniStat™ is an LED (light emitting diode) based, multi-color, single-high status indicator.

Using the latest die level LED technology, this unique status indicator can produce three colors (Amber, Green and Red) or four colors (Amber, Blue, Green and Red) from a single light source.

The UniStat offers a choice of four integrated flash patterns – steady burn, slow flash, strobe flash and SimuStrobe™. SimuStrobe simulates the attention-getting flash rate of a strobe light but with a much more color-rich output. The user can choose a total of 12 possible flash/color combinations in the tri-color models and 16 in the quad-color models.

The USIX is protected in a durable polycarbonate housing utilizing 4<sup>3</sup>/<sub>4</sub>-inch knockout conduit openings in the surface mount base. The outer glass globe is protected by a polycarbonate dome guard (included). Each model arrives pre-assembled and ready to surface mount.

The USIX has been designed for use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; and Class III. The USIX is suitable for use in Type 4X applications.

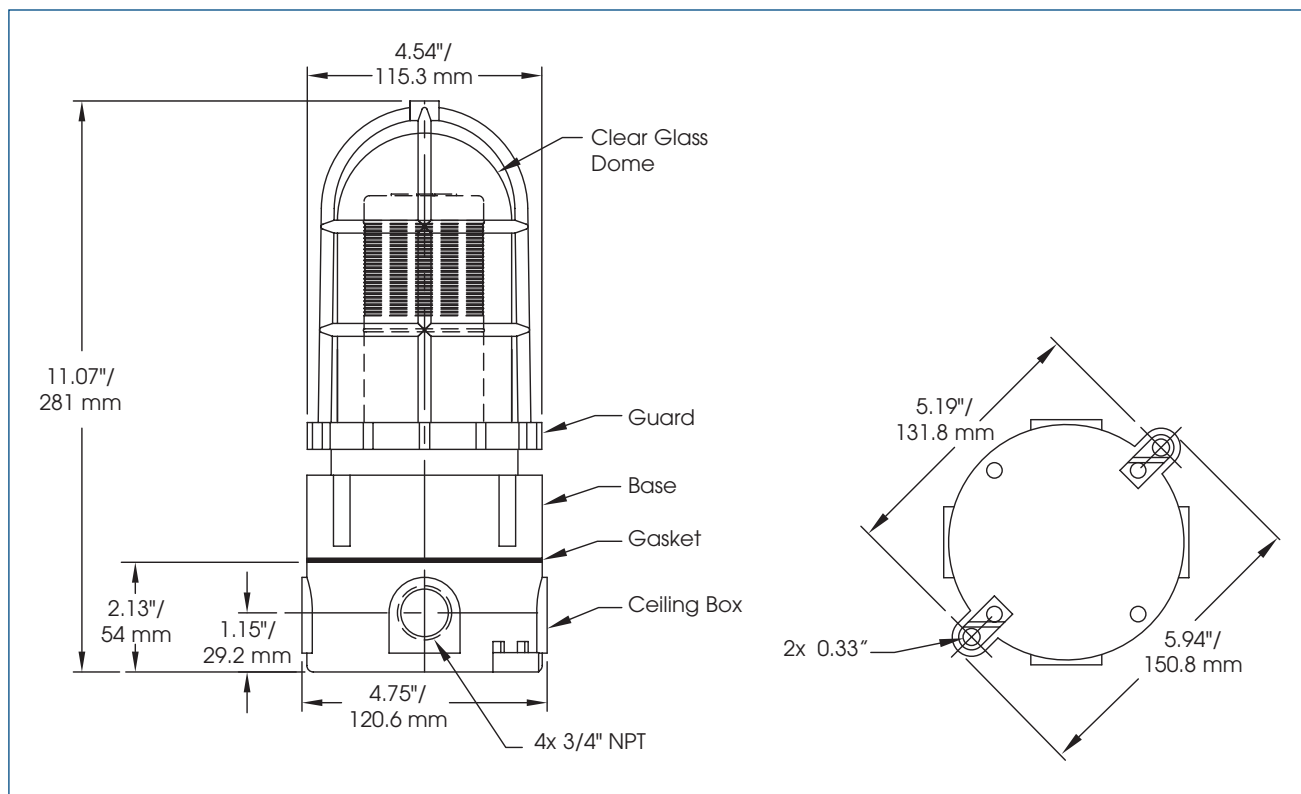
Model	Description	Voltage	Operating Current	Mount
<b>USIX-024TC</b>	Tri-color	24DC	0.087 amps	Surface
<b>USIX-120TC</b>	Tri-color	120VAC	0.058 amps	Surface
<b>USIX-024QC</b>	Quad-color	24DC	0.087 amps	Surface
<b>USIX-120QC</b>	Quad-color	120VAC	0.058 amps	Surface

## Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C		
Hazardous Location	40°C	66°C
<b>Class I, Div 2, Groups A, B, C, D</b>	T6/85°	T5/100°
<b>Class II, Div 2, Groups F, G</b>	T6/85°	T6/85°
<b>Class III</b>	T6/85°	T6/85°



## HAZARDOUS LOCATION UNISTAT™ (USIX)



### SPECIFICATIONS

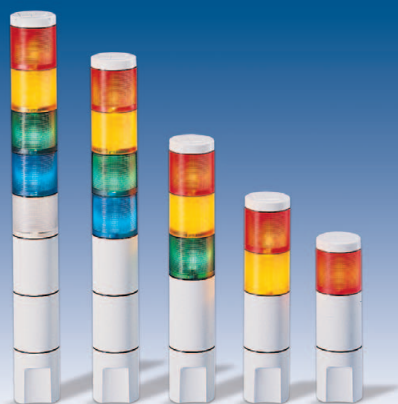
Lamp Life:	100,000 Hours	100,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	2.49 lbs.	1.13 kg
Shipping Weight:	2.53 lbs.	1.15 kg
Height:	11.07"	28.11 cm
Diameter:	4.75"	12.06 cm

### HOW TO ORDER

- Specify model number, voltage and tri-color or quad-color
- Please refer to Model Number Index USIX beginning on page 368

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Lens, Clear	K8447042A-02
Cap, Clear	K8447044A-02
O-Ring	K8447054B
PCB, USIX 24VAC/DC	K2005347A
PCB, USIX 120VAC	K2005347A-02
LED Array, TC	K2005328A
LED Array, QC	K2005328A-01



## COMPACT STATUS INDICATOR IN WATER-TIGHT ENCLOSURE

- MSL1, MSL2, MSL3 available in 24VAC/DC, 120VAC and 240VAC; MSL4 and MSL5 available in 24VAC/DC and 120VAC
- Factory assembled
- Small footprint — only 2.2" diameter (55.9 mm)
- Vibration-resistant 5.6W wedge lamp
- Surface mount and integrated  $\frac{3}{4}$ -inch NPT pipe mount
- Type 4X enclosure<sup>1</sup>
- Indoor Use only
- Optional Sound Module, LED Lamp, Pipe Mount Base and Flasher
- PLC Compatible
- UL and cUL Listed

# MicroStat® Status Indicator

## Model MSL

The Federal Signal MicroStat® is a compact, Type 4X status indicator, Type 1 with optional sounder. Ideal for OEM applications, the MicroStat comes pre-assembled as 1-, 2-, 3-, 4-, or 5-high light units. The user selects combinations from five colors; Amber, Blue, Clear, Green and Red. O-rings between each segment provide a water-tight and dust-tight seal. The MSL1, MSL2, MSL3 are available in 24VAC/DC, 120VAC and 240VAC; the MSL4 and MSL5 are available in 24VAC/DC and 120VAC. The base of each light can be surface or pipe mounted ( $\frac{3}{4}$ -inch NPT).

The lenses lock together and snap apart with a simple twisting motion, allowing for easy lamp changes and quick lens resequencing. A rugged vibration-resistant, thick-filament wedge lamp fills each lens with light, providing excellent optical performance.

Wire connections are made through a 2-piece terminal block. The MicroStat is designed to work with PLC outputs including "Triacs".

An optional 100,000-hour LED light source is available in the five colors. This lamp, made of surface mounted LEDs, plugs directly into the same socket as the standard lamp.

An optional sound module can be installed in the top position of any MicroStat. The Sound Module Kit (MSS) consists of a slotted grille and board-mounted piezoelectric horn. The sounder plugs directly into the wedge socket. Sounder is optional as one of the 5-units.

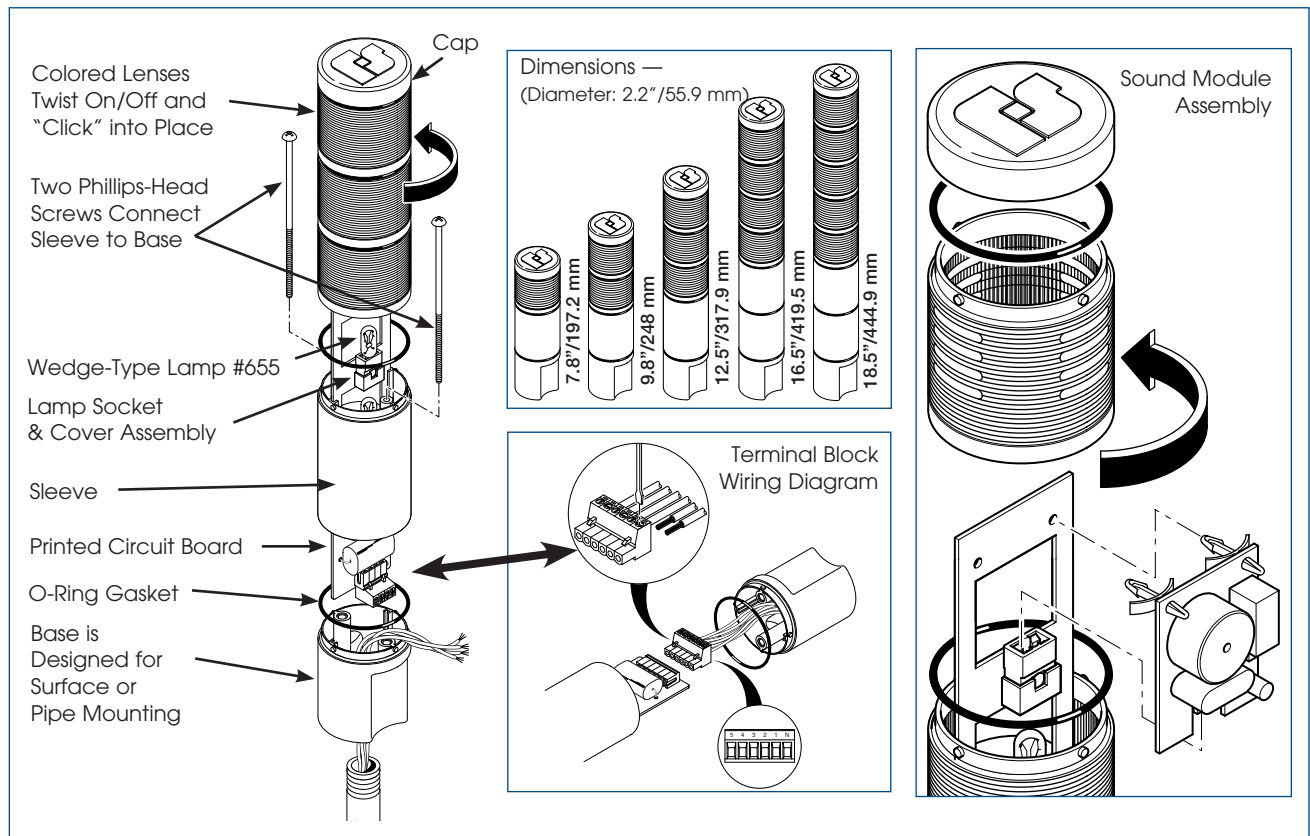
A pipe mount base, pipes and flashers are also available. See page 16 for a complete list of accessories.

Model	Description	Voltage	Operating Current
<b>MSL1</b>	One status segment	24VAC/DC, 120VAC, 240VAC	0.2 amps
<b>MSL2</b>	Two status segments	24VAC/DC, 120VAC, 240VAC	0.4 amps
<b>MSL3</b>	Three status segments	24VAC/DC, 120VAC, 240VAC	0.6 amps
<b>MSL4</b>	Four status segments	24VAC/DC, 120VAC	0.8 amps
<b>MSL5</b>	Five status segments	24VAC/DC, 120VAC	1.0 amps



<sup>1</sup> MSL with optional sounder rated NEMA Type 1.

## MICROSTAT® STATUS INDICATOR (MSL)



### SPECIFICATIONS

Lamp Life:	7,000 Hours	7,000 Hours
Light Source:	Wedge-Type Lamp #655	
Operating Temperature:	32°F to 104°F	0°C to 40°C
Net Weight:		
1-high	0.4 lbs.	0.18 kg
2-high	0.55 lbs.	0.25 kg
3-high	0.65 lbs.	0.29 kg
4-high	0.85 lbs.	0.39 kg
5-high	1.0 lbs.	0.45 kg
Ship. Weight:		
1-high	0.7 lbs.	0.32 kg
2-high	0.85 lbs.	0.39 kg
3-high	1.3 lbs.	0.59 kg
4-high	1.5 lbs.	0.68 kg
5-high	1.65 lbs.	0.75 kg

### HOW TO ORDER

- Determine number of status segments required; one for each light segment and one additional for a sounder
- Specify Model MSL1, MSL2, MSL3, MSL4, MSL5.
- Specify colors for MSL1 and MSL2 (MSL3, MSL4 and MSL5 are packaged with one each of the colored lenses)
- Specify voltage
- Specify Accessories (see page 16)
- Please refer to Model Number Index MSL beginning on page 368

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Lens, Amber	K8447042A	Terminal Block (3 position)	K140373A-03
Lens, Clear	K8447042A-02	Terminal Block (4 position)	K140373A-04
Lens, Red	K8447042A-04	Terminal Block (6 position)	K140373A-06
Lens, Blue	K8447042A-01	Light Barrier	K8447061A
Lens, Green	K8447042A-03	Cap	K8447044A
Wedge Lamp (#655), .28V	K8107185A	O-Ring	K8447054B
MSLED Lamp	Please refer to page 16		





## NOTIFY STATUS CHANGES WITH COLOR AND SOUND

- Available in 24VDC, 120VAC and 240VAC
- Five lens colors
- Surface mount and integrated  $\frac{3}{4}$ -inch NPT pipe mount
- Indoor use only
- Type 1 enclosure
- Optional sounder available
- UL and cUL Listed and CSA Certified

# Litestak® Status Indicator

## Models LSL

Federal Signal's Litestak® status indicator is a column of signal lights that indicate the status of a process or machine. The units may include up to five Light Modules (Model LSL) available in Amber, Blue, Clear, Green and Red; or four light modules plus an optional Sound Module (Models LSS or LSH) to create a dual purpose audible/visual status indicator. The Sound Module always occupies the top position of a Litestak unit.

Litestak's lensing provides a 360° visual signal. Individual light modules may be set to either flash or burn steadily. The flasher is included with the 120VAC LSB model and sold separately for other voltages.

Each light module consists of two impact-resistant polycarbonate lens halves that snap apart to provide easy maintenance and interchangeability of colors.

Litestak units can be installed on a  $\frac{3}{4}$ " NPT pipe mount or surface mounted with the Model LSB Base. If low profile surface mounting is required, Model LSBs is available.

Litestak is UL and cUL Listed, and CSA Certified for indoor use.

Multiple lens colors can communicate machine shutdown, shortage of materials, supervisor attention, etc. Ideal applications for the Litestak include assembly lines, instrument panels, workcells, etc. Federal Signal's Litestak is an economical device for increasing productivity in any manufacturing environment.

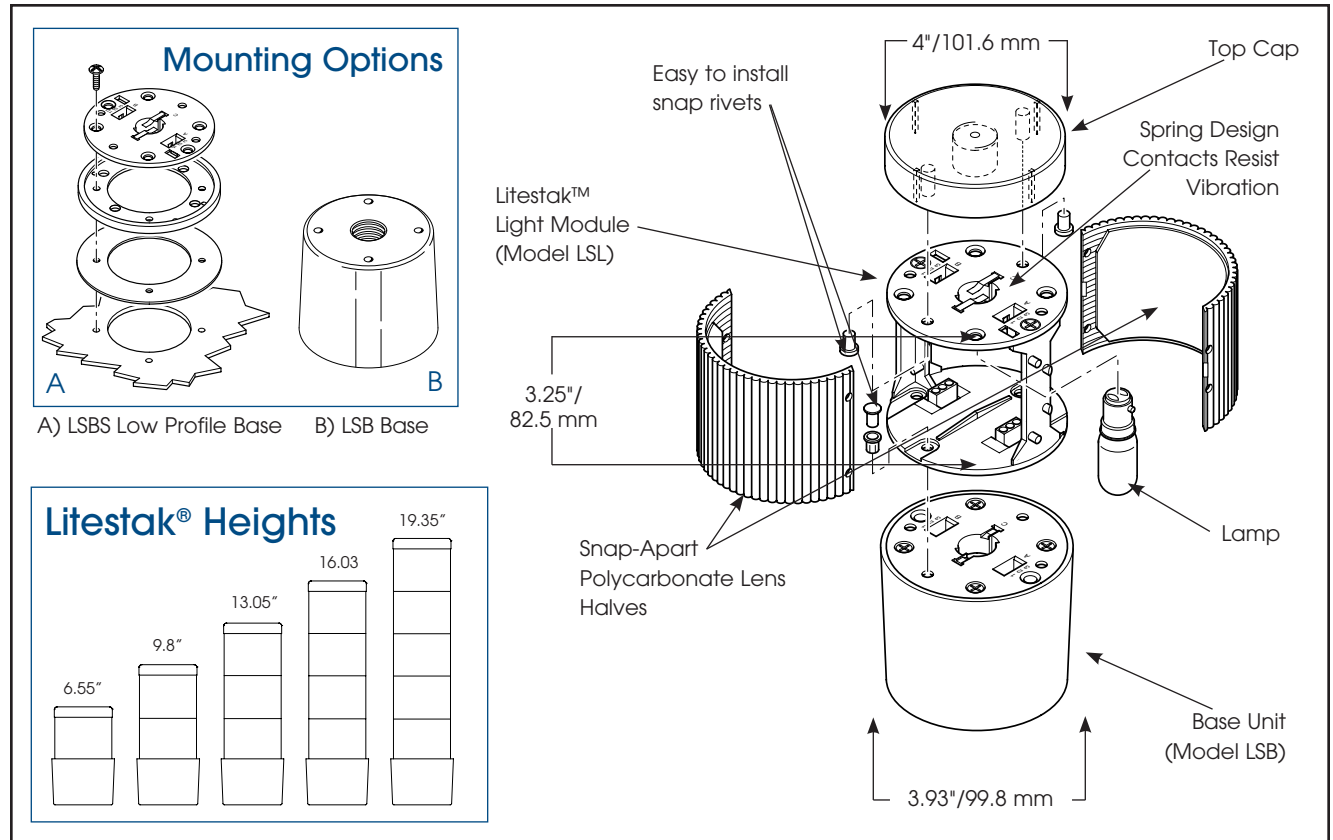
Model	Voltage	Operating Current	Flash Rate/Minute	Candela	Mount
LSB-024-120 <sup>1</sup>	24-240VAC/DC	N/A	N/A	N/A	$\frac{3}{4}$ " NPT Pipe/Surface
LSB-120 <sup>1</sup>	120VAC 50/60Hz	N/A	70	N/A	$\frac{3}{4}$ " NPT Pipe/Surface
LSBS <sup>1</sup>	24-240VAC/DC	N/A	N/A	N/A	Low Profile Surface
LSL-024 <sup>2</sup>	24VDC	0.76 amps	N/A	123	N/A
LSL-120 <sup>2</sup>	120VAC 50/60Hz	0.13 amps	N/A	123	N/A
LSL-240 <sup>2</sup>	240VAC 50/60Hz	0.11 amps	N/A	123	N/A

<sup>1</sup> Cap kit included.

<sup>2</sup> Model LSL includes lens, lamp and light module.



## LITESTAK® LIGHT (LSL) AND BASE (LSB)



### SPECIFICATIONS

Lamp Life:		7,000 Hours	7,000 Hours
Light Source:		Incandescent	Incandescent
Operating Temperature:		0°F to 120°F	-18°C to 49°C
Net Weight:	LSL	0.5 lbs.	0.2 kg
	LSB	0.75 lbs.	0.3 kg
Shipping Weight:	LSL	0.8 lbs.	0.4 kg
	LSB	1.0 lbs.	0.4 kg
Height:	LSL	3.25"	82.5 mm
	LSB	3.3"	82.8 mm
Diameter:	LSL	3.93"	99.8 mm
	LSB	3.93"	99.8 mm

### HOW TO ORDER

- Light modules and base modules are ordered separately
- Specify model and voltage of base unit
- Specify model, voltage and colors of light modules
- Specify optional sound module (page 24 & 26)
- Please refer to Model Number Index LSL/LSB beginning on page 368

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Lens Kit, Amber	K8447014A-02	Lamp, 24VDC	K8107210A
Lens Kit, Blue	K8447014A-04	Lamp, 120VAC	K8107194A
Lens Kit, Clear	K8447014A-05	Lamp, 240VAC	K8107A149A
Lens Kit, Green	K8447014A-01	Flasher, 24VDC	K8285237A
Lens Kit, Red	K8447014A-03	Flasher, 120VAC	K8285239A
Lens Kit, Blackout (1/2 lens)	K8447014A-06	Cap Kit-Snap Rivets included	K8447009E
Snap Rivets, 25 pieces	K7099A112A-01		



# Litestak® Status Indicator with LED Lamp

Model LSLD

## LONG LIFE LIGHT SOURCE

- Available in 24VDC and 120VAC
- Five lens colors
- 100,000 hour, vibration-resistant LED lamp
- Surface mount and integrated 3/4-inch NPT pipe mount
- Indoor use only
- Type 1 enclosure
- UL and cUL Listed and CSA Certified

Federal Signal's Litestak® status indicators are vertical columns of light that indicate the status of a machine's operating process in a full 360° radius.

The Litestak Model LSLD modular indicator light system allows the user to combine up to five interchangeable lamp units with a base power unit. Modules are sold separately for a truly customized indicator.

Light modules come complete with a 100,000-hour LED lamp; LED light output coordinates with the module's impact-resistant polycarbonate lensing. LED lamps consume less power, operate at a lower temperature, and are remarkably resistant to vibration — which makes them perfect for use in heavy-duty, high vibration applications.

LED lamps are available in five colors — Amber, Blue, Clear, Green or Red. The standard double-contact bayonet base retrofits into any Federal Signal Litestak unit to replace original incandescent lamps.

An optional Sound Module (Models LSS or LSH) can be added to the top of the Litestak column to create a dual purpose audible/visual status indicating signal. The LSS sound module allows the user to select from 32 tones via a simple dip switch panel. In applications where a single loud tone is all that is necessary, the LSH piezo-electric horn is a perfect audible addition.

Litestak is a versatile system that allows the user to select either steady burn or flash. A flasher is included on the 120VAC LSB unit only but can be purchased separately for 24VDC models. The Litestak base unit can be either surface mount, or 3/4" NPT pipe mount.

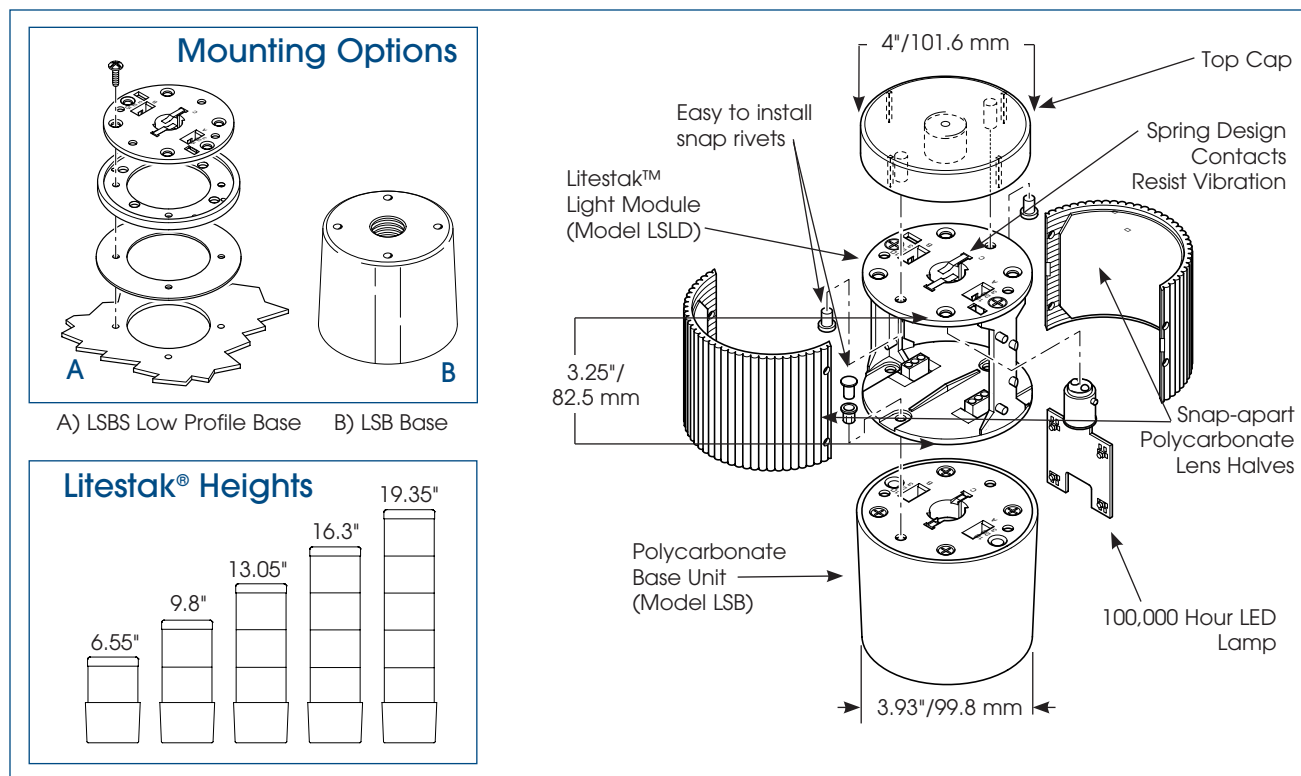
Model	Voltage	Operating Current	Mount
LSB-024-240 <sup>1</sup>	24-240VAC/DC	N/A	3/4" NPT Pipe/Surface
LSB-120 <sup>1</sup>	120VAC 50/60Hz	N/A	3/4" NPT Pipe/Surface
LSBS <sup>1</sup>	24-240VAC/DC	N/A	Surface
LSLD-024 <sup>2</sup>	24VDC	80 mA	N/A
LSLD-120 <sup>2</sup>	120VAC 50/60Hz	45 mA	N/A

<sup>1</sup> Cap kit included.

<sup>2</sup> Includes lens, lamp and light module.



## LITESTAK® WITH LED LAMP (LSLD)



### SPECIFICATIONS

Lamp Life:	100,000 Hours	100,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	0°F to 120°F	-18°C to 49°C
Net Weight, LSLD:	0.45 lbs.	0.2 kg
Shipping Weight, LSLD:	0.7 lbs.	0.32 kg
LSLD Height:	3.25"	82.5 mm
LSB Height:	3.3"	83.8 mm
LSLD Diameter:	3.93"	99.82 mm
LSB Diameter:	3.93"	99.82 mm

### HOW TO ORDER

- Light modules and base modules are ordered separately
- Specify model, voltage and color of light modules
- Specify model and voltage of base unit
- Specify optional sound module (page 24 & 26)
- Please refer to Model Number Index LSLD beginning on page 369

### REPLACEMENT PARTS

<i><b>Description</b></i>	<i><b>Part Number</b></i>	<i><b>Description</b></i>	<i><b>Part Number</b></i>
Lens Kit, Amber	K8447014A-02	LED Lamp, Amber, 24VDC	LED-024ASB
Lens Kit, Blue	K8447014A-04	LED Lamp, Blue, 24VDC	LED-024BSB
Lens Kit, Clear	K8447014A-05	LED Lamp, Clear, 24VDC	LED-024CSB
Lens Kit, Green	K8447014A-01	LED Lamp, Green, 24VDC	LED-024GSB
Lens Kit, Red	K8447014A-03	LED Lamp, Red, 24VDC	LED-024RSB
Lens Kit, Black-out (1/2 lens)	K8447014A-06	LED Lamp, Amber, 120VAC	LED-120ASB
Flasher, 24VDC	K8285237A	LED Lamp, Blue, 120VAC	LED-120BSB
Flasher, 120VAC	K8285239A	LED Lamp, Clear, 120VAC	LED-120CSB
Cap Kit-Snap Rivets included	K8447009E	LED Lamp, Green, 120VAC	LED-120GSB
Snap Rivets, 25 pieces	K7099A112A-01	LED Lamp, Red, 120VAC	LED-120RSB



LED

# LiteStak®

## Homeland Security Status Indicator

Model LSHLS

### NOTIFY HOMELAND SECURITY STATUS CHANGES

- Available in 24VDC and 120VAC
- Five lens colors
- Surface mount and integrated 3/4-inch NPT pipe mount
- Available with LED or Incandescent Lamps
- Indoor use only
- Type 1 enclosure
- Made in the USA
- UL and cUL Listed and CSA Certified

Federal Signal, the world's largest prime manufacturer of audible and visual signaling for industry has introduced a Homeland Security Advisory Status Indicator. The LiteStak® is an effective tool for communicating the Threat Conditions as outlined in the Homeland Security Presidential Directive; Low (Green), Guarded (Blue), Elevated (Yellow), High (Orange) and Severe (Red). The LiteStak is suitable for use in industrial, commercial and municipal environments.

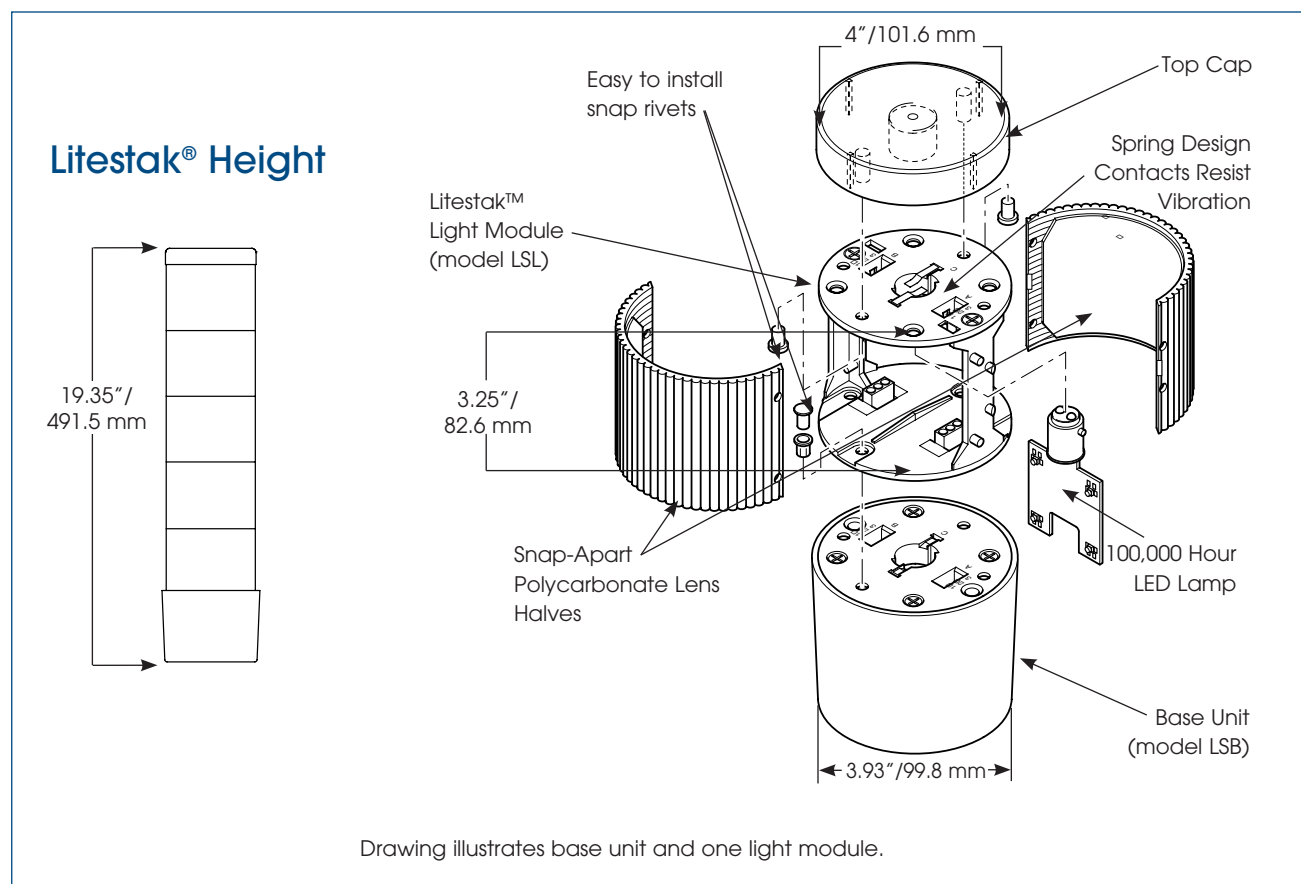
Each light module produces 360 degrees of light dispersion. Optical cross-hatching ensures a lens-filling distribution of light that is free of "hot spots". Each module of the LiteStak can be set up for either steady burning or flashing operation (with relays, flashers or PLCs). The lens of each module snaps on for quick and easy lamp maintenance.

Lamps choices include a rugged 25 watt incandescent bulb or a lifetime guaranteed 100,000 hour LED lamp. The LiteStak can be installed easily in a surface mount or a 3/4" NPT pipe mount configuration. The choice of operating voltages includes 24VDC and 120VAC for incandescent models and 120VAC for LED models.

Model	Voltage	Operating Current	Mount
LSHLS-024	24VDC	760 mA	Pipe/Surface
LSHLS-120	120VAC	230 mA	Pipe/Surface
LSHLS-LED-120	120VAC	40 mA	Pipe/Surface



## HOMELAND SECURITY STATUS INDICATOR (LSHLS)



### SPECIFICATIONS

Lamp Life, Incandescent:	7,000 Hours	7,000 Hours
Lamp Life, LED:	100,000 Hours	100,000 Hours
Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:	3.0 lbs.	1.4 kg
Shipping Weight:	4.8 lbs.	2.2 kg
Height:	19.35"	491.5 mm
Diameter:	3.93"	99.8mm

### HOW TO ORDER

- Specify model, voltage and lamp style (incandescent or LED)
- Please refer to Model Number Index LSL/LSB beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Lens Kit, Amber	K8447014A-02	Incandescent Lamp, 24VDC	K8107210A
Lens Kit, Blue	K8447014A-04	Incandescent Lamp, 120VAC	K8107194A
Lens Kit, Green	K8447014A-01	LED Lamp, Amber	LED-024ASB
Lens Kit, Orange	K8447014A-08	LED Lamp, Blue	LED-024BSB
Lens Kit, Red	K8447014A-03	LED Lamp, Green	LED-024GSB
Snap Rivets, 25 pieces	K7099A112A-01	LED Lamp, Orange	LED-024ASB
Cap Kit-Snap Rivets included	K8447009E	LED Lamp, Red	LED-024RSB





# Litestak® Sound Module

## Model LSS

### ADD SOUND TO A FEDERAL SIGNAL LITESTAK®

- Available in 24VDC and 120VAC
- Modular unit fits on top of any Litestak® configuration
- Select one of 18 tones
- Capable of outputs between 59-69dB @ 10' (69-79dB @ 1m)
- Indoor use only
- Type 1 enclosure
- UL Listed and CSA Certified

The Federal Signal Litestak® Sound Module is a microprocessor-based audible signaling device. The model LSS can be used as a stand-alone audible device or combined with the Federal Signal Litestak light modules to create an audible/visual signal.

The sound module contains a microprocessor-based tone generator and an integrated speaker which produces one of 18 tones. Select tones by setting five, 2-position DIP-switches. The sound module can work as a stand-alone audible signal when plugged into the Model LSBS Low Profile Surface Mount Base or Model LSB Pipe Mount Base.

The Model LSS can be combined with any Litestak light module configuration of up to four colors. Controlling the sound module is done via the wires normally used for the clear light module. The sound module always occupies the top module position in a Litestak tower.

Ideal applications for the LSS include environments where the ambient noise is not extreme – assembly lines, conveyor systems, automated lines, instrument panels and workshops.

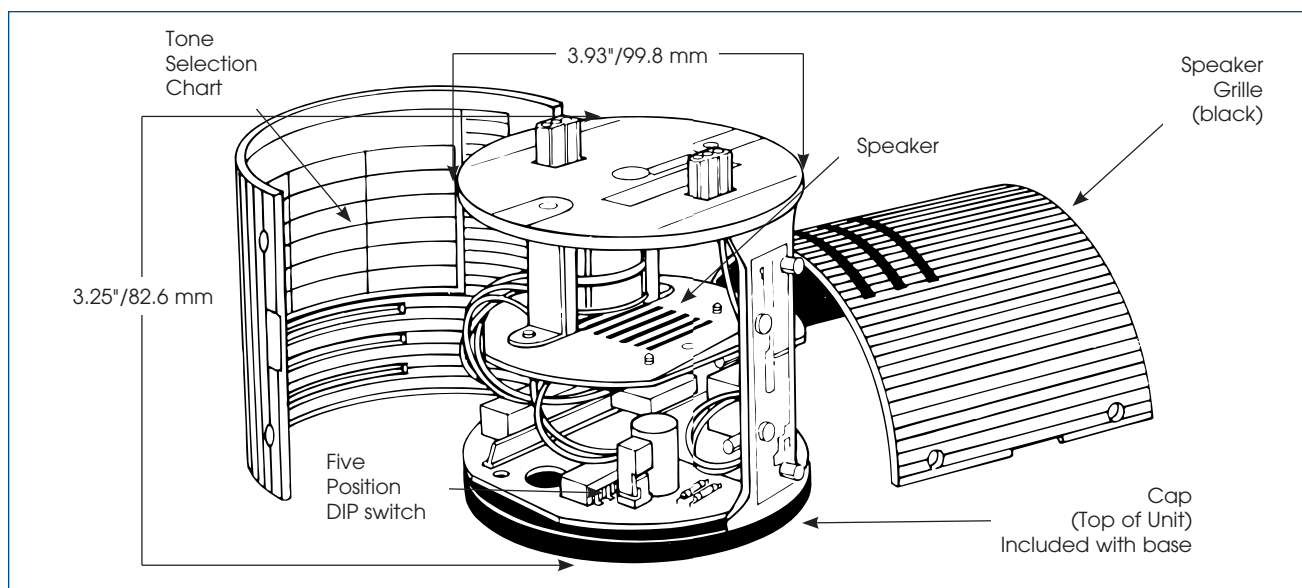
LSS is UL Listed and CSA Certified.

Federal Signal's Litestak Sound Module allows the user to add a distinctive audible signal to a Litestak Status Indicator.

Model	Voltage	Operating Current	dBa Output
LSS-024	24VDC	180 mA	See Page 25
LSS-120	120VAC	70 mA	



## LITESTAK® SOUND MODULE (LSS)



### AVAILABLE TONES

Model	Name	Description	Frequency	Rep. Rate	dBA @ 10'/1m
TM1	Wail	Conventional Siren	560-1055Hz	11 cycles/min.	68.8 / 78.8
TM2	Yelp	Rapid Siren	560-1055Hz	3.3 cycles/min.	67.6 / 77.6
TM3	Hi-Lo	Alternating High & Low	Low: 561Hz High: 760Hz	50 cycles/min.	68.3 / 78.3
TM4	Bell	Bell, struck rapidly	801Hz	50 cycles/min.	59.0 / 69.0
TM5	Yeow	Descending high to low, repeated	Low: 545Hz High: 1295Hz	36 cycles/min.	67.8 / 77.8
TM6	Horn	Steady Horn	470Hz	Continuous	61.0 / 71.0
TM7	Beep	Slow intermittent horn	470Hz	50 cycles/min.	59.6 / 69.6
TM8	Stutter	Rapid intermittent horn	470Hz	5 cycles/sec.	59.4 / 69.4
TM9	Slow Whoop	Slow ascending low to high, repeated	Low: 424Hz High: 1164Hz	15 cycles/min.	66.5 / 76.5
TM10	Gradual Horn	Steady horn, gradually increasing volume	514Hz	Continuous	62.3 / 72.3
TM11	Temp. Slow Whoop	NFPA <sup>1</sup> coded slow whoop	Low: 424Hz High: 774Hz	15 cycles/min.	65.2 / 75.2
TM12	Westminster Chime	Westminster Chime	Musical tone	1 cycle; 8 notes	63.4 / 73.4
TM13	Evac./Radiation	Amplitude modulated horn	479Hz	4.3 cycles/sec.	61.7 / 71.7
TM14	Air Horn	Steady horn	Low: 400Hz High: 800Hz	Continuous	66.2 / 76.2
TM15	Chime	Single strike chime	Musical tone	49 cycles/min.	60.6 / 70.6
TM16	Phaser	Rapid siren	600-1200Hz	15 cycles/sec.	63.7 / 73.7
TM17	Alternating Hi-Lo	Alternating High & Low	Low: 363Hz High: 518Hz	60 cycles/min.	63.8 / 73.8
TM18	Warble	Extremely rapid siren	560-1055Hz	63 cycles/sec.	67.1 / 77.1

### SPECIFICATIONS

Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:	24VDC 0.6 lbs.	0.3 kg
	120VAC 0.9 lbs.	0.4 kg
Shipping Weight:	24VDC 0.8 lbs.	0.4 kg
	120VAC 1.1 lbs.	0.5 kg
Height:	3.25"	82.6 mm
Diameter:	3.93"	99.8 mm

### HOW TO ORDER

- Specify model and voltage of sound module (base required, page 18)
- Please refer to Model Number Index LSS beginning on page 369

### REPLACEMENT PARTS

Description	Part Number
Grille Kit, Black	K8447014A-07
Snap Rivets, 25 pieces	K7099A112A-01



## A SINGLE-TONE HORN FOR LITESTAK® STATUS INDICATORS

- Available in 24VDC, 120VAC and 240VAC
- Adjustable volume
- Capable of producing 75-77dB @ 10' (85-87dB @ 1m)
- Indoor use only
- Type 1 enclosure
- UL Listed and CSA Certified

# Litestak® Piezoelectric Horn

## Model LSH

The Litestak® LSH Horn is a piezoelectric unit that employs a ceramic element which expands or bends when voltage is applied, generating a single tone. The Model LSH can be used as a stand-alone audible device (with the LSB pipe/surface mount base or LSBS surface mount base), or combined with the Federal Signal Litestak light modules to create a combination audible/visual signal.

The LSH Horn is a modular unit which mounts directly onto the top of any Litestak light or base (sound units must be positioned at the top module of the status indicator). A black speaker grille cover protects the horn. The volume can be adjusted by removing the grille covers and turning the volume control below the horn mechanism.

The 24VDC and 240VAC LSH units produce 75dB @ 10' (85dB @ 1m); the 120VAC unit produces 77dB @ 10' (87dB @ 1m). Litestak is UL Listed for indoor use and CSA Certified.

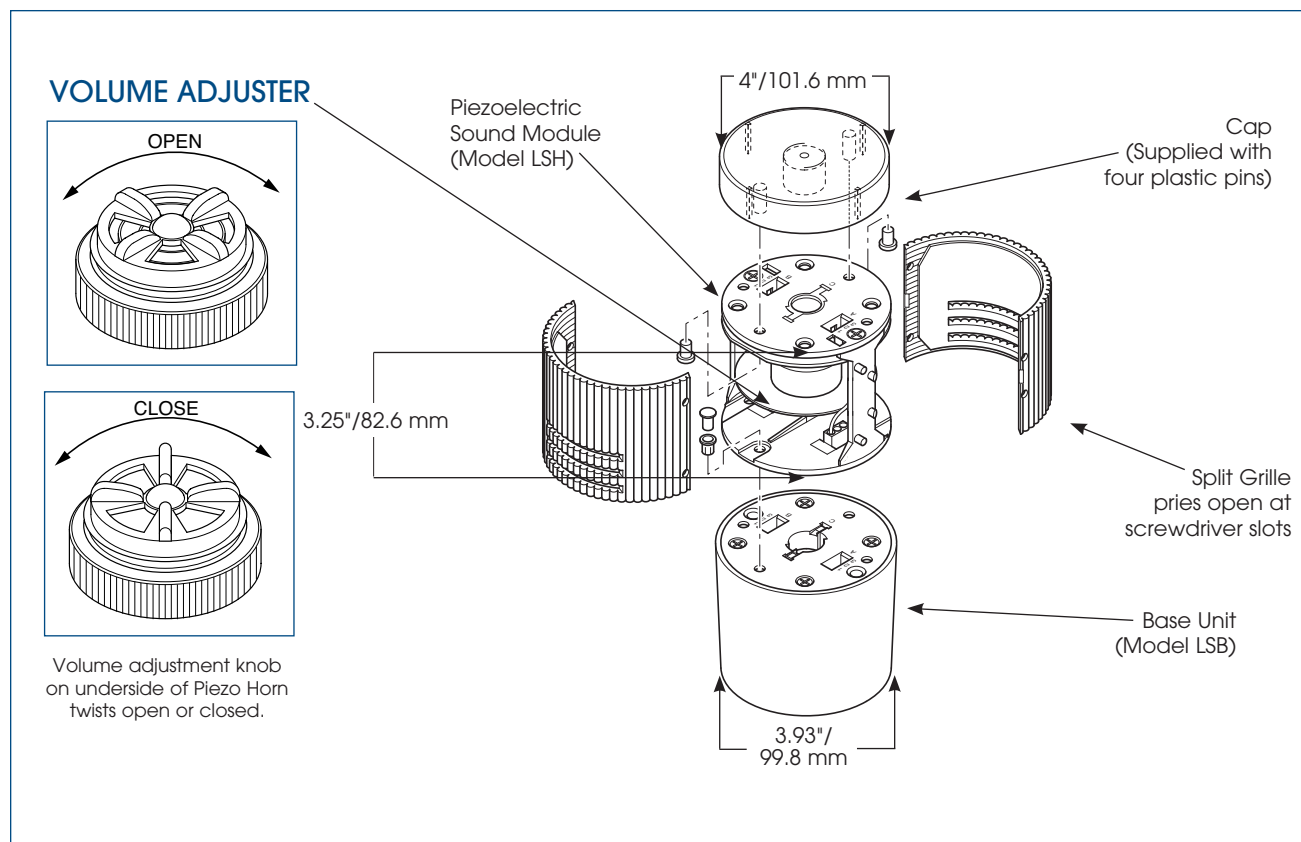
Ideal applications for Litestak audible/visual status indicators include assembly lines, conveyor systems, automated lines, instrument panels, workshops, etc.

Federal Signal's Piezoelectric Horn is an inexpensive way to add an audible signal to Litestak Status Indicators.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
LSH-024	24VDC	70 mA	75	85
LSH-120	120VAC	40 mA	77	87
LSH-240	240VAC	40 mA	75	85



## LITESTAK® PIEZOELECTRIC HORN (LSH)



### SPECIFICATIONS

Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:	0.45 lbs.	0.2 kg
Shipping Weight:	0.65 lbs.	0.3 kg
Height:	3.25"	82.6 mm
Diameter:	3.93"	99.8 mm

### HOW TO ORDER

- Specify model and voltage of sound module (base required, page 18)
- Please refer to Model Number Index LSH beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Grille Kit, Black	K8447014A-10
Piezo Horn, 24VDC	K8447040A
Piezo Horn, 120VAC	K8447040A-01
Piezo Horn, 240VAC	K8447040A-02



# FireBeam® Compact Vehicular Warning Light

Model FB3SM

## OUR BRIGHTEST VEHICULAR WARNING LIGHT!

- Available in 12VDC
- 68,000 candela output
- 55 watt Halogen lamp
- Dual Speed Motor for 95 or 175 FPM
- Five dome colors
- Low profile — only 3.8" high

Federal Signal's FireBeam® is a super-bright, compact vehicular warning light. This rotating 55 watt halogen light produces 68,000 candelas per flash.

Each lightweight unit features a polycarbonate base and snap-on dome. The light is easily and quickly serviced without the use of tools.

The jewel-shaped lens is available in five colors: Amber, Blue, Clear, Green, and Red. Each FireBeam comes with a black half-dome that snaps over the back of the unit and prevents back flash when used inside vehicles.

The FireBeam features a dual speed motor with a convenient slide switch that allows you to choose an operating speed of 95 or 175 flashes per minute.

Power is supplied to the FireBeam via a 10-foot coil cord with a cigarette lighter-type plug. The FireBeam operates on 12VDC.

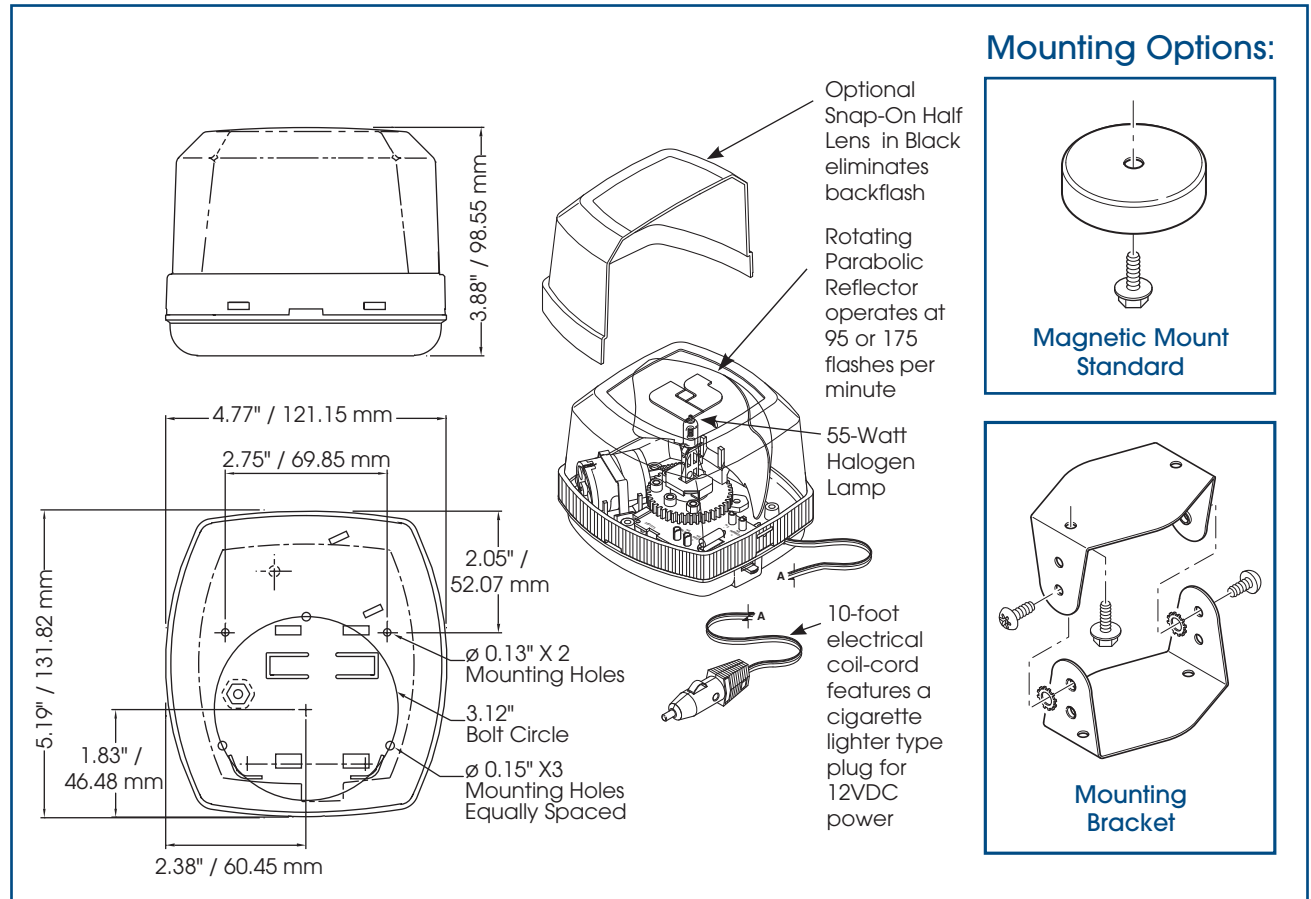
The FireBeam is supplied with both a magnetic mount for use outside the vehicle on the roof or hood and a swivel mount for permanent installation.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Output
FB3SM-*	12VDC	4.3 amps	95 or 175	68,000

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## FIREBEAM® COMPACT VEHICULAR WARNING LIGHT (FB3SM)



### SPECIFICATIONS

Lamp Life:	200 Hours	200 Hours
Light Source:	Halogen	Halogen
Net Weight:	1.8 lbs.	0.8 kg
Shipping Weight:	2.0 lbs.	0.9 kg
Height:	4.8"	12.0 cm
Width:	3.8"	9.5 cm
Depth:	5.1"	13.0 cm

### HOW TO ORDER

- Specify model and color
- Please refer to Model Number Index FB3SM beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550137A-02	55 Watt Halogen Lamp, 12VDC	K8440A265A-02
Dome, Blue	K8550137A-03	Motor for FB3SM	K8422B463B-02
Dome, Clear	K8550137A	Half Lens Cover, Black	K8550140A
Dome, Red	K8550137A-01	Cigarette Plug Cord	K8550318A
Dome, Green	K8550137A-04	Magnet Mount Assembly	K8550A012A





# Vitalite® Rotating Warning Light

Models 121A

## LIGHT DUTY VEHICULAR LIGHT

- Available in 24VDC
- Five dome colors
- Integrated pipe and surface mount
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

The Federal Signal Vitalite® Model 121A is compact, rotating light featuring a parabolic reflector that rotates around an incandescent lamp, providing 60 flashes per minute in all directions. Model available in five dome colors — Amber, Blue, Clear, Green and Red.

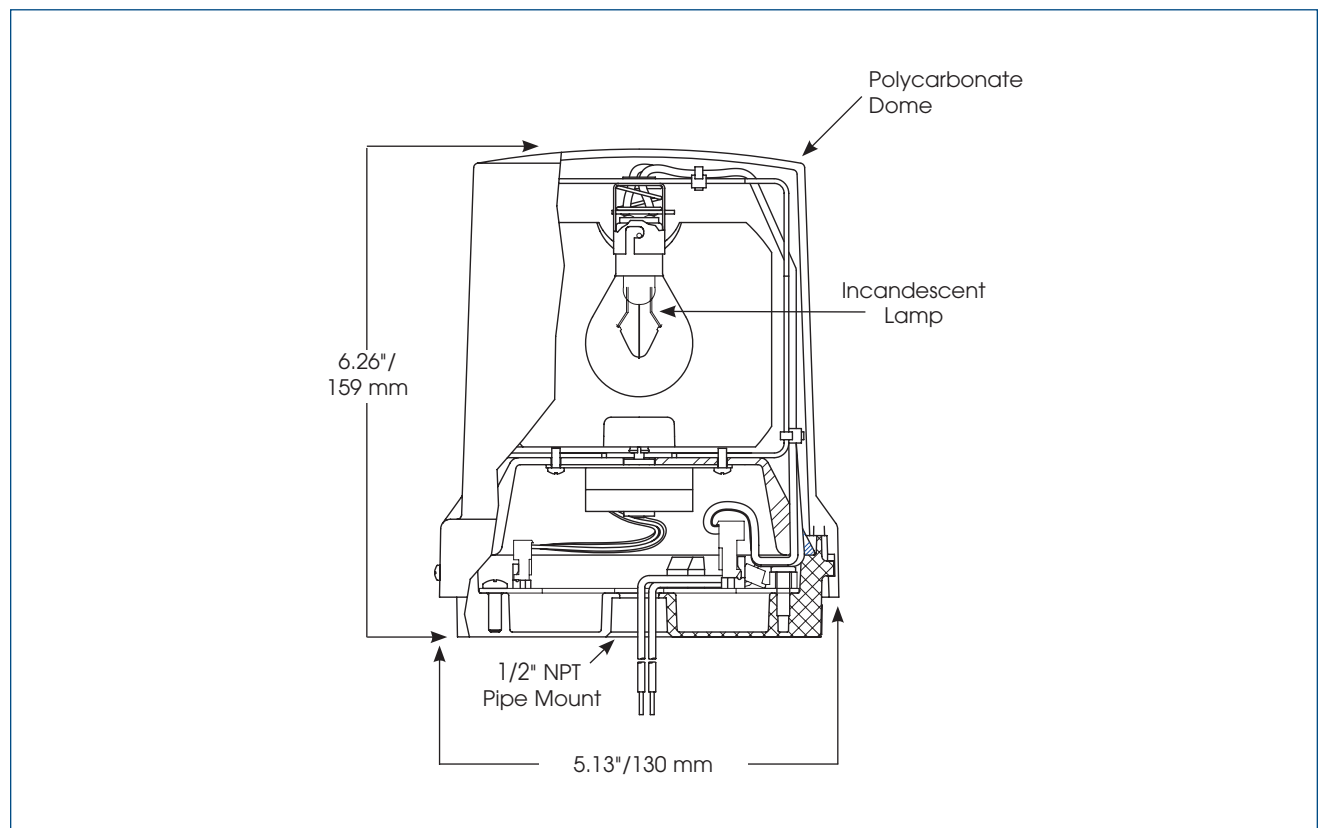
The 121A rotating light is designed for in-plant applications. This unit can be surface mounted or mounted on a 1/2" NPT pipe with the integrated pipe mount. The 121A is available in 24VDC. The enclosure is also rated Type 4X for a water tight and dust tight seal.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
121A-024 *	24VDC	1.3 amps	60	4,000	Pipe/Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## VITALITE® ROTATING WARNING LIGHT (121A)



### SPECIFICATIONS

Lamp Life:	300 Hours	300 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.8 lbs.	0.79 kg
Shipping Weight:	1.9 lbs.	0.86 kg
Height:	6.26"	159.0 mm
Diameter:	5.13"	130.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)
- Please refer to Model Number Index 121A beginning on page 369

### REPLACEMENT PARTS

<u>Description (Current Series)</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber, Series C	K8444357A-02	Dome, Red	K8444357A-03
Dome, Blue, Series C	K8444357A-01	Incandescent Lamp, 24VDC	K8107236A
Dome, Clear, Series C	K8444357A	Motor, Stepper	K8444382A
Dome, Green, Series C	K8444357A-04	PC Board Assembly	K2001927A
Dome, Magenta, Series C	K8444357A-05		

Series A & B Domes on page 33



# Vitalite® Rotating Warning Light

## Model 121S

### LIGHT DUTY WARNING LIGHT

- Available in 120VAC
- Five dome colors
- 40 watt incandescent lamp
- Integrated 1/2-inch NPT pipe mount and surface mount
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

Federal Signal's Model 121S is a compact, rotating warning light designed for in-plant use. It features a parabolic reflector which rotates around an incandescent lamp, providing 60 flashes per minute in all directions. The 121S Vitalite® is available in five dome colors (Amber, Blue, Clear, Green and Red). It is UL (Underwriters Laboratories) Listed, cUL Listed, and CSA Certified.

Federal Signal's 121S comes ready to mount on a 1/2-inch NPT pipe or surface mount. Optional brackets simplify installation on walls or in corners (see page 108). The enclosure is also rated Type 4X for a water tight and dust tight seal.

The lamp projects an intense, fixed beam onto a parabolic reflector which rotates 360°, producing 60 flashes per minute. The 121 features a twist and lock dome which allows for fast and easy access to inspect and change the lamp.

This light is particularly useful as a signaling or warning device in high ambient noise areas where it can supplement audible signaling devices. It is also effective alerting hazardous conditions or dangerous areas.

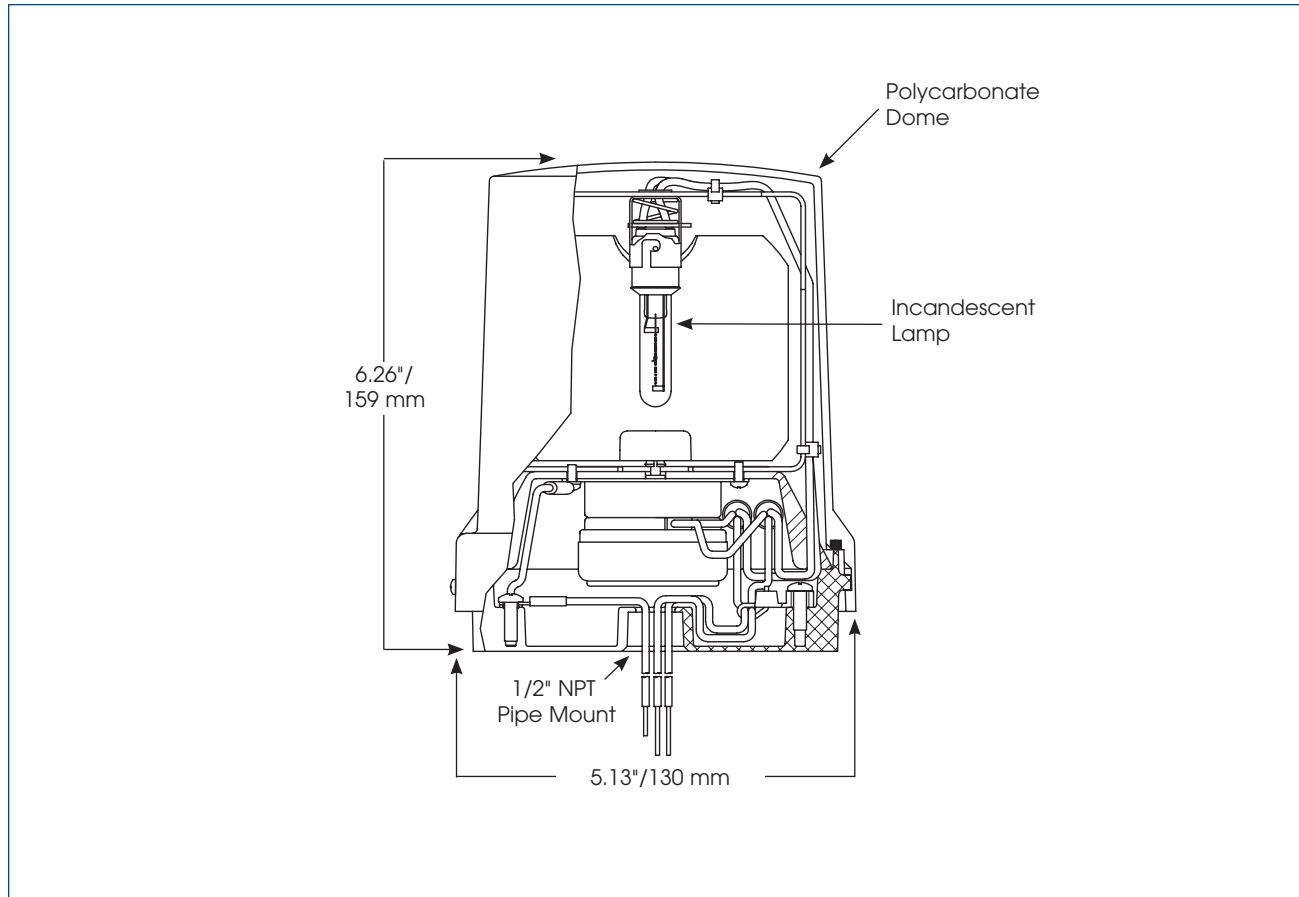
Federal Signal's Vitalite is an economical rotating warning light for emergency warning or status indication in noisy areas.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela	Mount
121S-120 *	120VAC 50/60Hz	0.36 amps	60	2,100	Pipe/Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## VITALITE® ROTATING WARNING LIGHT (121S)



### SPECIFICATIONS

Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	2.0 lbs.	0.91 kg
Shipping Weight:	2.1 lbs.	0.96 kg
Height:	6.26"	159.0 mm
Diameter:	5.13"	130.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)
- Please refer to Model Number Index 121S beginning on page 369

### REPLACEMENT PARTS

<u>Description (Current Series)</u>	<u>Part Number</u>	<u>Description (Older Series)</u>	<u>Part Number</u>
Dome, Amber, Series C	K8444357A-02	Motor, 120VAC	K8241A030-03
Dome, Blue, Series C	K8444357A-01	Dome, Amber, Series A and B	K8444B019A-12
Dome, Clear, Series C	K8444357A	Dome, Blue, Series A and B	K8444B019A-13
Dome, Green, Series C	K8444357A-04	Dome, Clear, Series A and B	K8444B019A-14
Dome, Magenta, Series C	K8444357A-05	Dome, Green, Series A and B	K8444B019A-15
Dome, Red, Series C	K8444357A-03	Dome, Magenta, Series A and B	K8444B019A-17
Incandescent Lamp, 120V, Krypton Series C	K8107251A	Dome, Red, Series A and B	K8444B019A-11
		Incandescent Lamp, 120V, Series A and B	K8107181A

# Electrarray® Rotating Warning Light

## Model 225



### ECONOMICAL LIGHT DUTY WARNING LIGHT

- Available in 120VAC
- Five dome colors
- 40 watt incandescent lamp
- Integrated 1/2-inch NPT pipe mount
- Indoor/outdoor use
- Type 4X, IP66 enclosure
- UL and cUL Listed

The Federal Signal Electrarray® Model 225 is a compact, economical rotating warning light designed for industrial uses. This innovative dome design features a single retaining screw that allows quick and easy access for inspection and relamping.

The Federal Signal Electrarray has a closed cell neoprene gasket that makes it water resistant. The injection molded reflector rotates around an incandescent lamp and produces 90 flashes per minute. It is available in five dome colors (Amber, Blue, Clear, Green and Red) and is UL Listed for Type 4X. Constructed to IP66 specifications, the Electrarray 225 is ready to mount on a 1/2-inch NPT pipe. Optional mounting brackets are available, simplifying installation on walls and in corners.

The Electrarray 225 is one of the most economical rotating signaling lights in the Federal Signal product line. Its design makes it easily adaptable for a multitude of indoor and outdoor applications. It is designed for permanent mounting where a 120VAC, 50/60Hz line is available. This light provides an effective, economical means of supplementing audible signaling devices.

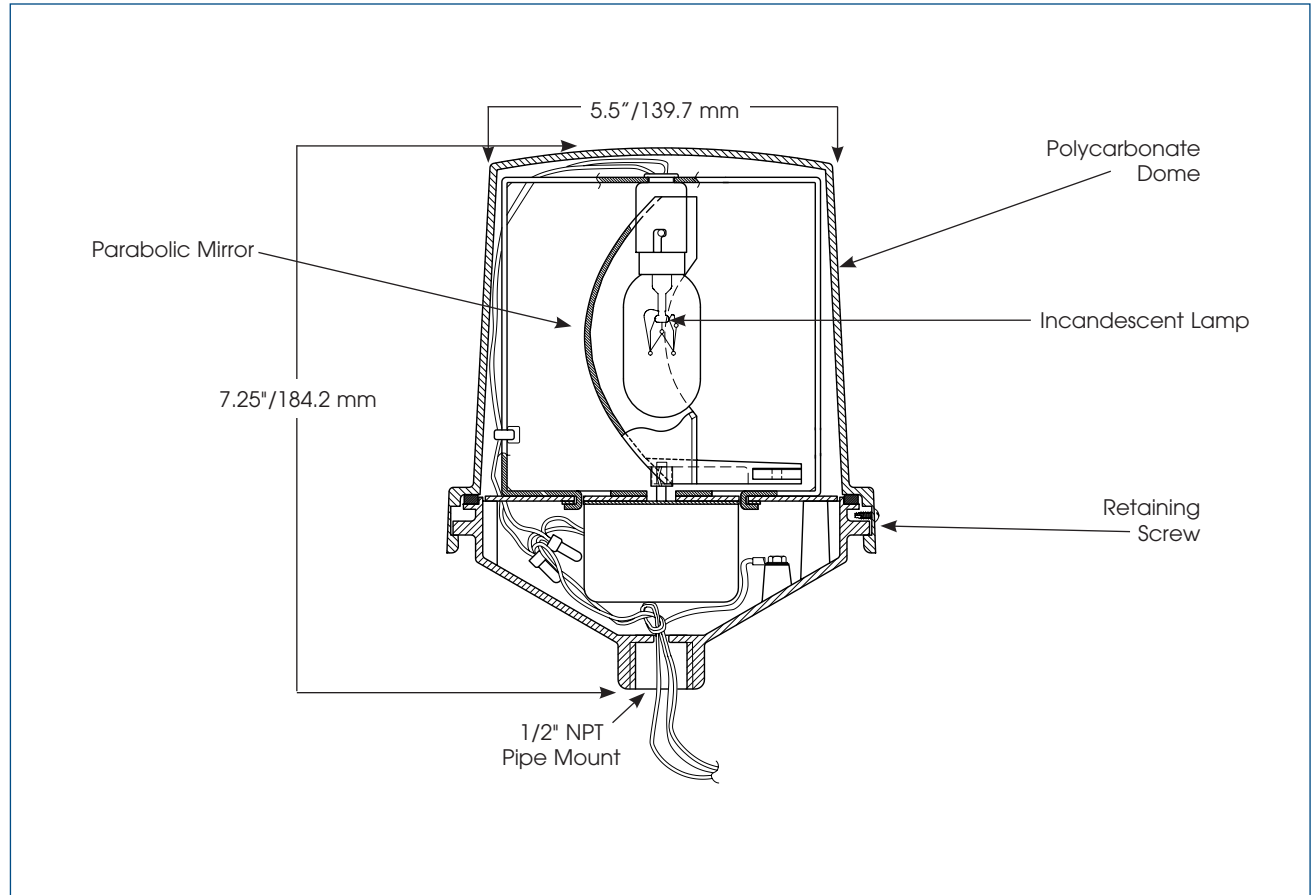
Federal Signal's Electrarray rotating light is an inexpensive warning light for calling attention to emergency situations or process status changes.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
225-120 *	120VAC 50/60HZ	0.22 amps	90	1,000	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## ELECTRARAY® (225)



### SPECIFICATIONS

Lamp Life:	1,000	1,000
Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	2.0 lbs.	0.9 kg
Shipping Weight:	2.7 lbs.	1.2 kg
Height:	7.25"	184.0 mm
Diameter:	5.5"	140.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)
- Please refer to Model Number Index 225 beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8444D219C-03
Dome, Blue	K8444D219C-01
Dome, Clear	K8444D219C-04
Dome, Green	K8444D219C-02
Dome, Red	K8444D219C
Lamp	K149123A
Motor, 120VAC	K8241A030-02





# Electraray®

## Hazardous Location Rotating Warning Light

### Model 225X

### DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 120VAC
- Five dome colors
- 25 watt incandescent lamp
- 1/2-inch NPT pipe mount
- Indoor/outdoor use
- Type 4X, IP66 enclosure
- UL and cUL Listed

The new Federal Signal Electraray® Model 225X is a compact, economical rotating warning light designed for a variety industrial applications. This innovative dome design, with a single screw allows quick and easy access for inspection and relamping.

The Federal Signal Electraray 225X features a silicone rubber gasket that provides a water-resistant seal between the dome and the black poly-coated base. The injection molded reflector rotates around a 25 watt lamp producing 90 flashes per minute. It is available in five dome colors (Amber, Blue, Clear, Green and Red) and is UL listed for Class I, Division 2, Group A, B, C and D; Class II, Division 2, Groups F and G; and Class III. The Electraray 225X is ready to mount on a 1/2" NPT pipe.

The Electraray 225X design makes it a good choice for a multitude of indoor and outdoor applications. It is designed for permanent mounting where 120VAC, 50/60Hz is available. This particular light provides an effective means of supplementing audible signaling devices in hazardous environments.

Federal Signal's affordable Electraray rotating warning light is specifically designed for use in hazardous locations or where corrosive materials are present.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
<b>225X-120 *</b>	120VAC 50/60Hz	0.220 amps	90	1,000	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

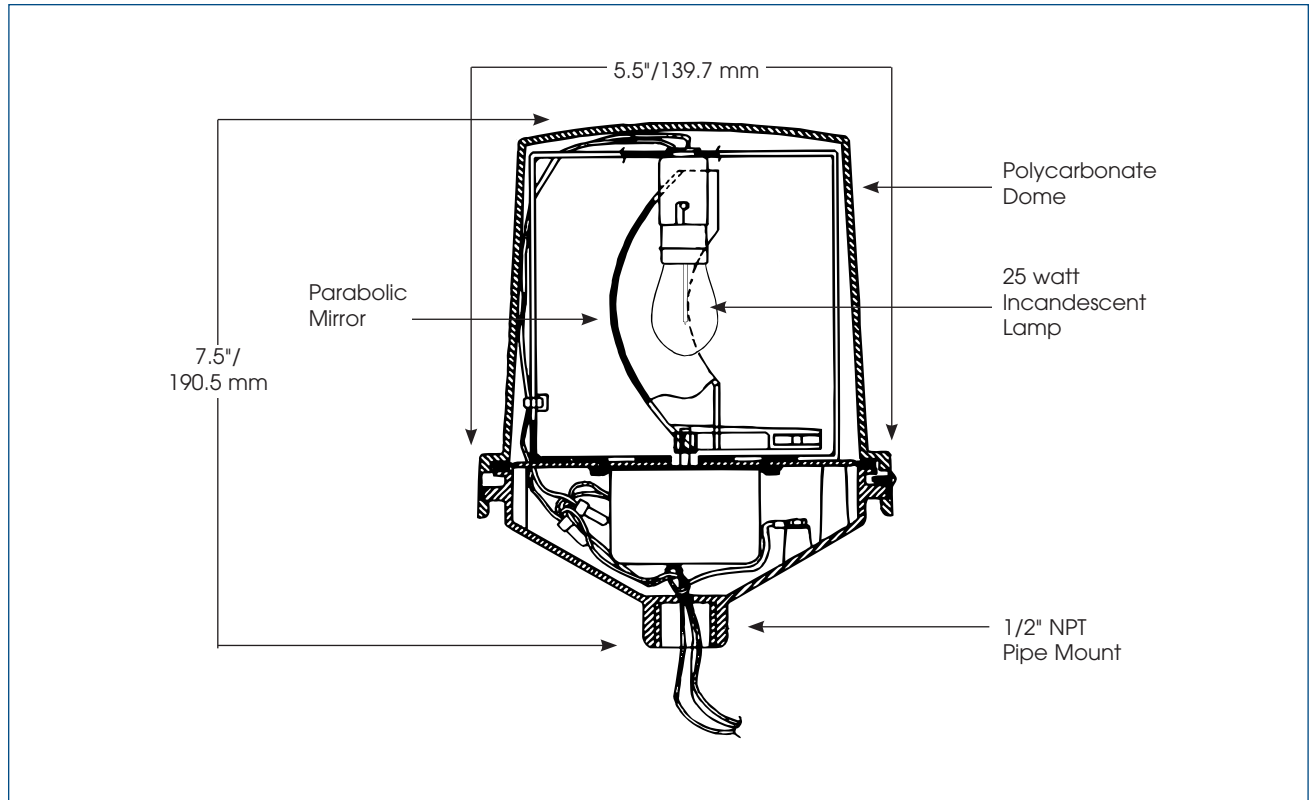
### Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C	
Hazardous Location	66°C

Class I, Div 2, Groups A, B, C, D	T2B/260°
Class II, Div 2, Groups F, G	T5/100°
Class III	T5/100°



## ELECTRARAY® HAZARDOUS LOCATION WARNING LIGHT (225X)



### SPECIFICATIONS

Lamp Life:	1,000 Hours	1,000 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-40°F to 104°F	-40°C to 40°C
Net Weight:	2.0 lbs.	0.9 kg
Shipping Weight:	2.7 lbs.	1.2 kg
Height:	7.5"	190.5 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Hazardous Location Mounting Bracket (LHWB)
- Please refer to Model Number Index 225X beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8444D219C-03
Dome, Blue	K8444D219C-01
Dome, Clear	K8444D219C-04
Dome, Green	K8444D219C-02
Dome, Red	K8444D219C
Lamp, 120VAC	K149123A
Motor, 120VAC	K8241A030-02



# Pioneer™ Rotating Beacon Ray

Model 27S

## MEDIUM DUTY WARNING LIGHT

- Available in 120VAC
- Six lens colors
- 2,000 hour sealed beam lamp
- Integrated 1/2-inch NPT pipe mount
- Type 3R enclosure
- UL and cUL Listed and CSA Certified

Federal Signal's Model 27S is a medium sized, highly effective warning light designed for upright mounting and AC operation.

The 27S streamlined design features a sturdy housing finished in gray enamel. The Pioneer™ is available in six lens colors (Amber, Blue, Clear, Green, Magenta and Red), and is UL Listed and CSA Certified.

The Model 27S is ready to mount on a 1/2" NPT pipe. In addition, optional mounting brackets simplify installation on walls or in corners.

A high intensity 65 watt sealed beam lamp projects a fixed beam downward onto a 360° rotating reflector set at a 45° angle, producing the 60 flashes per minute in all directions.

Model 27S is a versatile warning or signaling light useful in a variety of in-plant applications. It has been designed for permanent installation where a 120VAC, 50/60Hz line voltage is available.

This light is particularly useful as a signaling or warning device in high ambient noise areas where it can be used to supplement or supplant audible signaling devices.

The 27S is effective for alerting of hazardous conditions or identifying dangerous areas.

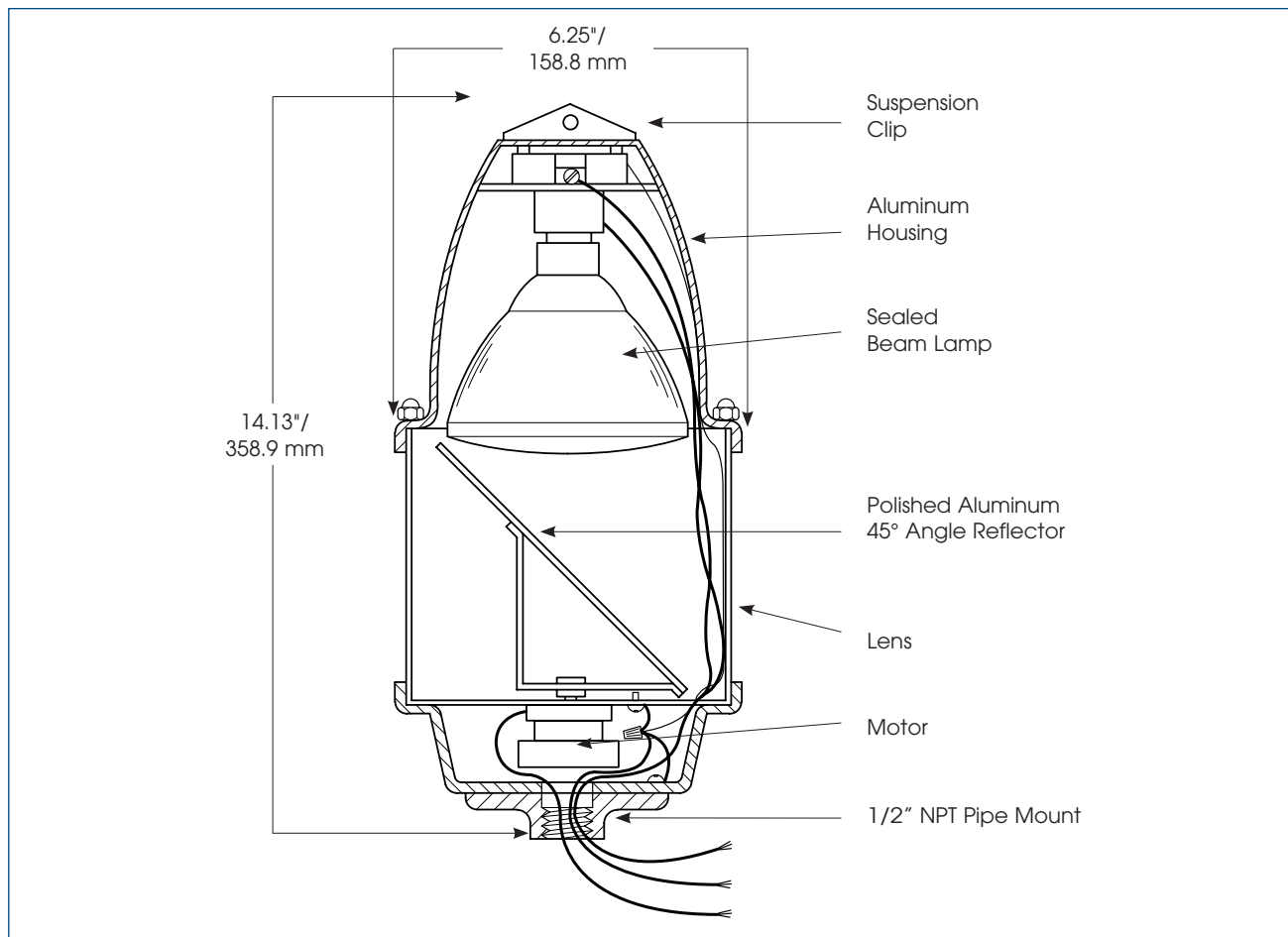
Federal Signal's Pioneer Rotating Beacon Ray is a dependable mid-range warning light which meets or exceeds the durability and light output requirements of most manufacturing environments.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
27S-120 *	120VAC 50/60HZ	0.64 amps	60	6,000	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (M) Magenta or (R) Red



## PIONEER™ BEACON RAY (27S)



### SPECIFICATIONS

Lamp Life:	2,000 Hours	2,000 Hours
Light Source:	65 Watt Sealed Beam	65 Watt Sealed Beam
Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:	3.1 lbs.	1.4 kg
Shipping Weight:	4.0 lbs.	1.8 kg
Height:	14.13"	358.9 mm
Diameter:	6.25"	158.9 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)
- Please refer to Model Number Index 27S beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8241B031K-16	Dome, Magenta	K8241B031K-15
Dome, Blue	K8241B031K-14	Dome, Red	K8241B031K-12
Dome, Clear	K8241B031K-13	Sealed Beam Lamp, 120V	K8241A014B
Dome, Green	K8241B031K-11	Motor, 120VAC	K8241A030-03



# Commander® Rotating Warning Lights

Models 371 and 371L

## HEAVY DUTY WARNING LIGHTS

- Available in 120VAC
- Five dome colors
- Pivoting lamp yoke
- Surface mount and integrated 1-inch NPT pipe mount
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

Federal Signal Models 371/371L incandescent warning lights have a powerful sealed beam lamp that rotates 360° within a glass or polycarbonate dome. Power is delivered to the Commander's rotating lamp by a unique collector ring. The lamp itself is mounted in a pivoting yoke. This allows the lamp beam angle to be adjusted through 90 degrees from horizontal to vertical. Changing the beam angle allows the user to create unique light patterns and/or direct the light for better visibility.

The Model 371 features a 200 watt sealed beam lamp and a high-temperature resistant glass dome. The glass dome of the 371 is ideal for applications such as steel mills or arc furnaces/smelters where high ambient temperatures or red hot materials would melt or damage the dome.

The Model 371L features a 100 watt sealed beam lamp and an impact-resistant polycarbonate dome. The thinner polycarbonate dome allows more light to pass through while protecting the lamp.

Both models of the Commander® are available in five colors (Amber, Blue, Clear, Green and Red). The dome and ring assembly simply screws on, providing access to the interior of the light.

The new 371/371L base features electrostatically applied (e-coated) black epoxy paint for greater corrosion-resistance. Wiring can be routed through the pipe-mount opening in the bottom of the light or the two side knockouts can be used for side entry wiring. Installation can be surface – or 1-inch NPT pipe mount. Optional wall and corner mount brackets are available.

The 371 and 371L are Type 4X, IP66 rated, UL and cUL Listed and CSA Certified.

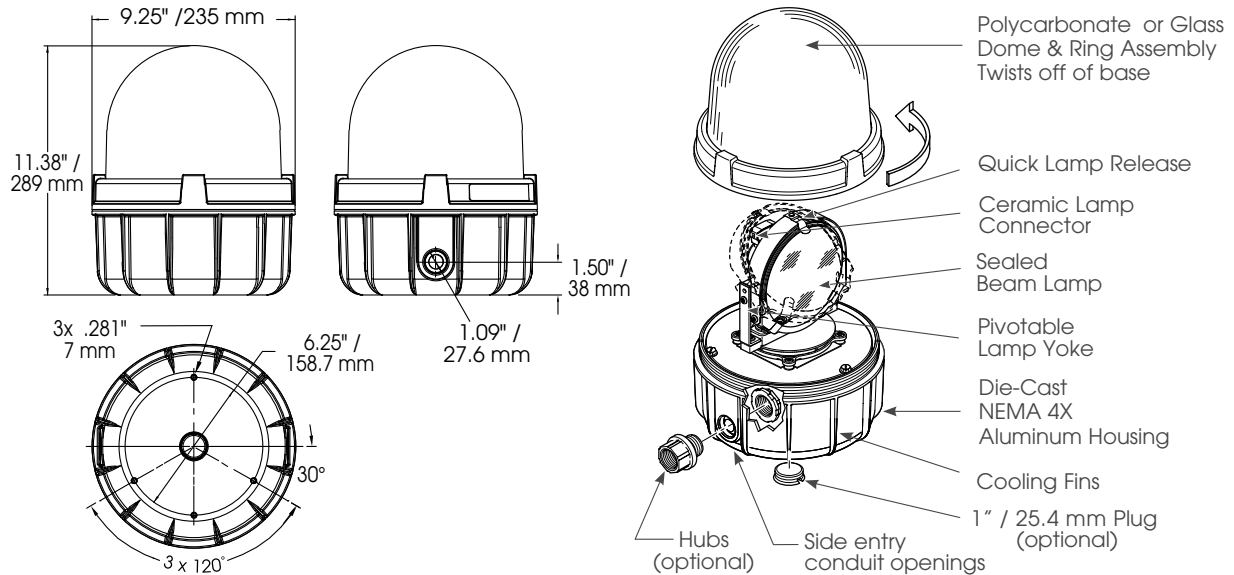
Model	Voltage	Operating Current	Flash Rate/Minute	Candela	Mount
<b>371-120 *</b>	120VAC 50/60HZ	1.75 amps	60	36,000	1" NPT Pipe/Surface
<b>371L-120 *</b>	120VAC 50/60HZ	0.80 amps	60	20,000	1" NPT Pipe/Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## COMMANDER® ROTATING LIGHTS (371/371L)

### 371 and 371L



### SPECIFICATIONS

Lamp Life:	2,000 Hours	2,000 Hours
Light Source:	371 200 Watt Sealed Beam	371L 100 Watt Sealed Beam
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:		
371	13.25 lbs.	6.0 kg
371L	9.8 lbs.	4.4 kg
Shipping Weight:		
371	14.25 lbs.	6.5 kg
371L	10.8 lbs.	4.9 kg
Height:	11.38"	288.9 mm
Diameter:	9.12"	231.8 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:
  - Corner Bracket (LCMB2)\*
  - Wall Bracket (LWMB2)\*
  - Solid Surface Mounting Bracket (371BRCKT)\*
  - Shock Mount Kit (K8459A076C)
  - 3/4" Hub Kit (K8459138A)
  - 1" Plug Kit (K8459130A)
- Please refer to Model Number Index 371/371L beginning on page 369

\* Rated for NEMA 3R installations.

### REPLACEMENT PARTS

<u>Description (Current Series)</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Series B Dome and Ring Assembly		Lamp (371)	K8442A039
Amber Glass (371)	K8459126A	Lamp (371L)	K8107A130
Blue Glass (371)	K8459126A-01	Motor Replacement Kit (371/371L)	K8459A113B
Clear Glass (371)	K8459126A-03	Worm Gear Assembly (371/371L)	K8459A017
Green Glass (371)	K8459126A-04	Brush and Spring (371/371L)	K8442A028
Red Glass (371)	K8459126A-02	Gasket, Surface Mount	K8459127A
Amber Polycarbonate (371L)	K8459125A		
Blue Polycarbonate (371L)	K8459125A-01		
Clear Polycarbonate (371L)	K8459125A-02		
Green Polycarbonate (371L)	K8459125A-03		
Red Polycarbonate (371L)	K8459125A-04		





## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Available in 24VDC and 120VAC
- Five lens colors
- 3/4-inch NPT pendant mount standard; other options available
- Optional dome guard
- Type 4X, IP66 enclosure
- UL and cUL Listed, CSA Certified and Marine Rated

# Explosion-Proof Rotating Light

## Model 121X

Federal Signal's Model 121X rotating light flashes 90 times per minute and produces a 360° visual signal. This explosion-proof light has an incandescent lamp and is available in five lens colors – Amber, Blue, Clear, Green and Red.

The Model 121X is UL Listed for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; Class I, Division 2, Groups A, B; and Class III. The 121X is CSA Certified, Marine Rated and constructed to Type 4X, IP66 standards.

This corrosion-resistant unit's copper-free aluminum housing is finished with a powder epoxy. All exposed hardware is constructed of 316 grade stainless steel.

The 121X uses a synchronous motor to drive a parabolic reflector around an incandescent lamp. This results in a 360° rotating beam which is concentrated in a horizontal plane.

The 121X features a spring-clip mounted lens for quick access when inspecting or relamping. A pendant mount is supplied and a ceiling mount and 90° wall mount are available options. Installation is simple; with the mounting box in place, the fixture is threaded onto the mounting box, making the electrical connection. Electrical continuity is made when five threads are engaged.

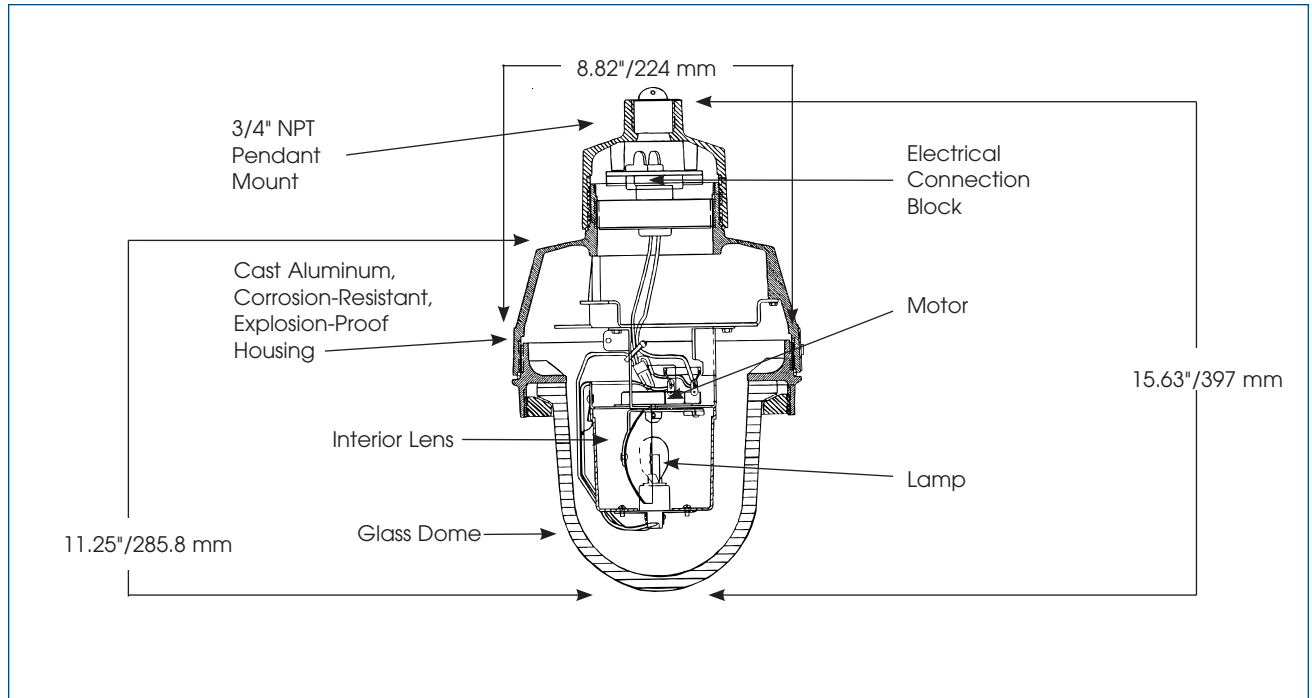
Federal Signal's rugged 121X Warning Light is designed for explosion-proof applications and/or corrosive environments. It is ideal for use in indoor and outdoor areas such as oil rigs, mines, refineries, and chemical plants.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela	Mount
<b>121X-024 *</b>	24VDC	1.05 amps	90	2,350	3/4" NPT Pendant
<b>121X-120 *</b>	120VAC 60Hz	0.33 amps	90	1,800	3/4" NPT Pendant

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## EXPLOSION-PROOF ROTATING LIGHT (121X)



### SPECIFICATIONS

Lamp Life:	800 Hours	800 Hours
Light Source:	Incandescent	Incandescent
Ambient Temperature Range:	-31°F to 150°F	-35°C to 66°C
Net Weight:	14.75 lbs.	6.69 kg
Shipping Weight:	18.9 lbs.	8.57 kg
Height:	15.63"	397.0 mm
Diameter:	8.82"	224.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Ceiling Mount Kit (CMXC)  
Wall Mount (WMXC)  
Dome Guard (DGXC)
- Please refer to Model Number Index 121X beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Exterior Dome Assembly, Clear	K8444C271A-01	24VDC Mechanism, Amber	K8444269A
Interior Lens, Amber	K8444242A	24VDC Mechanism, Blue	K8444269A-01
Interior Lens, Blue	K8444242A-01	24VDC Mechanism, Clear	K8444269A-02
Interior Lens, Clear	K8444242A-02	24VDC Mechanism, Green	K8444269A-03
Interior Lens, Green	K8444242A-03	24VDC Mechanism, Red	K8444269A-04
Interior Lens, Red	K8444242A-04	120VAC Mechanism, Amber	K8444277A
Lamp, 24VDC	K8107A041	120VAC Mechanism, Blue	K8444277A-01
Lamp, 120VAC	K8444A173A	120VAC Mechanism, Clear	K8444277A-02
		120VAC Mechanism, Green	K8444277A-03
		120VAC Mechanism, Red	K8444277A-04

# Streamline® Low Profile Light

## Model LP2



### PERFECT SIZE MEETS SUPERIOR PERFORMANCE

- Available in 24VAC/VDC and 120VAC
- Surface or panel mount
- Steady burning
- Five dome colors
- Type 4X enclosure
- Low profile — only 2.5" H x 3" diameter (65mm x 76mm)
- Built-in strain relief
- UL and cUL Listed and CE Compliant

The Streamline® Model LP2 is a unique, steady burning incandescent light, ideal for both horizontal and vertical panel mount installation. This device mounts easily through any 1.54" (39mm) diameter hole; a lock nut secures the light firmly in place. A gasket positioned above the mounting surface assures a water-tight and dust-tight fit. The lamp is easily replaced from below the mounting surface. Inherent strain relief secures all wiring from the rear, for added durability. The enclosure consists of a polycarbonate dome in five colors (Amber, Blue, Clear, Green and Red), and a polyamide base; the enclosure with gasket is rated Type 4X.

A 6 watt incandescent lamp is included with the 24VAC/DC and 120VAC units. The double-contact bayonet base (Type S-6) is a standard lamp style, readily available when replacement is required. Lamp life is approximately 1,500 hours when run on AC power.

Like all Federal Signal products, the StreamLine LP2 is designed with customer applications in mind. The LP2 functions in most PLC applications (including triac outputs). Careful consideration has been given to the relationship between lamp shape and lens design for maximum light output.

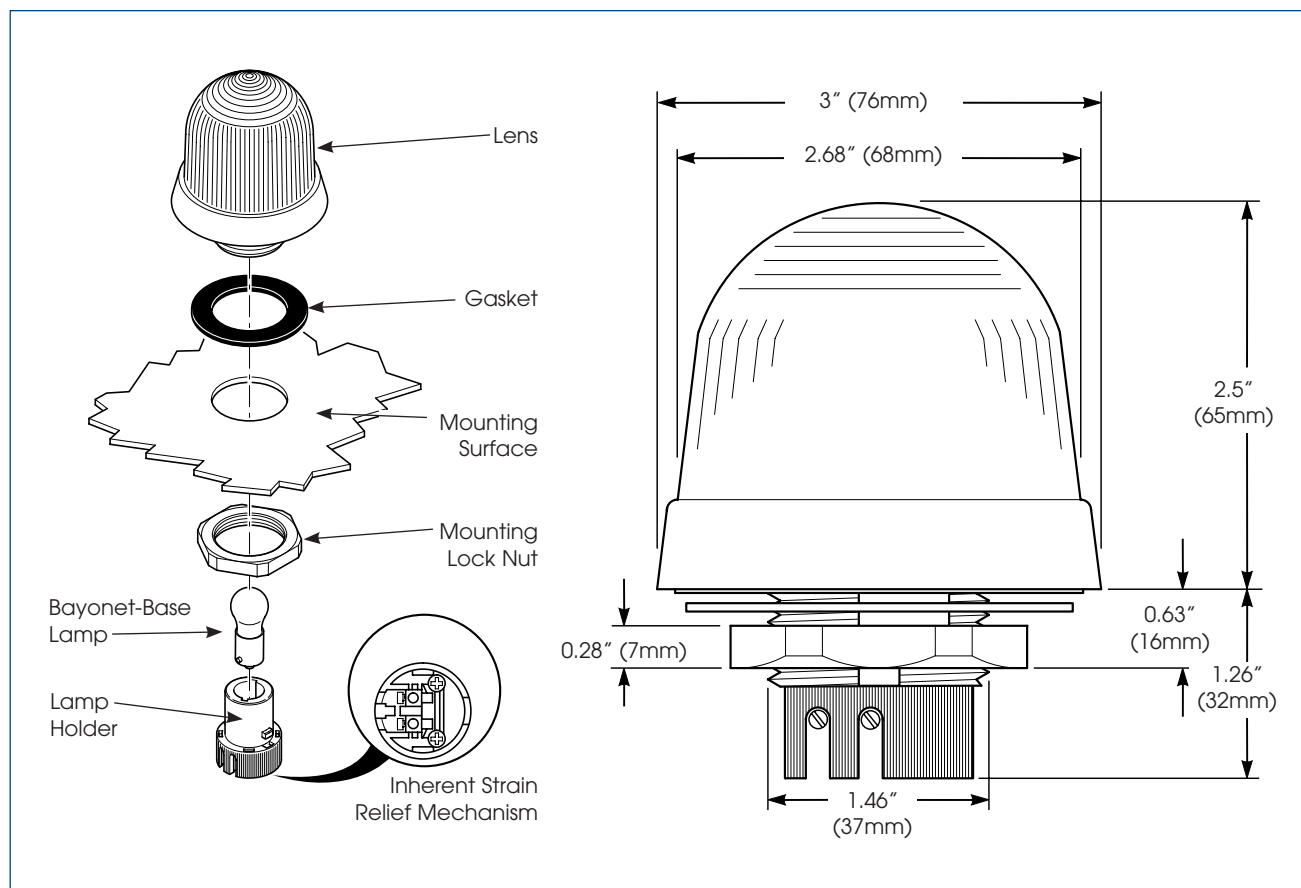
When your application calls for a compact signal with unparalleled reliability, Federal Signal's Streamline products are the clear choice.

Model	Voltage	Power	Operating Current
LP2-024 *	24VAC/DC	6 watt	0.30 amps
LP2-120 *	120VAC	6 watt	0.06 amps

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## STREAMLINE® LOW PROFILE LIGHT (LP2)



### SPECIFICATIONS

Lamp Life:	1,500 Hours	1,500 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-4°F to 140°F	-20°C to 60°C
Net Weight:	3.4 oz.	96.4 g
Shipping Weight:	4.5 oz.	127.6 g
Height — above surface:	2.5"	65.0 mm
Height — below surface:	1.26"	32.0 mm
Diameter:	3.0"	75.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index LP2 beginning on page 369

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Lamp, 24VAC/DC	K8107195A
Lamp, 120VAC	K8107195A-01



# StreamLine® Low Profile Steady Burning Light

Models LP3MI, LP3PI, LP3TI

## COMPACT, ECONOMICAL AND FLEXIBLE

- Available in 24VDC and 120VAC
- T-mount, integrated 1/2-inch NPT pipe mount or 1/2-inch NPT male pipe mount
- Incandescent lamp included
- Five dome colors
- 15 watt incandescent lamp
- Screw-on lens
- Type 4X enclosure
- Optional wire guard
- UL and cUL Listed and CSA Certified

Federal Signal introduces the Model LP3I low profile steady burning light. The Type 4X light is available in five colors: Amber, Blue, Clear, Green, and Red.

The LP3I is offered in three mounting configurations. LP3PI features an integrated 1/2" NPT pipe mount. LP3MI features an integrated 1/2" NPT male pipe mount. The "T-mount" LP3TI has a popular 2-hole design for wall or flush mounting.

Both the LP3MI and LP3TI include a surface gasket to complete the Type 4X installation. All LP3I units feature a threaded screw-on lens. The LP3I comes in two voltages: 24VDC and 120VAC.

A 15 watt incandescent lamp is included with all units. The lamp features a standard double-contact bayonet base readily available when replacement is required.

Like all Streamline® products, the LP3I is designed with OEM applications in mind. It is economical, easy to install and attractive. Careful consideration has been given to the relationship between lamp shape and lens design for maximum light output.

When your application calls for a compact signal with unparalleled reliability, Federal Signal's Streamline products are the clear choice.

Model	Voltage	Power	Operating Current
LP3 <b>** I-024 *</b>	24VDC	15 watt	0.67 amps
LP3 <b>** I-120 *</b>	120VAC	15 watt	0.13 amps

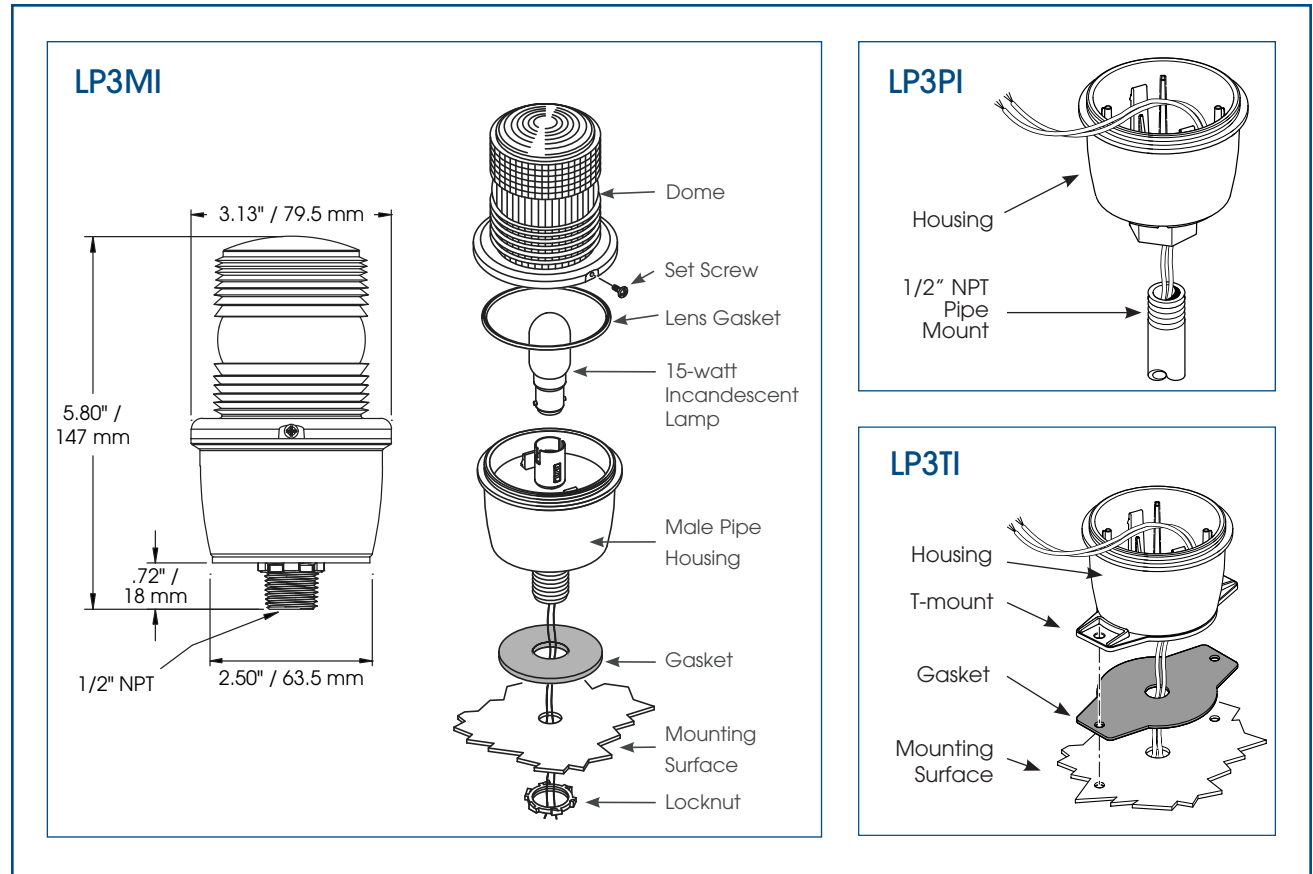
**\*\* Indicates Mounting Style:**

(S) Surface Mount, (P) Pipe Mount (T) T-Mount, or (M) Male Pipe Mount

**\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red**



## STREAMLINE® LOW PROFILE STEADY BURN LIGHT (LP3MI/LP3PI/LP3TI)



### SPECIFICATIONS

Lamp Life:	2,000 Hours	2,000 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 65°C
Net Weight:	7.3 oz.	206.96 g
Shipping Weight:	8.5 oz.	240.98 g
Diameter:	3.13"	7.95 cm
Height (from bottom):		
LP3PI	5.7"	14.48 cm
LP3MI	5.8"	14.7 cm
LP3TI	5.1"	12.95 cm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Wire Guard (LP3G) Compatible with S, T, and M mounts only
- Please refer to Model Number Index LP3I beginning on page 370

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Lens, Amber	K8589063A	Lamp, 120VAC	K8107194A
Lens, Blue	K8589063A-01	Lamp, 24VDC	K8107227A
Lens, Clear	K8589063A-02	Gasket, LP3TI	K8589012A
Lens, Green	K8589063A-03	Gasket, Lens	K8589013A
Lens, Red	K8589063A-04		





## COMPACT, ECONOMICAL AND FLEXIBLE

- Available in 24VDC and 120VAC
- T-mount, integrated 1/2-inch NPT pipe mount, 1/2-inch NPT male pipe mount or surface mount
- Five dome/lens colors available
- 100,000 Hour LED
- Screw on lens
- Indoor/Outdoor use
- Type 4X enclosure
- Optional wire lens guard
- UL and cUL Listed and CSA Certified

# StreamLine® Low Profile Steady Burning LED Light

Model LP3SL, LP3PL, LP3TL, LP3ML

Federal Signal introduces the Model LP3L low profile LED light. The Type 4X light is available in five LED/lens color combinations; Amber, Blue, Clear, Green and Red. All LP3 models feature the easy access screw on lens.

The LP3L is offered in four mounting configurations; LP3PL with an integrated 1/2" NPT pipe mount, LP3ML features an integrated 1/2" NPT male pipe mount, LP3TL features a T formation base with 2 mounting holes for wall or flush mounting and the LP3SL features a three hole surface mounting configuration. The T-mount and Surface mount units include surface gaskets to maintain the 4X installation.

The LP3L series is available in 24VDC and 120VAC. All models include the vibration resistant, double contact bayonet style 100,000 hour LED module.

Like all StreamLine® products, the LP3L is designed with OEM applications in mind. It is economical, easy to install and attractive. Careful consideration has been given to the relationship between the LED light source and the lens design for maximum light output.

When your application calls for a compact signal with unparalleled reliability, Federal Signal's StreamLine products are the clear choice.

Model	Voltage	Operating Current
LP3 <b>** L-024 *</b>	24VDC	0.08 amps
LP3 <b>** L-120 *</b>	120VAC	0.13 amps

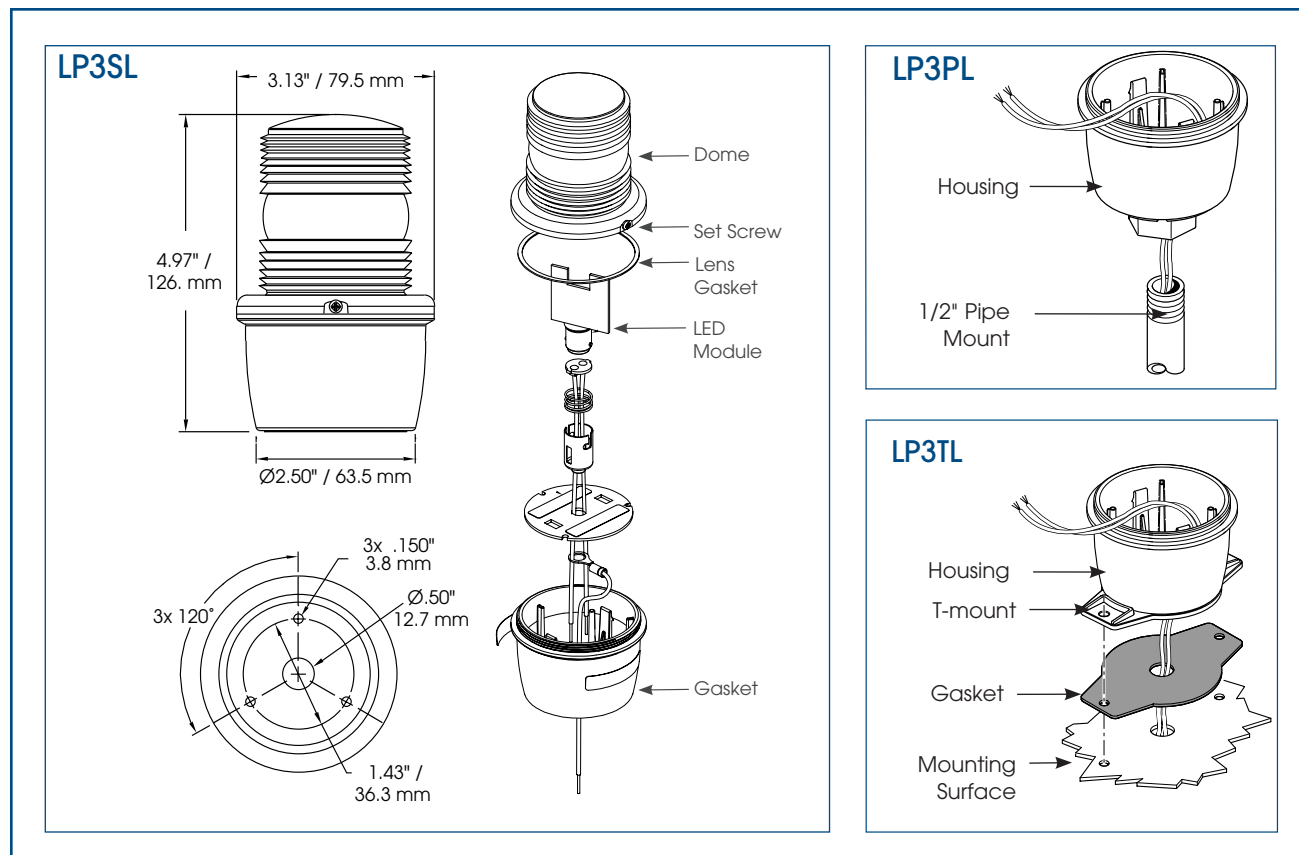
**\*\* Indicates Mounting Style:**

(S) Surface Mount, (P) Pipe Mount, (T) T-Mount, or (M) Male Pipe Mount

**\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red**



## STREAMLINE® LOW PROFILE STEADY BURNING LED LIGHT (LP3SL/LP3PL/LP3TL/LP3ML)



### SPECIFICATIONS

Lamp Life:	100,000 Hours	100,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	-31°F to 150°F	-35°C to 65°C
Net Weight:	0.46 lbs.	206.96 g
Shipping Weight:	0.53 lbs.	240.98 g
Diameter:	3.13"	7.95 cm
Height (from bottom):		
LP3PL	5.7"	14.48 cm
LP3ML	5.8"	14.7 cm
LP3TL	5.1"	12.95 cm
LP3SL	5.0"	12.7 cm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Wire Guard (LP3G) Compatible with S, T, and M mounts only
- Please refer to Model Number Index LP3L beginning on page 370

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Lens, Amber	K8589063A	LED, 24V Amber	K8107199A
Lens, Blue	K8589063A-01	LED, 24V Blue	K8107199A-03
Lens, Clear	K8589063A-02	LED, 24V Clear	K8107199A-04
Lens, Green	K8589063A-03	LED, 24V Green	K8107199A-02
Lens, Red	K8589063A-04	LED, 24V Red	K8107199A-01
Gasket, LP3TL	K8589012A	LED, 120V Amber	K8107200A
Gasket, LP3SL	K8589011A	LED, 120V Blue	K8107200A-03
Gasket, Lens	K8589013A	LED, 120V Clear	K8107200A-04
		LED, 120V Green	K8107200A-02
		LED, 120V Red	K8107200A-01

LED



## LED-BASED WARNING LIGHT FOR HEAVY-DUTY INDUSTRIAL APPLICATIONS

- XLT™ Technology
- Available in 24VAC/DC, 120VAC–240VAC
- Five lens/lamp colors
- Flashing mode standard, configurable to Steady-burn
- 60,000-hour, vibration-resistant LED lamp
- 1/2-inch NPT pipe mount
- Type 4X, IP66 enclosure, Marine Listed
- UL and cUL Listed for Class 1, Division 2 applications

# Electraray® Hazardous Location LED Flashing Warning Light with XLT™

## Model 225XL

The Model 225XL is a hazardous location flashing signal light that features the super bright LED array with XLT™, eXtreme Light Technology. The unit is available in 24VAC/DC, 120-240VAC self detecting voltage and five colors – Amber, Blue, Clear, Green, and Red. The 225XL comes standard in flashing mode and is field configurable to steady burn mode for maximum functionality.

The Model 225XL has been certified by UL as meeting Type 4X water-tight and corrosion-resistant requirements, and is rated for Division 2 applications. This hazardous location warning light has a black polyurethane-coated base and the inner Fresnel lens is available in five colors – Amber, Blue, Clear, Green, and Red. The clear polycarbonate outer dome can be quickly removed for access while changing the LED or inspecting the unit.

Federal Signal's super bright LED array used in the 225XL with XLT inside produces intense light output and 60,000 hours of service. Increased shock and vibration resistance add to this unit's rugged industrial portfolio of features.

The 225XL is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II Division 2, Groups F and G; and Class III.

The Federal Signal Model 225XL is ideal for wet, corrosive atmospheres like those found in food processing industries or anywhere a vibration-resistant visual signal is needed.

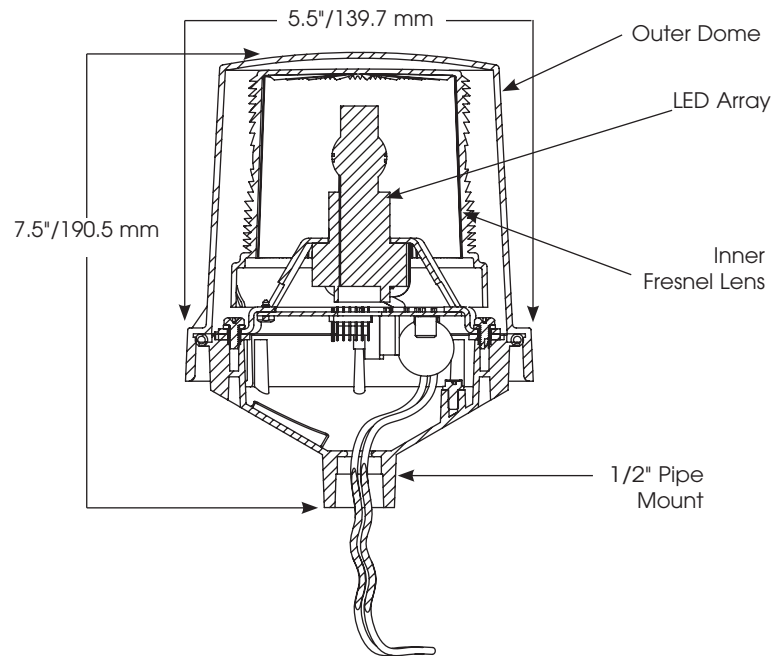


Model	Voltage	Operating Current	In-rush Current	Flash Rate/Minute	Mount
225XL-024 *	24VAC/DC	0.38 amps	1.75 amps, 5.0 mS	60	1/2" NPT Pipe
225XL-120-240 *	120/240VAC	0.21/0.13 amps	2.00 amps, 0.25 mS	60	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

Hazardous Location	T-Code at Maximum Ambient Temperature, °C					
	40°C		55°C		66°C	
	24V	100-265VAC	24V	100-265VAC	24V	100-265VAC
Class I, Div 2, Groups A, B, C, D	T6/85°	T6/85°	T5/100°	T5/100°	T4A/120°	T4A/120°
Class II, Div 2, Groups F, and G	T6/85°	T6/85°	T6/85°	T6/85°	T6/85°	T6/85°
Class III	T6/85°	T6/85°	T6/85°	T6/85°	T6/85°	T6/85°

## ELECTRARAY® HAZARDOUS LOCATION LED LIGHT (225XL)



### SPECIFICATIONS

Lamp Life:	60,000 Hours	60,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	-58°F to 150°F	-50°C to 66°C
Net Weight:	3.2 lbs.	1.5 kg
Shipping Weight:	4.0 lbs.	1.8 kg
Height:	7.5"	190.5 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index 225XL beginning on page 370

### REPLACEMENT PARTS

<b><i>Description</i></b>	<b><i>Part Number</i></b>	<b><i>Description</i></b>	<b><i>Part Number</i></b>
Exterior Dome, Clear	K8444D219C-04	PC Board Assembly, 24VAC/DC	K2005455A
Interior Lens, Amber	K8550292A-02	PC Board Assembly, 120/240VAC	K2005416A
Interior Lens, Blue	K8550292A-01	LED Lamp, Amber	K147169A-06
Interior Lens, Clear	K8550292A	LED Lamp, Blue	K147169A-07
Interior Lens, Green	K8550292A-04	LED Lamp, Clear	K147169A-10
Interior Lens, Red	K8550292A-03	LED Lamp, Green	K147169A-08
		LED Lamp, Red	K147169A-09

# Electraflash® Flashing Lights

## Model 141



### DESIGNED FOR INDUSTRIAL OR VEHICULAR USE

- Available in 12VDC, 24VDC, and 120VAC
- Five dome colors
- Surface mount or integrated 1/2-inch NPT pipe mount
- Type 3R enclosure
- UL Listed and CSA Certified

Federal Signal's Electraflash® Model 141 is an economical incandescent flashing light. The Electraflash is less than six inches high and six inches in diameter. It is available in five impact-resistant fresnel dome colors: Amber, Blue, Clear, Green and Red. The 120VAC model is UL Listed and CSA Certified.

The Model 141 is available in 12VDC, 24VDC, and 120VAC. This light consists of a flasher unit with an incandescent bayonet lamp secured to its base (screw-in type lamp in 120VAC only).

The 12VDC and 24VDC units each provide three holes for easy flat surface mounting. The 120VAC unit is ready to mount on a 1/2-inch NPT pipe. Optional mounting brackets are available for the 120VAC unit, including the Model LWMB2 wall mount bracket and the Model LCMB2 corner mount bracket.

Federal Signal's economical flashing lights are designed for both indoor and outdoor environments. Model 141's convenient size and intense light output are ideal for maintenance vehicles, fork lifts, and other material handling equipment. The Electraflash can effectively identify hazardous conditions or dangerous areas.

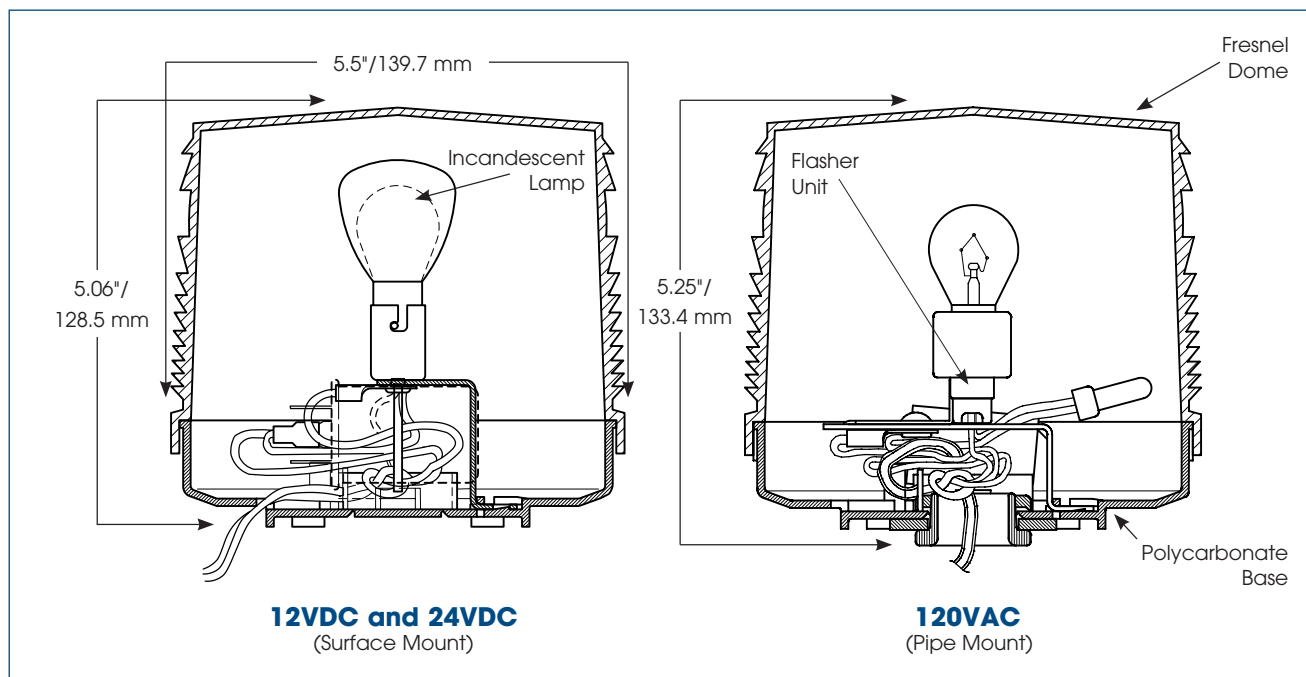
Federal Signal's Electraflash is a compact warning light designed specifically for use in light-duty industrial applications.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
<b>141-012 *</b>	12VDC	3.00 amps	70	325	Surface
<b>141-024 *</b>	24VDC	0.90 amps	70	125	Surface
<b>141-120 *</b>	120VAC 50/60Hz	0.38 amps	70	275	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## ELECTRAFLASH® FLASHING LIGHT (141)



### SPECIFICATIONS

#### Lamp Life:

12VDC - Incandescent	1,000 Hours	1,000 Hours
24VDC - Incandescent	7,000 Hours	7,000 Hours
120VAC - Incandescent	7,000 Hours	7,000 Hours

#### Operating Temperature:

-31°F to 150°F	-35°C to 66°C
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#### Net Weight:

DC Versions	0.8 lbs.	0.4 kg
AC Version	1.0 lb.	0.5 kg

#### Shipping Weight:

DC Versions	1.1 lbs.	0.5 kg
AC Version	1.3 lbs.	0.6 kg

#### Height:

DC Versions	5.06"	128.5 mm
AC Version	5.25"	133.4 mm

#### Diameter:

DC Versions	5.5"	139.7 mm
AC Version	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories: (120VAC only):  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)
- Please refer to Model Number Index 141 beginning on page 370

### REPLACEMENT PARTS

<b>Description</b>	<b>Part Number</b>	<b>Description</b>	<b>Part Number</b>
Dome, Amber	K8263073A	Incandescent Lamp (24VDC)	K8107213A
Dome, Blue	K8263073A-01	Incandescent Lamp (120VAC)	K8107181A
Dome, Clear	K8263073A-03	Flasher (12VDC)	K8263A083A
Dome, Green	K8263073A-04	Flasher (24VDC)	K8285237A
Dome, Red	K8263073A-02	Flasher (120VAC)	K8285238A-01
Incandescent Lamp (12VDC)	K8107212A	Pipe Mount Kit	K8263093A



# Battery Powered Warning Light

## Model BPL26



### PORTABLE WARNING LIGHT INCLUDING A MOUNTING METHOD

- 12VDC — uses two standard 6VDC lantern batteries (batteries not included)
- Five dome colors
- 300-hour, 5 watt incandescent lamp
- Type 3R enclosure

Federal Signal's Model BPL26 is a portable, battery powered warning light which flashes 65 times per minute. The solid state flasher features components which are moisture-proof and reverse polarity protected to ensure extended battery life and trouble-free performance.

The BPL26 is available in five fresnel dome colors; Amber, Blue, Clear, Green and Red. For increased durability, the dome is made of impact-resistant polycarbonate materials, and the base is constructed from a high-density polyethylene. A flexible, rubber seal covers the on/off switch to protect it from the elements.

A suspension ring on the top of the unit makes this warning light easy to hang. Power is supplied by two standard 6-volt DC, spring terminal lantern batteries (not included).

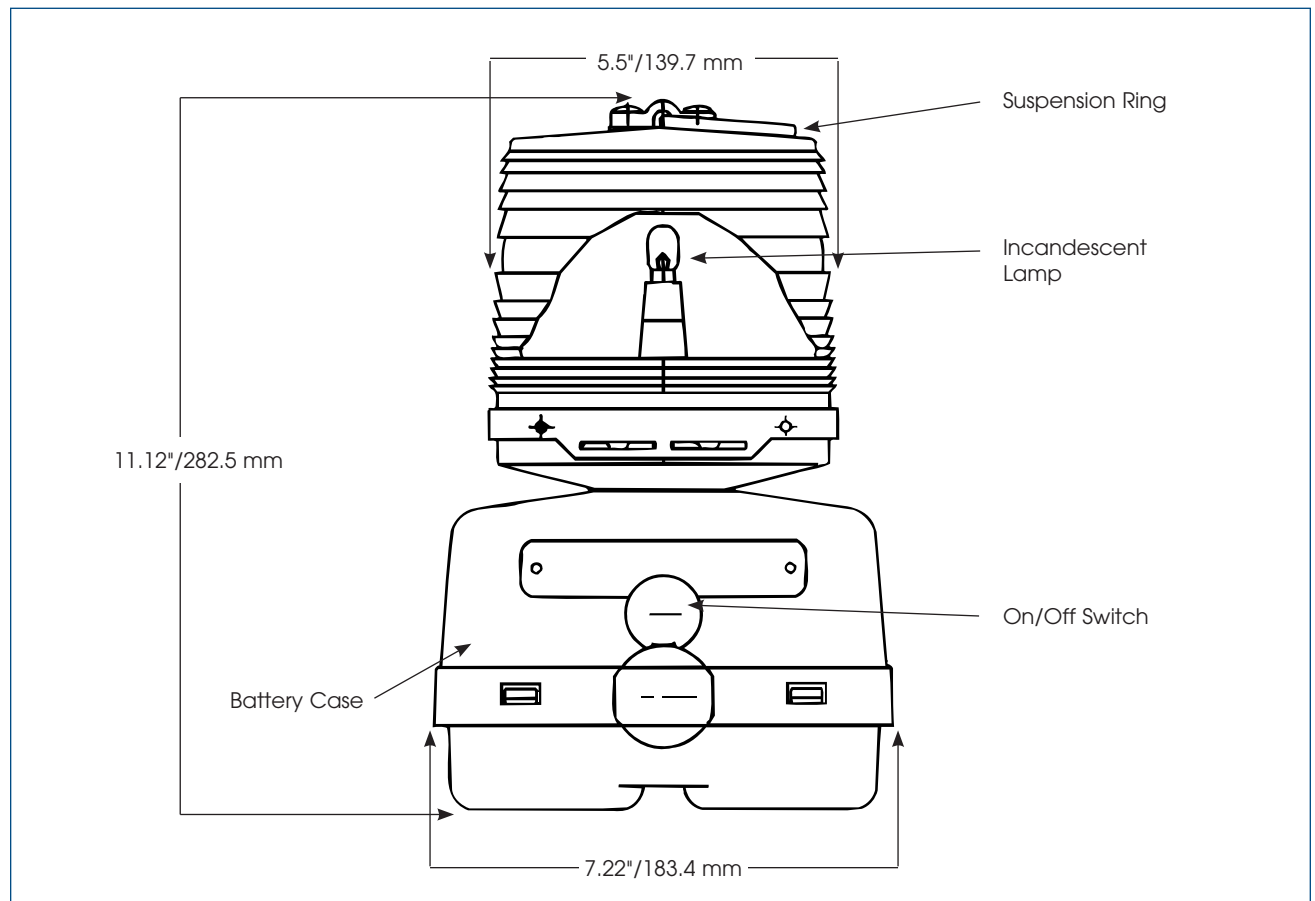
The Model BPL26 is ideal for job sites requiring temporary warning lights or for any location where primary power is unavailable.

Model	Voltage	Operating Current	Flash Rate/Minute	Mount
BPL26 *	12VDC	0.58 amps	65	Portable

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## BATTERY POWERED LIGHT (BPL26)



### SPECIFICATIONS

Lamp Life:	300 Hours	300 Hours
Light Source:	Incandescent	Incandescent
Operating Voltage:	12VDC	12VDC
Net Weight:	1.9 lbs.	0.86 kg
Shipping Weight:	3.0 lbs.	1.36 kg
Height:	11.12"	282.5 mm
Width:	7.22"	183.4 mm
Diameter of Dome:	5.5"	139.7 mm

\* Optimal hours under ideal conditions.

### HOW TO ORDER

- Specify model number and color
- Please refer to Model Number Index BPL26 beginning on page 370

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8263A084A
Dome, Blue	K8263A084A-01
Dome, Red	K8263A084A-02
Dome, Clear	K8263A084A-03
Dome, Green	K8263A084A-04
12VDC, 5 watt Lamp	K8107A151A



## RUGGED DESIGN FOR USE IN HAZARDOUS LOCATIONS

- XLT™ Technology
- Available in 24VAC/DC and 120-240VAC
- Five lamp/lens colors
- Flashing mode standard, configurable to Steady-burn
- 60,000 hour, vibration resistant LED lamp
- 3/4-inch NPT pipe mount
- Dome guard included
- Type 4X, IP66 enclosure, Marine Listed
- UL and cUL Listed

# Flashing LED Hazardous Location Warning Light with XLT™

## Model 191XL

The model 191XL is a hazardous location flashing signal light that features the super bright LED array with XLT™, eXtreme Light Technology. The unit is available in 24VAC/DC, 120VAC or 240VAC and five colors – Amber, Blue, Clear, Green, and Red. The 191XL comes standard in flashing mode and is field configurable to steady burn mode for maximum functionality.

The Model 191XL has been certified by UL as meeting Type 4X watertight and corrosion-resistant requirements, and IP66 rated. This hazardous location warning light has an aluminum base ready for mounting on a 3/4-inch NPT pipe. The base features electrostatically applied (e-coated) epoxy paint for corrosion-resistance. A dome guard fits over the glass dome to protect it against accidental collision with moving equipment, such as a forklift. The outer glass dome and LED pairing are available in five colors – Amber, Blue, Green, Red and Clear.

Federal Signal's super bright LED array used in the 191XL with XLT inside produces intense light output and 60,000 hours of service. Increased shock and vibration resistance add to this unit's rugged industrial portfolio of features.

The 191XL is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II Division 1, Groups E, F and G; and Class III.



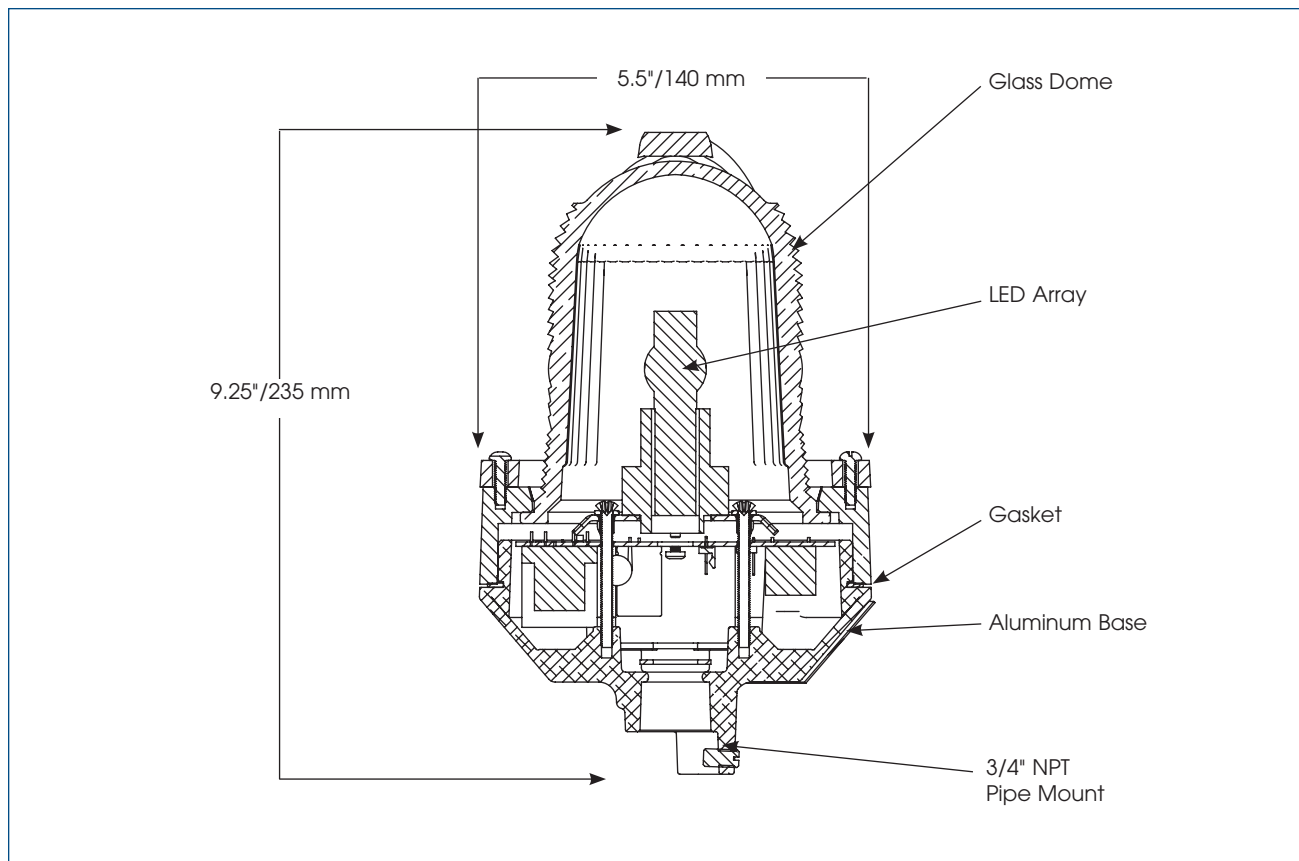
Model	Voltage	Operating Current	In-rush Current	Flash Rate/Minute	Mount
191XL-024 *	24VAC/DC	0.38 amps	1.75 amps, 5.0 mS	60	3/4" NPT Pipe
191XL-120-240 *	120/240VAC	0.21/0.13 amps	2.0 amps, 0.25 mS	60	3/4" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

## Hazardous Location Rating:

Hazardous Location	T-Code at Maximum Ambient Temperature, °C					
	24V	40°C 100-265VAC	24V	55°C 100-265VAC	24V	66°C 100-265VAC
Class I, Div 2, Groups A, B, C, D	T6	T6	T5	T5	T4A	T4A
Class II, Div 1, Groups E, F and G	T6	T6	T6	T6	T6	T6
Class III	T6	T6	T6	T6	T6	T6

## HAZARDOUS LOCATION LED WARNING LIGHT (191XL)



### SPECIFICATIONS

Lamp Life:	60,000 Hours	60,000 Hours
Light Source:	LED Array	LED Array
Operating Temperature:	-58°F to 150°F	-50°C to 66°C
Net Weight:	4.0 lbs.	1.82 kg
Shipping Weight:	4.25 lbs.	1.93 kg
Height (with Dome Guard):	9.25"	235.0 mm
Diameter:	5.5"	140.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index 191XL beginning on page 370

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Dome and Ring Assembly</u>	
PC Board Assembly, 24VDC	K2005455A	Glass Dome/Ring Assembly, Amber	K8449078C-01
PC Board Assembly, 120/240VAC	K2005416A	Glass Dome/Ring Assembly, Blue	K8449078C-06
LED array, Amber	K147169A-06	Glass Dome/Ring Assembly, Clear	K8449078C-04
LED array, Blue	K147169A-07	Glass Dome/Ring Assembly, Green	K8449078C-07
LED array, Clear	K147169A-10	Glass Dome/Ring Assembly, Red	K8449078C
LED array, Green	K147169A-08	Gasket	K8449080B
LED array, Red	K147169A-09		

LED



## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- XLT™ Technology
- Available in 24VAC/DC and 120-240VAC
- Available in flashing or steady-burn mode
- Five lens colors
- 60,000 hour LED
- 3/4-inch NPT pendant mount standard; other options available
- Dome guard optional
- UL and cUL Listed
- Type 4X, IP66 enclosure
- Marine Listed

# Explosion-Proof LED Warning Light with XLT™

## Model 27XL

Federal Signal's Model 27XL explosion-proof LED light with XLT™ produces 60 high-intensity flashes per minute. This warning light operates on 24VAC/DC, 120VAC, and 240VAC 50/60Hz and is UL Listed for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; Class I, Division 2, Groups A, B; and Class III. The 27XL is also Marine Rated.

eXtreme Light Technology (XLT) is a break through high-intensity LED array designed to meet the demands of industrial customers, producing maximum light output and superior lens fill. Configurable to either steady burning state or flashing mode XLT provides improved performance over standard LED's and increased versatility while maintaining low power consumption and vibration resistances expected from LED signals.

The 27XL features a standard low in-rush circuitry design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices.

The 27XL is Type 4X rated; constructed to IP66. Corrosion resistance is achieved with a powder epoxy finish applied over the copper-free aluminum housing. All exposed hardware is 316 grade stainless steel.

Federal Signal's Model 27XL is specifically designed for explosion-proof atmospheres and/or corrosive environments. Because it is easy to install and requires very low maintenance, it is ideal for use in areas such as oil rigs, mines, refineries, and chemical plants.



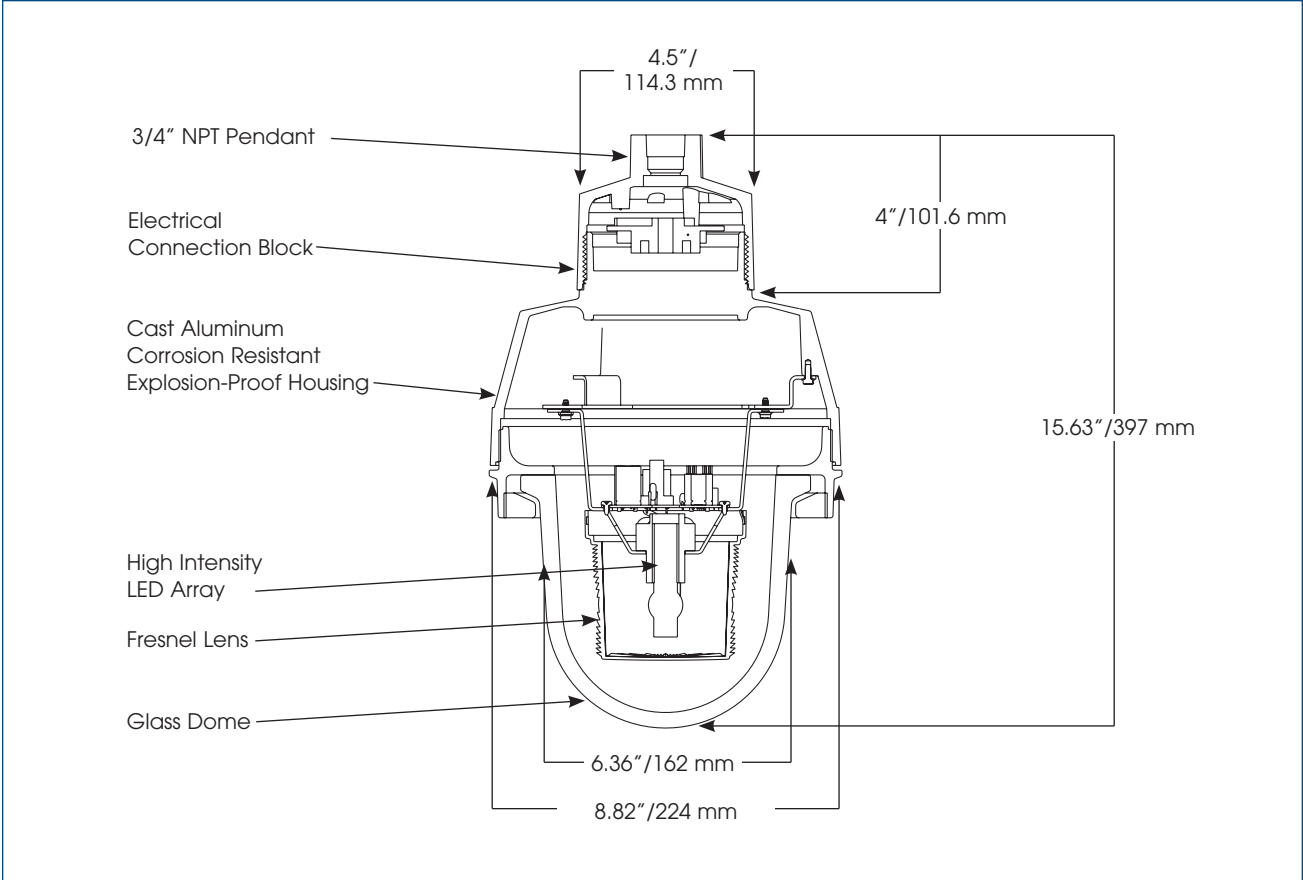
Model	Voltage	Operating Current	In-rush Current	Flash Rate/Minute	Mount
27XL-024 *	24VAC/DC	380mA	1.75 amps, 5.0 mS	60	3/4" NPT Pendant
27XL-120-240 *	120/240VAC	210/130mA	2.00 amps, 0.25 mS	60	3/4" NPT Pendant

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

## Hazardous Location Rating:

Hazardous Location	T-Code at Maximum Ambient Temperature, °C					
	40°C		55°C		66°C	
	24V	100-265VAC	24V	100-265VAC	24V	100-265VAC
Class I, Div 1, Groups C, D	T6	T6	T6	T6	T6	T6
Class I, Div 2, Groups A, B	T6	T6	T6	T5	T5	T4A
Class II, Div 2, Groups E, F, G	T6	T6	T6	T6	T6	T6
Class III	T6	T6	T6	T6	T6	T6

EXPLOSION-PROOF LED LIGHT (27XL)



SPECIFICATIONS

Lamp Life:	60,000 Hours	60,000 Hours
Light Source:	LED Array	LED Array
Ambient Operating Temp. Range:	-55°C to 66°C	Canada
	-25° to 65°C	USA
Net Weight:	14.1 lbs.	6.45 kg
Shipping Weight:	18.4 lbs.	8.35 kg
Height:	15.63"	397.0 mm
Diameter:	8.82"	224.0 mm

HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:
  - Dome Guard (DGXC)
  - Ceiling Mount (CMXC)
  - Wall Mount (WMXC)
- Please refer to Model Number Index 27XL beginning on page 371

REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Exterior Dome Assembly, Clear	K8444C271A-01	PC board assembly, 24VDC	K2005455A
Interior Lens Assembly, Amber	K8550292A-02	PC board assembly, 120/240VAC	K2005416A
Interior Lens Assembly, Blue	K8550292A-01	LED array, Amber	K147169A
Interior Lens Assembly, Clear	K8550292A	LED array, Blue	K147169A-01
Interior Lens Assembly, Green	K8550292A-04	LED array, Clear	K147169A-04
Interior Lens Assembly, Red	K8550292A-03	LED array, Green	K147169A-02
		LED array, Red	K147169A-03



# Streamline® Low Profile Mini Strobe

## Model LP1

### COMPACT, ECONOMICAL STROBE LIGHT — IDEAL FOR CONTROL PANEL APPLICATIONS

- Available in 12VDC, 24VDC, 120VAC and 240VAC
- Easy access dome available in five colors
- Surface mount
- Low profile — only 2.6" High by 2.33" Wide by 5" Long
- Type 4X, IP65 enclosure
- UL Listed

Federal Signal Model LP1 low profile strobe light is a rectangular Type 4X strobe light that is available in five colors: Amber, Blue, Clear, Green and Red. The LP1 is designed to be flush mounted to control panels or other flat surfaces. Mounting is accomplished with two supplied 1 1/4", 8/32 slotted hex bolts. A polypropylene gasket is supplied to create a water-tight and dust-tight seal. The gasket mounts between the base of the light and the mounting surface.

The user replaceable strobe tube is rated for 4,000 hours of life. The LP1 is available in 12VDC, 24VDC, 120VAC and 240VAC versions. The unit is UL and cUL Listed. Access to the printed circuit board and strobe tube is provided through the back of the unit.

With its Type 4X rating, small size, and bright signal, the LP1 suits an endless number of applications. The LP1 is especially suited for use on control panels, machines, above entry ways, on walls, and along assembly lines. The 12/24VDC units are suitable in battery backup systems and vehicular applications such as forklifts and moving guided vehicles.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela		Mount
				Peak <sup>1</sup>	ECP <sup>2</sup>	
LP1-012 *	12VDC	0.18 amps	80	108,000	30	Surface
LP1-024 *	24VDC	0.08 amps	80	108,000	30	Surface
LP1-120 *	120VAC	0.06 amps	80	108,000	30	Surface
LP1-240 *	240VAC	0.03 amps	80	108,000	30	Surface

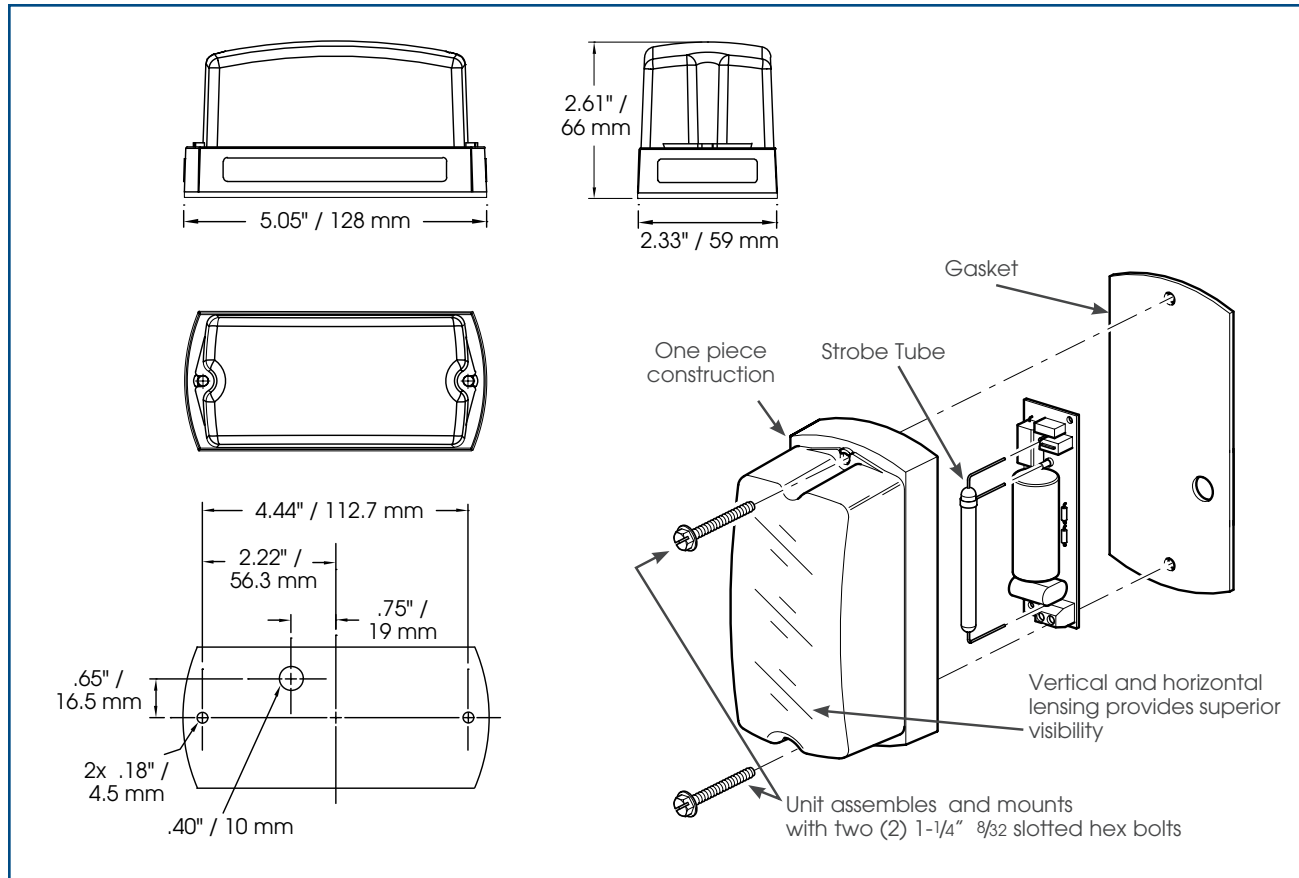
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## LOW-PROFILE MINI STROBE (LP1)



### SPECIFICATIONS

Lamp Life:	4,000 Hours	4,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 151°F	-35°C to 66°C
Net Weight:	0.23 lbs.	0.1 kg
Shipping Weight:	0.6 lbs.	0.27 kg
Height:	2.61"	6.63 cm
Width:	2.33"	5.92 cm
Length:	5.05"	12.83 cm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index LP1 beginning on page 371

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Replacement Strobe Tube	K149128A
Dome, Amber	K8435711A-02
Dome, Blue	K8435711A-03
Dome, Clear	K8435711A
Dome, Green	K8435711A-04
Dome, Red	K8435711A-01



# StreamLine® Low Profile Strobe Light

Models LP3P, LP3S, LP3T

## PERFECT SIZE MEETS SUPERIOR PERFORMANCE

- Available in 12-48VDC, 120VAC and 240VAC
- Surface mount, T-mount, or integrated 1/2-inch NPT pipe mount
- Five dome colors
- Screw-on lens
- Low profile — Model LP3S is only 5" high
- Type 4X, IP66 enclosure
- PLC and triac compatible
- Optional dome guard for LP3S and LP3T
- UL and cUL Listed, CSA Certified and CE Approved\*

\* CE Approval for P and S models only.

Federal Signal Model LP3 low profile strobe light is a Type 4X strobe that is available in five colors: Amber, Blue, Clear, Green and Red. An optional dome wire guard is available for the LP3S and LP3T.

The LP3 is offered in three mounting configurations. LP3P features an integrated 1/2-inch NPT pipe mount. LP3S features a three-hole surface mount — ideal for control panels and other flat or flush surfaces. The “T-mount” LP3T has a popular 2-hole design for wall or flush mounting.

Both the LP3S and LP3T include a surface gasket to complete the Type 4X installation. An optional dome guard is available for use with the LP3S and LP3T. All LP3 units feature a threaded screw-on lens that provides tool-free wiring and strobe tube replacement. The strobe tube is rated for 7,000 hours.

The LP3 comes in three voltage variations: 12-48VDC, 120VAC and 240VAC. The state-of-the-art strobe mechanism produces 2.2 joules of energy, while drawing relatively low level amperage.

StreamLine® strobes feature high-quality, long-life strobe lamps which are designed to reduce tungsten build-up for longer lamp maintenance cycles. Careful consideration is given to the relationship between lamp shape and lens design for maximum light output. StreamLine products make use of surface mount technology, which provides a more powerful light in a much smaller package. The dry-electrolyte capacitor used in StreamLine products runs cooler than those used in many competitive strobes, resulting in a more reliable product that won't fail due to overheating.

Model	Voltage	Operating Current	Flash Rate/ Minute	Joule Output	Candela Peak <sup>1</sup>	ECP <sup>2</sup>
LP3 <b>** -012/048 *</b>	12-48VDC	0.44-0.10 amps	65-95	2.2	175,000	51.5
LP3 <b>** -120 *</b>	120VAC	0.10 amps	65-95	2.2	175,000	51.5
LP3 <b>** -240 *</b>	240VAC	0.07 amps	65-95	2.2	175,000	51.5

\*\* Indicates Mounting Style: (S) Surface Mount, (P) Pipe Mount (T) T-Mount,

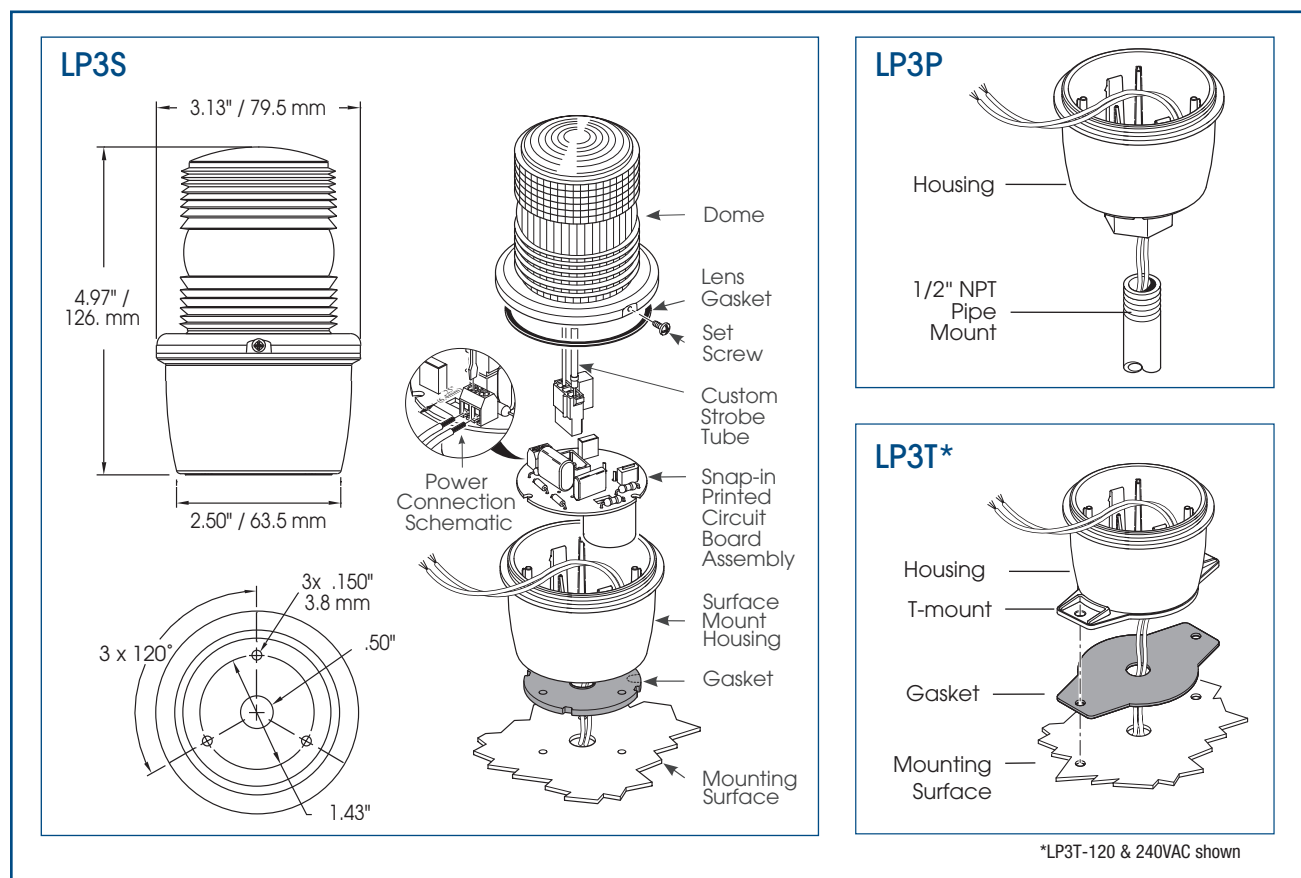
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## STREAMLINE® LOW PROFILE STROBE LIGHT (LP3S/LP3P/LP3T)



### SPECIFICATIONS

Lamp Life:	7,000 Hours	7,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	7.3 oz.	206.96 g
Shipping Weight:	8.5 oz.	240.98 g
Diameter:	3.125"	7.94 cm
Height (from bottom):		
LP3P	5.7"	14.48 cm
LP3S	5.0"	12.7 cm
LP3T	5.1"	12.95 cm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Wire/Dome Guard (LP3G)  
for LP3S, LP3T
- Please refer to Model Number Index  
LP3 (P,S,T) beginning on page 371

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8589063A	PC Assembly, 12-48VDC	K2001316B
Dome, Blue	K8589063A-01	PC Assembly, 120VAC	K2001317B
Dome, Clear	K8589063A-02	PC Assembly, 240VAC	K2001317B-01
Dome, Green	K8589063A-03	Gasket, Lens	K8589013A
Dome, Red	K8589063A-04	Gasket, LP3S	K8589011A
Strobe Tube	K149130A	Gasket, LP3T	K8589012A



# Streamline® Low Profile Strobe Light

Models LP3S, LP3E, LP3M

## PERFECT SIZE MEETS SUPERIOR PERFORMANCE

- LP3S and LP3M are available in 12-48VDC, 120VAC and 240VAC; LP3E in 120VAC
- Surface mount, Edison mount, or integrated 1/2-inch NPT pipe mount
- Five dome colors
- Screw-on lens provides easy access
- Low profile — Model LP3S is only 5" high
- Type 4X, IP66 enclosure
- PLC and triac compatible
- UL and cUL Listed, CSA Certified and CE Approved\*

\* CE Approval for S and M models only.

Federal Signal introduces the Model LP3 low profile strobe light. This Type 4X strobe is available in five colors: Amber, Blue, Clear, Green and Red.

The LP3 is offered in three mounting configurations: the LP3S features a three-hole surface mount — ideal for control panels and other flat or flush surfaces; the LP3E features a standard A-19 medium Edison screw-in base; the LP3M features a 1/2" NPT male pipe mount and 18' wire leads.

Both the LP3S and LP3M include a surface gasket to complete the Type 4X installation. An optional dome guard is available for use with the LP3M when installed flush with a panel. All LP3 units feature a unique threaded screw-on lens to provide for tool free wiring and strobe tube replacement. The strobe tube is rated for 7,000 hours.

LP3 comes in three voltage variations: 12-48VDC, 120VAC and 240VAC. The state-of-the-art strobe mechanism produces 2.2 joules of energy, while drawing relatively low amperage.

StreamLine® strobes feature high-quality, long-life strobe tubes which are designed to reduce tungsten build-up for longer lamp maintenance cycles. Careful consideration is given to the relationship between tube shape and lens design for maximum light output. StreamLine products make use of surface mount technology, which provides a more powerful light in a much smaller package. The high-quality dry-electrolyte capacitor used in StreamLine products runs cooler than those used in many competitive strobes, resulting in a more reliable product that won't fail due to overheating.

Model	Voltage	Operating Current	Flash Rate/ Minute	Joule Output	Candela Peak <sup>1</sup>	ECP <sup>2</sup>
LP3 ** -012/048 *	12-48VDC	0.44-0.10 amps	65-95	2.2	175,000	51.5
LP3 ** -120 *	120VAC	0.10 amps	65-95	2.2	175,000	51.5
LP3 ** -240 *	240VAC	0.07 amps	65-95	2.2	175,000	51.5

\*\* Indicates Mounting Style: (S) Surface Mount, (E) Edison A-19 Screw-in Base or (M) Male Pipe Mount

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

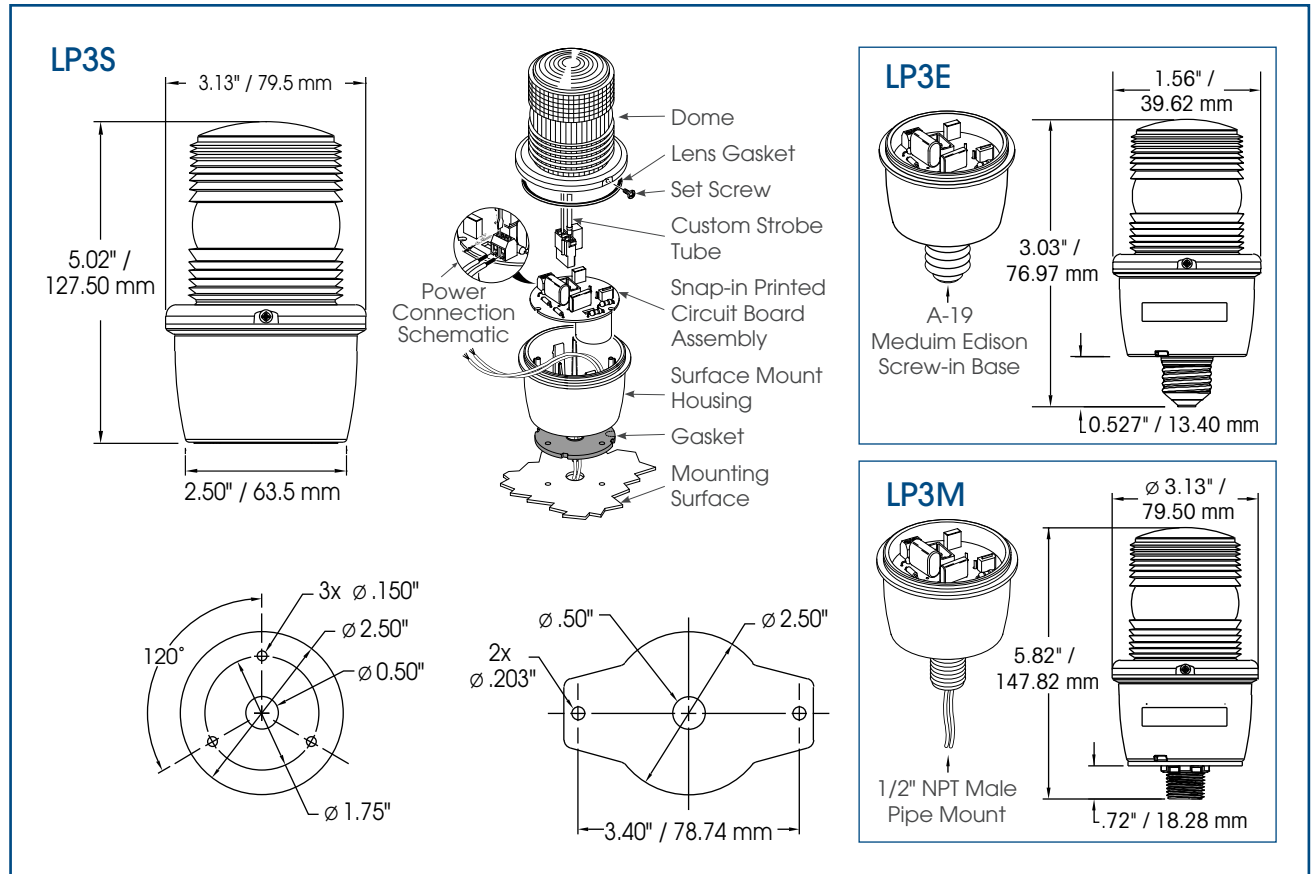
<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily





## STREAMLINE® LOW PROFILE STROBE LIGHT (LP3S/LP3E/LP3M)



### SPECIFICATIONS

Lamp Life:	7,000 Hours	7,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	7.3 oz.	206.96 g
Shipping Weight:	8.5 oz.	240.98 g
Diameter:	3.125"	7.94 cm
Height (from bottom):		
LP3S	5.0"	12.7 cm
LP3E	6.1"	15.5 cm
LP3M	5.8"	14.7 cm

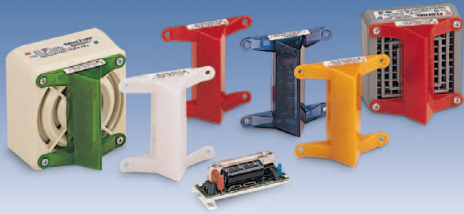
### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Wire/Dome Guard (LP3G)  
for LP3S and LP3M
- Please refer to Model Number Index  
LP3 (E.M) beginning on page 371

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8589063A	PC Assembly, 12-48VDC	K2001316B
Dome, Blue	K8589063A-01	PC Assembly, 120VAC	K2001317B
Dome, Clear	K8589063A-02	PC Assembly, 240VAC	K2001317B-01
Dome, Green	K8589063A-03	Gasket, Lens	K8589013A
Dome, Red	K8589063A-04	Gasket, Base LP3S	K8589011A
Strobe Tube	K149130A		





# Visalert® Strobe Light

## Model VALS

### STROBE WARNING LIGHT

- Available in 12VDC and 24VDC, 120VAC and 240VAC
- Five lens colors
- 4,000 hour strobe tube
- Surface mount on Federal Signal audible signaling devices or control panel
- Indoor/outdoor use
- Type 3R, IP44 enclosure
- UL Listed and CSA Certified

Federal Signal's Visalert® is a three dimensional, triangular warning light designed to be mated with Federal Signal's Model 350 Vibratone® horn and the Model 50GC SelectTone® speaker/amplifier. The Model VALS can also be used as a stand alone device. Visalert is available in five lens colors: Amber, Blue, Clear, Green and Red.

Knockouts on the 50GC, 350 and the 450 audible devices (sold separately) ensure easy installation. The units can be either independently or simultaneously wired with the audible device. Model VALS uses a linear strobe tube and all the circuitry is contained within the lens.

Visalert units are recommended for use in industrial applications and situations where effective visual warning is needed. The Visalert can be surface mounted on the Model 350 and 450 horn or Model 50GC speaker/amplifier.

Federal Signal's Visalert strobe light is an affordable, low-maintenance strobe light in a compact size that is perfect for control panel applications.

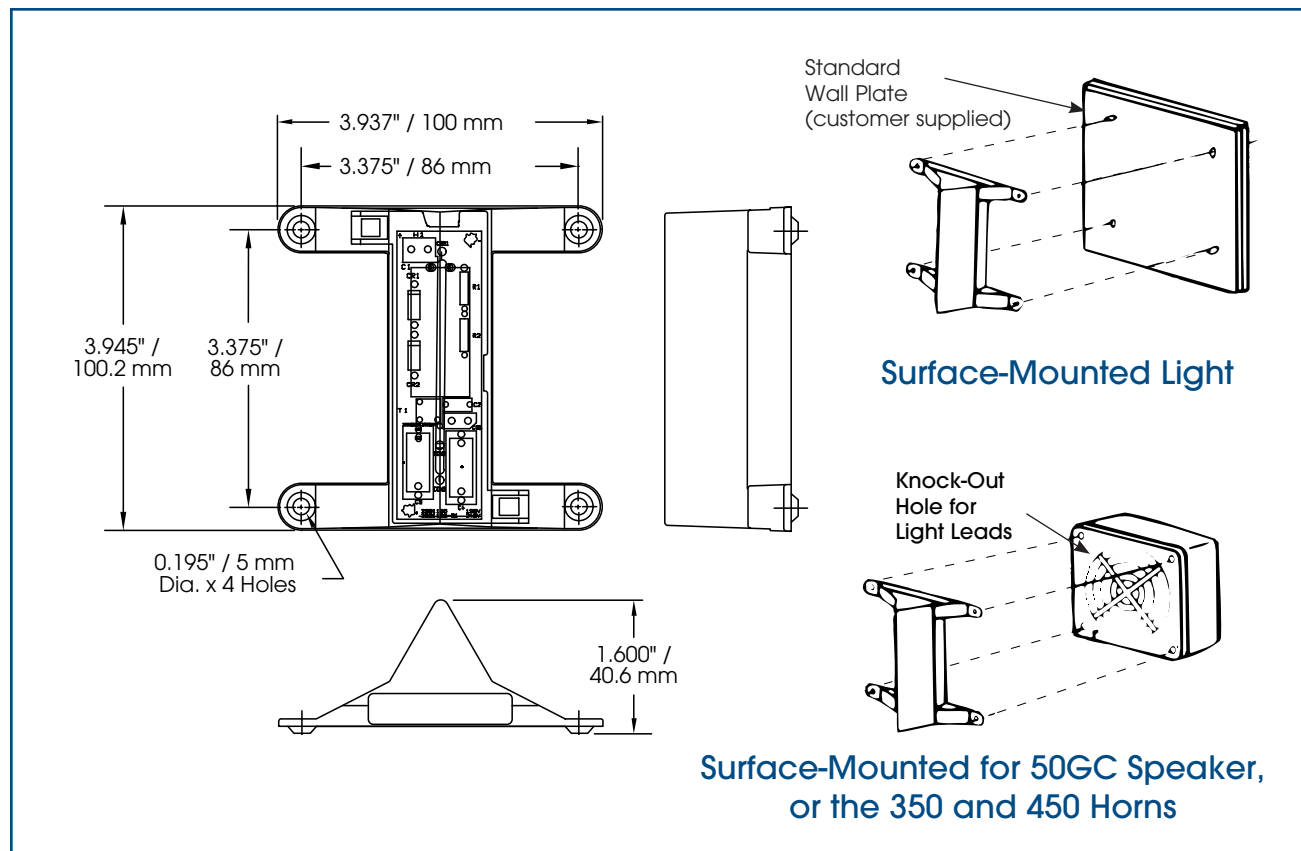
Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	Mount
<b>VALS-012 *</b>	12VDC	0.18 amps	80	108,000	Surface
<b>VALS-024 *</b>	24VDC	0.08 amps	80	108,000	Surface
<b>VALS-120 *</b>	120VAC 50/60HZ	0.06 amps	80	108,000	Surface
<b>VALS-240 *</b>	240VAC 50/60HZ	0.03 amps	80	108,000	Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse



## VISALERT® STROBE LIGHT (VALS)



### SPECIFICATIONS

Lamp Life:	4,000 Hours	4,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	0.1 lbs.	0.057 kg
Shipping Weight:	0.25 lbs.	0.113 kg
Height:	3.95"	100.3 mm
Width:	3.94"	100.0 mm
Depth:	1.6"	40.6 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Speaker (50GC, page 174)  
Horns (350 and 450, page 124)
- Please refer to Model Number Index VALS beginning on page 372

### REPLACEMENT PARTS

<b>Description</b>	<b>Part Number</b>	<b>Description</b>	<b>Part Number</b>
Lens, Amber	K8435D539A	Lens, Green	K8435D539A-03
Lens, Blue	K8435D539A-08	Lens, Red	K8435D539A-07
Lens, Clear	K8435D539A-02	Strobe Tube	K149128A
		Gasket	K8435A225



# Streamline® Low Profile Mini Strobe

## Model LP6

### COMPACT, ECONOMICAL STROBE LIGHT

- Available in 12-48VDC and 120VAC
- Screw-on dome available in five colors
- Surface mount
- Low profile — only 3<sup>5</sup>/<sub>8</sub>" high
- Type 4X enclosure
- UL and cUL Listed and CSA Certified

The Model LP6 is a very compact, high power strobe light designed for applications where space is critical. At 3<sup>5</sup>/<sub>8</sub>" high, this strobe light is ideal for fork lift applications where head room is important. The LP6 also mounts easily to small control panels.

The LP6 features a two joule power supply that works in multiple voltages from 12-48VDC to 120VAC. Modular construction incorporates a powerful flash tube and vibration resistant circuit board.

The LP6 housing utilizes a unique screw-on dome for easy relamping and service. The polycarbonate base and lens combination gives this strobe excellent impact and corrosion resistance and meets Type 4X requirements. The LP6 is also UL Listed, cUL Listed and CSA Certified.

The LP6 is available in five colors — Amber, Blue, Clear, Green and Red.

This economical light does not sacrifice power for price or size.

Model	Voltage	Operating Current	Flash Rate/Minute	Joule Output	Candela Peak <sup>1</sup>	ECP <sup>2</sup>
LP6-012/048 *	12-48VDC	0.44-0.10 amps	65-95	2.2	175,000	51.5
LP6-120 *	120VAC	0.10 amps	65-95	2.2	175,000	51.5

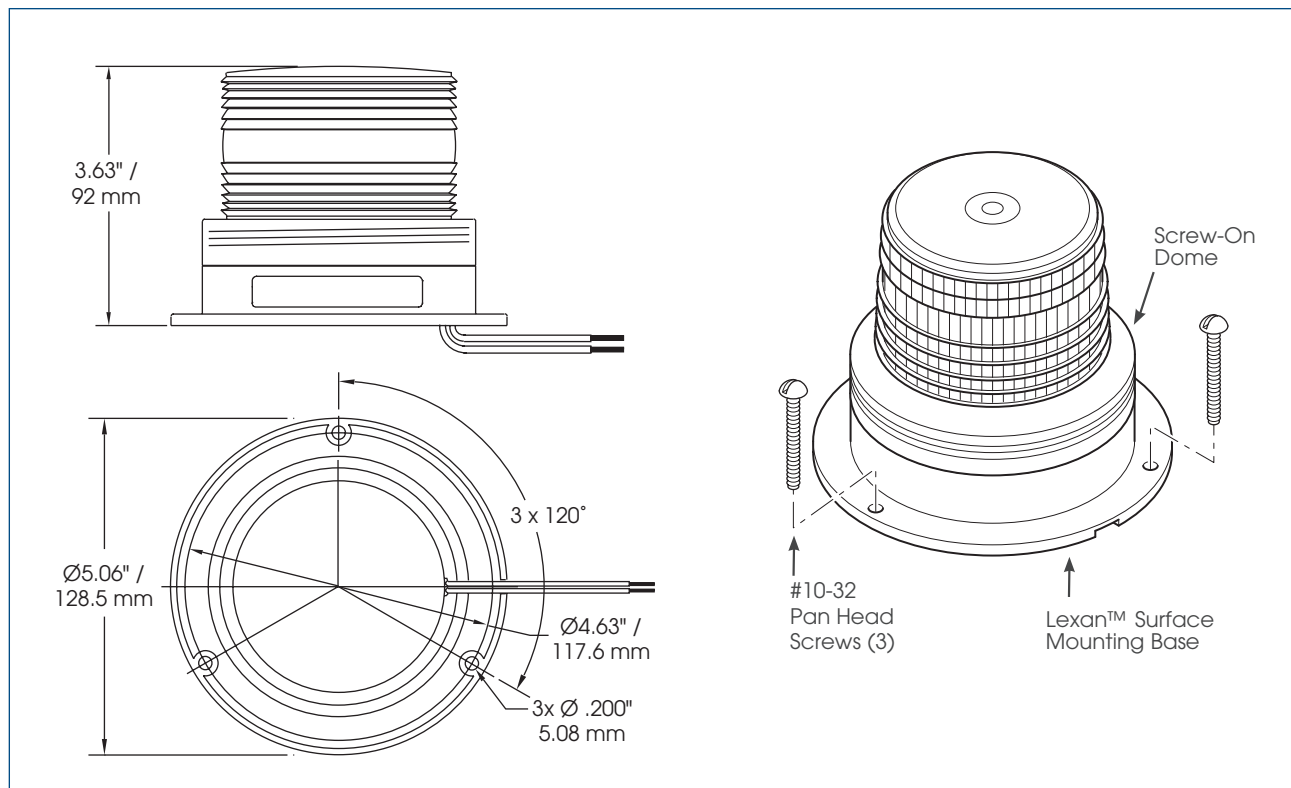
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## STREAMLINE® LOW PROFILE MINI STROBE (LP6)



### SPECIFICATIONS

Lamp Life:	7,000 Hours	7,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 65°C
Net Weight:	0.65 lbs.	0.29 kg
Shipping Weight:	0.85 lbs.	0.39 kg
Height:	3.63"	9.2 cm
Diameter:	5.0"	12.7 cm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index LP6 beginning on page 372

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8589037A	PC Assembly, 012-048VDC	K2005083A-01
Dome, Blue	K8589037A-01	PC Assembly, 120VAC	K2001887A-02
Dome, Clear	K8589037A-02	O-Ring	K8589038A
Dome, Green	K8589037A-03	Base Gasket	K8589039A
Dome, Red	K8589037A-04	Strobe Tube	K149130A

# Electraflash® Strobe Warning Light

## Model 141ST



### DESIGNED FOR INDUSTRIAL OR VEHICULAR USE

- Available in 12VDC, 24VDC, and 120VAC
- Four dome colors
- 4,000 hour strobe tube
- Surface mount or integrated 1/2-inch NPT pipe mount
- Indoor/outdoor use
- Type 3R enclosure
- UL Listed and CSA Certified

Federal Signal's Electraflash® 141ST is an economical strobe light designed for a variety of industrial uses. This compact warning light is less than six inches tall and six inches in diameter. Models are available in four fresnel dome colors, including Amber, Blue, Green and Red. All models are UL Listed for indoor/outdoor use and the 120VAC models are CSA Certified.

The Model 141ST is available in 12VDC, 24VDC, and 120VAC and includes a removable strobe mechanism. The 12VDC and 24VDC units have three holes for flat surface mounting. The 120VAC version come ready to mount on a 1/2-inch NPT pipe. Optional wall mounting brackets (Model LWMB2) or corner mounting brackets (Model LCMB2) is available for the 120VAC and unit.

Federal Signal's Electraflash strobe lights are designed for both indoor and outdoor industrial environments. The unit's convenient size and intense light output make it ideal for use on maintenance vehicles, fork lifts, and other material handling equipment. The economical Model 141ST effectively alerts of hazardous conditions or dangerous areas.

Federal Signal's Electraflash strobe warning light is an affordable visual signal which is ideally suited for light duty applications.

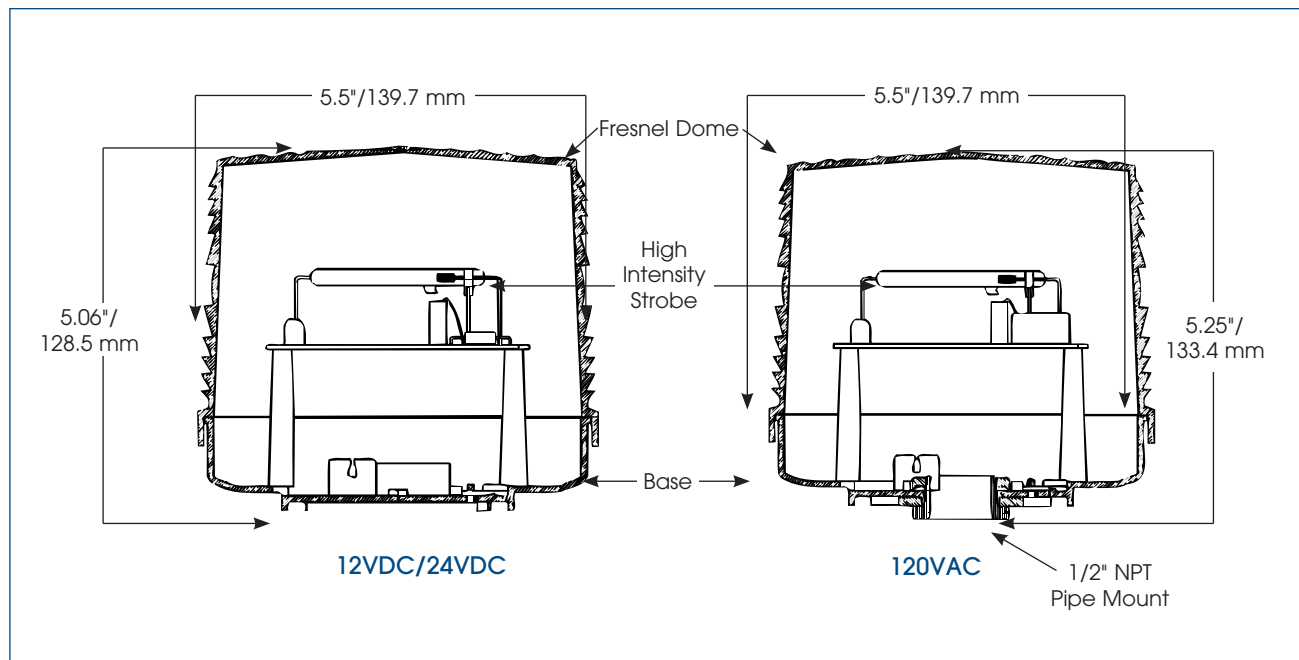
Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	Mount
<b>141ST-012 *</b>	12VDC	0.18 amps	80	100,000	Surface
<b>141ST-024 *</b>	24VDC	0.08 amps	80	100,000	Surface
<b>141ST-120 *</b>	120VAC 50/60HZ	0.06 amps	80	100,000	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse



## ELECTRAFLASH® STROBE LIGHT (141ST)



### SPECIFICATIONS

Lamp Life:	4,000 Hours	4,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:		
DC Models	0.8 lbs.	0.4 kg
AC Models	0.9 lbs.	0.4 kg
Shipping Weight:		
DC Models	1.3 lbs.	0.5 kg
AC Models	1.4 lbs.	0.5 kg
Height:		
DC Models	5.06"	128.5 mm
AC Models	5.25"	133.4 mm
Diameter:		
DC Models	5.5"	139.7 mm
AC Models	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories: (120VAC only):  
    Corner Bracket (LCMB2)  
    Wall Bracket (LWMB2)
- Please refer to Model Number Index 141ST beginning on page 372

### REPLACEMENT PARTS

<b>Description</b>	<b>Part Number</b>	<b>Description</b>	<b>Part Number</b>
Dome, Amber	K8263079A	PC Assembly, 24VDC	K2001201B-01
Dome, Blue	K8263079A-01	PC Assembly, 120VAC	K2001195D
Dome, Green	K8263079A-03	Strobe Tube	K149128A
Dome, Red	K8263079A-02	Pipe Mount Kit	K8263093A
PC Assembly, 12VDC	K2001201B		





# Battery Powered Strobe Warning Light

## Model BPL26ST

### PORTABLE WARNING LIGHT

- 12VDC — uses two standard 6VDC lantern batteries (not included)
- 4,000 Hour strobe tube
- Five dome colors
- Type 3R weatherproof enclosure
- Magnetic mount

Federal Signal's Model BPL26ST is a portable, battery-powered strobe warning light which flashes 65 times per minute. Components are moisture-proof and reverse polarity protected to ensure extended battery life and trouble-free performance.

The BPL26ST is available in five fresnel dome colors – Amber, Blue, Clear, Green and Red. For increased durability, the dome is made of impact-resistant polycarbonate materials and the base is constructed from a high-density polyethylene. A flexible rubber seal covers the on/off switch to protect it from the elements.

Two Magnetic pads (not shown) are included for simple yet secure, temporary mounting.

Power is supplied by two standard 6VDC, spring terminal lantern batteries (not included).

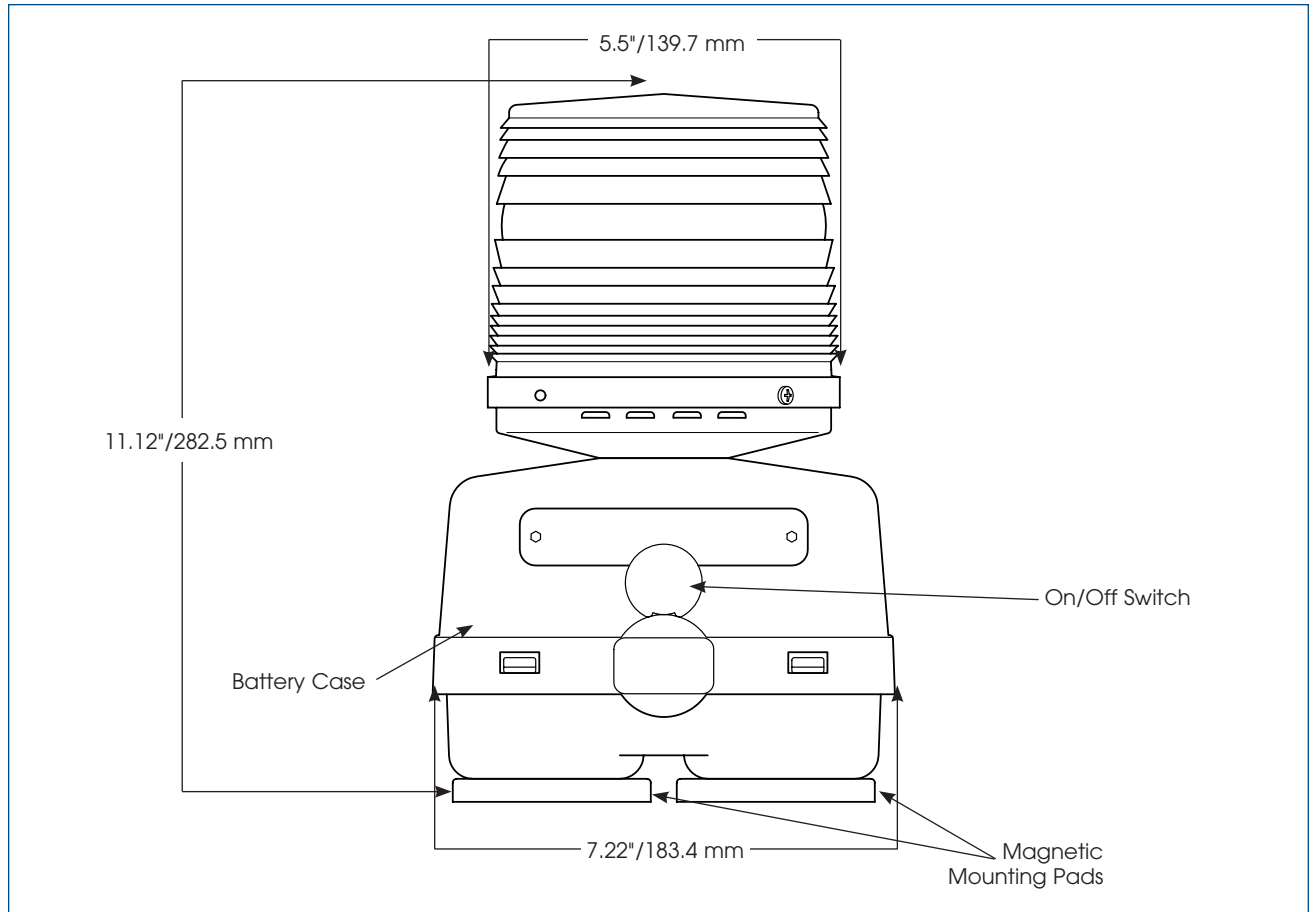
The Model BPL26ST is ideal for job sites requiring temporary warning lights or for any location where primary power is unavailable.

Model	Voltage	Operating Current	Flash Rate/ Minute	Mount
BPL26ST- *	12VDC	0.48 amps	60	Magnetic

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## BATTERY POWERED LIGHT (BPL26ST)



### SPECIFICATIONS

Lamp Life:	4,000 Hours	4,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Voltage:	12VDC	12VDC
Net Weight:	2.3 lbs.	1.04 kg
Shipping Weight:	3.5 lbs.	1.59 kg
Height:	10.5"	266.7 mm
Width:	7.22"	183.4 mm
Diameter of Dome:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model number and color
- Optional Accessories:  
Hazardous Wall Bracket (LHWB)
- Please refer to Model Number Index  
BPL26ST beginning on page 372

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8263079A
Dome, Blue	K8263079A-01
Dome, Clear	K8263079A-04
Dome, Red	K8263079A-02
Dome, Green	K8263079A-03
Strobe Tube	K8107215A



## LIGHT DUTY STROBE LIGHT

- Available in 12-24VDC, 120VAC and 240VAC
- Six dome colors
- 10,000 hour strobe tube
- Integrated 1/2-inch NPT pipe and surface mount
- Indoor/outdoor use
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

# Fireball® Strobe Warning Light

## Model FB2PST and FB2PST-I

Federal Signal's brightest and most compact strobe light, the Fireball® emits a powerful "lightning bolt" flash of light. Approximately five inches tall and four inches in diameter and rated at 300 effective candela, the Fireball is an economical solution to a wide variety of stationary and vehicular warning requirements. The Fireball is available in 12-24VDC, 24VDC, 120VAC and 240VAC. All models are UL Listed and CSA Certified. The FB2PST is available in six colors – Amber, Blue, Clear, Green, Magenta, and Red.

The 24VDC Model FB2PST-I features a voltage in-rush limiting PCB design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices.

The Fireball features a unique dome that twists off easily for quick dome and lamp replacements. The newly redesigned base features an integrated 1/2-inch NPT pipe mount base as well as the three holes required for surface mount configurations. Black epoxy paint is electrostatically applied to the base for superior corrosion resistance. The Fireball dome and base design provides a watertight, dust-tight and corrosion resistant Type 4X rating.

The FB2PST is designed for stationary pipe and surface mount applications.

The Fireball can be used in any application where a superior visual signal is needed. It is especially effective in the warning of industrial hazards, process control, status indication and in areas with high ambient noise levels.

Federal Signal's Fireball Strobe is a very low-maintenance warning light for industrial applications where a vibration-resistant light is required to signal an emergency or process status.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	Candela ECP <sup>2</sup>	Mount
<b>FB2PST-012-024 *</b>	12-24VDC	1.70-0.70 amps	80	1,000,000	300	1/2" NPT Pipe/Surface
<b>FB2PST-I-024 *</b>	24VDC	0.70 amps (2.0 amp In-rush)	80	1,000,000	300	1/2" NPT Pipe/Surface
<b>FB2PST-120 *</b>	120VAC 50/60Hz	0.25 amps	90	1,000,000	300	1/2" NPT Pipe/Surface
<b>FB2PST- 240 *</b>	240VAC 50/60Hz	0.20 amps	90	1,000,000	300	1/2" NPT Pipe/Surface

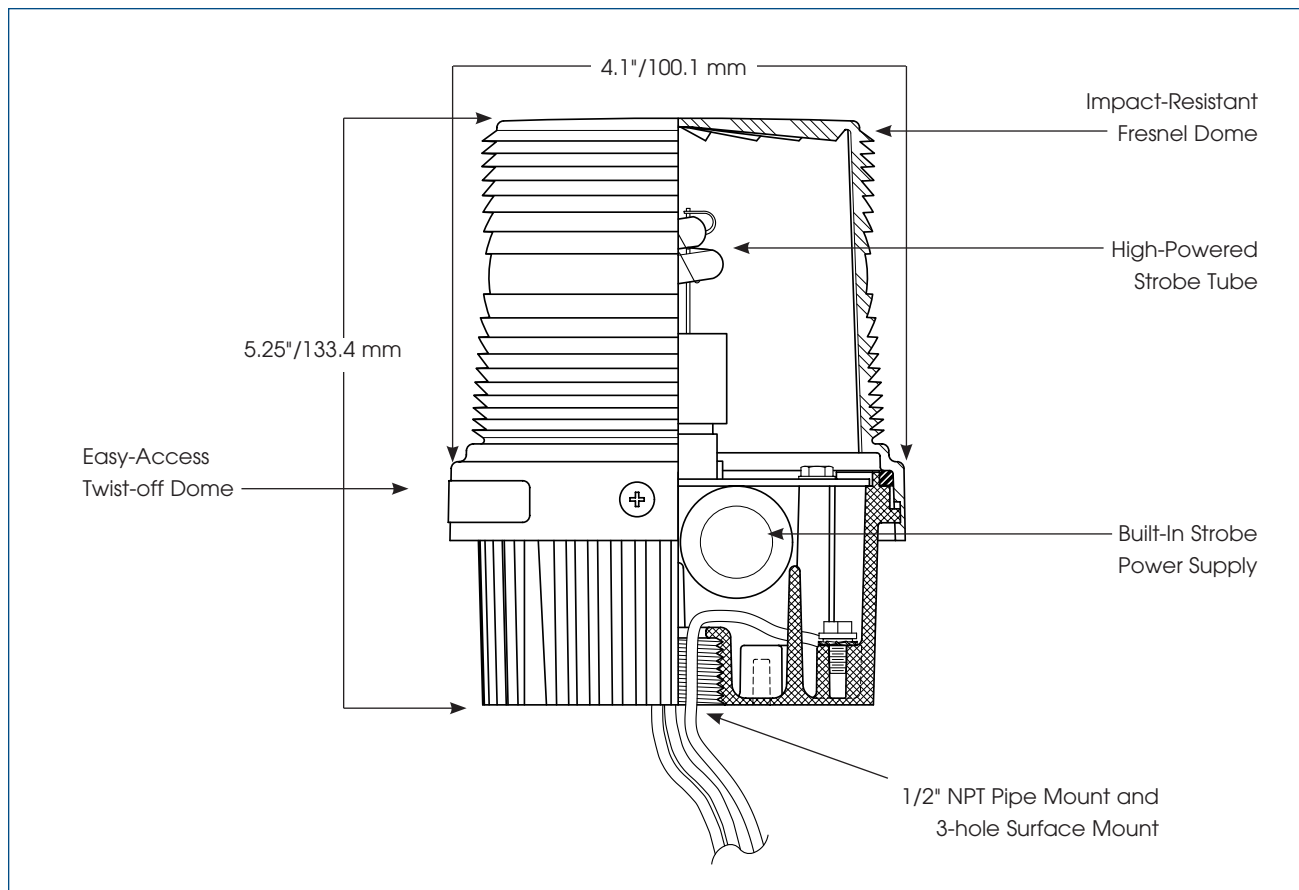
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green (M) Magenta or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## FIREBALL® STROBE WARNING LIGHT (FB2PST / FB2PST-1)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	2.0 lbs.	0.9 kg
Shipping Weight:	2.12 lbs.	0.96 kg
Height:	5.25"	133.4 mm
Diameter:	4.10"	100.1 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)\*  
Wall Bracket (LWMB2)\*
- Please refer to Model Number Index FB2PST beginning on page 372

\* Not Type 4X rated.

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550320A	PC Assembly, 12-24VDC	K2001202C
Dome, Blue	K8550320A-01	PC Assembly, 120VAC	K200D866G
Dome, Clear	K8550320A-02	PC Assembly, 240VAC	K200D866G-01
Dome, Green	K8550320A-03	Strobe Tube, Series A4, A5, B	K8107177A
Dome, Red	K8550320A-04	120VAC Fuse	K148A155A-01
Dome, Magenta	K8550320A-05		



## DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- 12-24VDC, 24VDC, 120VAC and 240VAC
- Six lens colors
- 5,000 hour, high-intensity strobe tube
- 1/2-inch NPT pipe mount
- Indoor/outdoor use
- Type 4X, IP66 enclosure (Dome up orientation)
- UL and cUL Listed and CSA Certified

# Electraray® Hazardous Location Strobe Warning Light

## Model 225XST and 225XST-I

Federal Signal's Electraray® Model 225XST hazardous location strobe light provides 80 high intensity flashes per minute. This warning light is available in 12-24VDC, 24VDC, 120VAC and 240VAC.

The Model 225XST has been certified by UL as meeting Type 4X water tight and corrosion resistant requirements; constructed to IP66 (in dome up orientation). This hazardous location warning light has a black polyurethane coated base and the inner fresnel lens is available in six colors (including magenta). The clear polycarbonate outer dome can be quickly removed for easy access to inspect the unit or change the lamp. The 225XST has an effective candela of 240 and a 580,000 peak candela.

The 24VDC 225XST-I features a voltage in-rush limiting PCB design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices.

The 225XST is UL Listed and CSA Certified for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III.

Model 225XST is ideal for wet, corrosive atmospheres like those found in food processing industries, or anywhere a visual signa is needed.

Federal Signal's affordable Electraray Strobe Warning Light is specifically designed for use in hazardous locations or where corrosive materials are present.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
<b>225XST-012-024 *</b>	12-24VDC	1.70-0.70 amps	80	580,000	240	1/2" NPT Pipe
<b>225XST-I-024 *</b>	24VDC	0.70 amps (2.0 amp In-rush)	80	580,000	240	1/2" NPT Pipe
<b>225XST-120 *</b>	120VAC	0.25 amps	80	580,000	240	1/2" NPT Pipe
<b>225XST-240 *</b>	240VAC	0.20 amps	80	580,000	240	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green (M) Magenta or (R) Red

## Hazardous Location Rating:

### T-Code at Maximum Ambient Temperature, °C

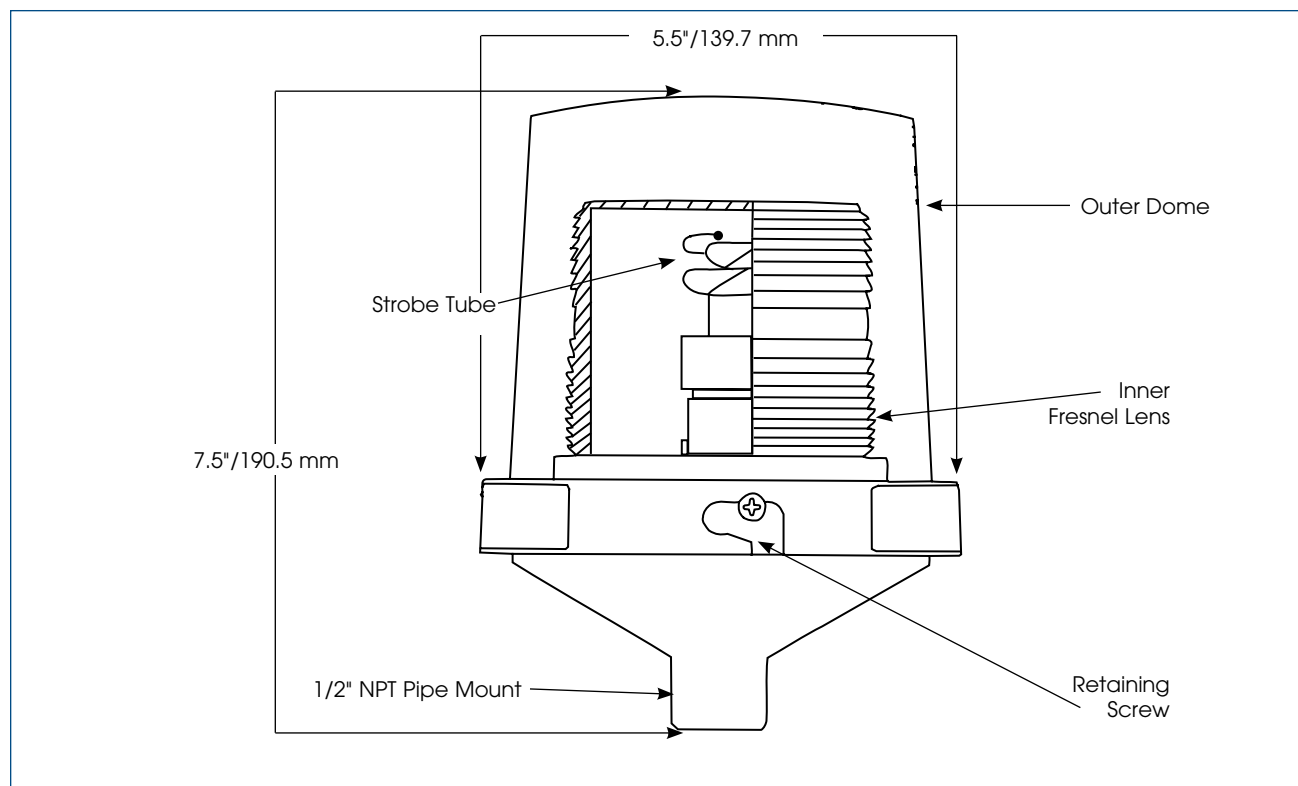
Hazardous Location	40°C
<b>Class I, Div 2, Groups A, B, C, D</b>	T2A/280
<b>Class II, Div 2, Groups F, G</b>	T5/100
<b>Class III</b>	T5/100

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## ELECTRARAY® HAZARDOUS LOCATION WARNING LIGHT (225XST/225XST-I)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-40°F to 104°F	-40°C to 40°C
Net Weight:	1.5 lbs.	0.68 kg
Shipping Weight:	2.0 lbs.	0.9 kg
Height:	7.5"	190.5 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Hazardous Wall Bracket (LHWB)
- Please refer to Model Number Index 225XST/225XST-I beginning on page 372

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
<b>Interior Lens</b>		<b>Exterior Dome, Clear</b>	K8444D219C-04
Amber	K8550C095A-02	PC Assembly, 24VDC	K2001202C-01
Blue	K8550C095A-01	PC Assembly, 120VAC	K2001905A
Clear	K8550C095A	PC Assembly, 240VAC	K2001905A-01
Green	K8550C095A-04	Strobe Tube	K8107177A
Magenta	K8550C095A-07		
Red	K8550C095A-03		





# Hazardous Location Warning Light

## Model 151XST

### RUGGED DESIGN FOR USE IN HAZARDOUS LOCATIONS

- Available in 12-24VDC, 120VAC and 240VAC
- Six dome colors
- 10,000-hour high-intensity strobe
- 3/4-inch NPT pipe mount
- Dome guard included
- Indoor/outdoor use
- Type 4X, IP66 enclosure
- Marine Rated
- UL and cUL Listed and CSA Certified

Federal Signal's Model 151XST hazardous location strobe light provides 80 high-intensity flashes per minute. This warning light is available in 12-24VDC, 120VAC and 240VAC, 50/60Hz.

The Model 151XST strobe light is UL Listed and CSA Certified for Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; and Class III.

The 151XST meets Type 4X water-tight, dust-tight, and corrosion-resistant requirements; constructed to IP66. This hazardous location warning light has an aluminum base, coated for corrosion-resistance that is ready for mounting on a 3/4-inch NPT pipe. The Dome Guard (included) fits over the glass dome to protect it against accidental collision with moving equipment, such as forklifts.

The 151XST has an effective candela (ECP) of 165 and a 520,000 peak candela. It is available in six dome colors, including Amber, Blue, Clear, Green and Red (Magenta upon request).

Federal Signal's rugged 151XST strobe warning light is specifically designed for hazardous locations or corrosive environments where a very bright visual signal is required. This warning light can be used for plant evacuation or other communication needs.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
<b>151XST-012-024 *</b>	12-24VDC	1.3-0.60 amps	80	520,000	165	3/4" NPT Pipe
<b>151XST-120 *</b>	120VAC 50/60Hz	0.35 amps	80	520,000	165	3/4" NPT Pipe
<b>151XST-240 *</b>	240VAC 50/60Hz	0.18 amps	80	520,000	165	3/4" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green (M) Magenta or (R) Red

### Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C

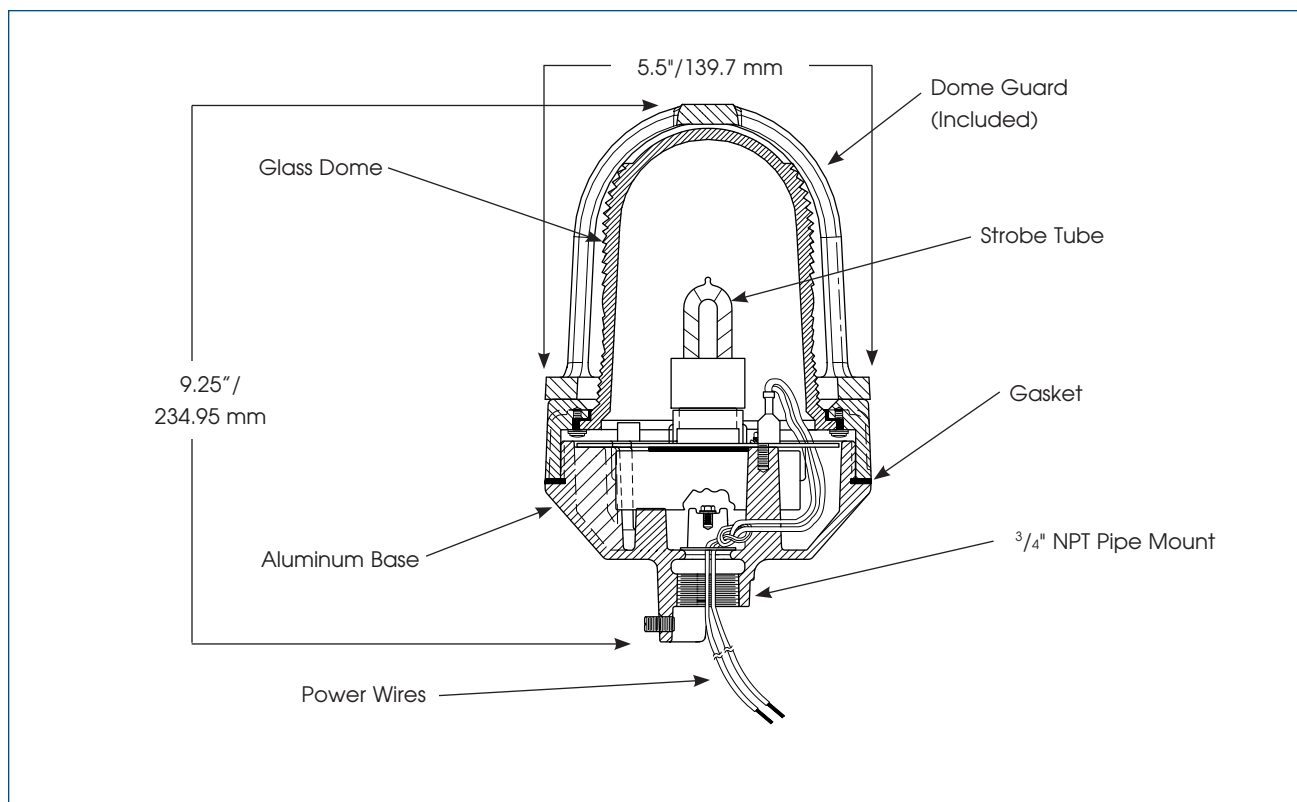
Hazardous Location	66°C
<b>Class I, Div 2, Groups A, B, C &amp; D</b>	T2B/300°
<b>Class II, Div 1, Groups E, F &amp; G</b>	T5/100°
<b>Class III</b>	T5/100°

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## HAZARDOUS LOCATION STROBE LIGHT (151XST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-67°F to 150°F	-55°C to 65.6°C
Net Weight:	3.8 lbs.	1.7 kg
Shipping Weight:	4.5 lbs.	2.0 kg
Height:	9.25"	234.95 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Hazardous Wall Bracket (LHWB)
- Please refer to Model Number Index 151XST beginning on page 372

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Series C Dome and Ring Assembly		PC Assembly, 12-24VDC	K2001173A
Dome & Ring Assembly, Amber	K8449078C-01	PC Assembly, 120VAC	K2001071B
Dome & Ring Assembly, Blue	K8449078C-06	PC Assembly, 240VAC	K2001071B-01
Dome & Ring Assembly, Clear	K8449078C-04	Strobe Tube	K149122B
Dome & Ring Assembly, Green	K8449078C-07	Dome Gaskets	K8449080B
Dome & Ring Assembly, Red	K8449078C	Guard	K8449090B
Dome & Ring Assembly, Magenta	K8449078C-05		

# Starfire® Strobe Warning Lights

Models 131ST and 131DST



## OUR BRIGHTEST MEDIUM DUTY STROBE LIGHT

- Available in 12-24VDC, 120VAC and 240VAC
- Five dome colors
- 10,000 hour strobe tube
- Single or double flash strobe
- 1/2-inch NPT pipe mount
- Indoor/outdoor use
- Type 3R, IP45 enclosure (Dome up orientation)
- UL and cUL Listed and CSA Certified

Federal Signal's Starfire® strobe warning lights are available in single-flash (131ST) and double-flash (131DST) models. Through precise timing of the strobe flash, the double flash unit produces 1,200 effective candela; the single flash unit produces 1,000 effective candela.

Starfire models are available in 12-24VDC, 120VAC (50/60Hz) and 240VAC (50/60Hz). All units are less than nine inches high and six inches in diameter, but powerfully effective.

Starfire strobe warning lights contain their own strobe power supply in the base of the light. The strobe flash tube is mounted in an eight-pin octal socket base. The fresnel dome stands up to impact and abuse and is available in Amber, Blue, Clear, Green and Red. The base of the light is made of corrosion-resistant anodized aluminum. Each Starfire model comes with a standard 1/2-inch NPT pipe mount. An optional surface mount can be ordered.

Because of its convenient size and intense light output, the Starfire strobes can be used for multiple applications. Excellent for in-plant use, the Models 131ST/DST warn of hazardous conditions, mark dangerous areas (either permanently or temporarily) and mounts on lift trucks, cranes and other moving devices. These powerful strobes can be used on emergency, utility, maintenance or any other vehicle requiring emergency warning.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount <sup>4</sup>
<b>131DST-012-024 *</b>	12-24VDC	3.0-1.9 amps	80 <sup>3</sup>	1,000,000	1,200	1/2" NPT Pipe
<b>131DST-120 *</b>	120VAC	0.60 amps	80 <sup>3</sup>	1,000,000	1,200	1/2" NPT Pipe
<b>131DST-240 *</b>	240VAC	0.30 amps	80 <sup>3</sup>	1,000,000	1,200	1/2" NPT Pipe
<b>131ST-012-024 *</b>	12-24VDC	2.75-1.25 amps	80	2,000,000	1,000	1/2" NPT Pipe
<b>131ST-120 *</b>	120VAC 50/60Hz	0.60 amps	80	2,000,000	1,000	1/2" NPT Pipe
<b>131ST-240 *</b>	240VAC 50/60Hz	0.30 amps	80	2,000,000	1,000	1/2" NPT Pipe

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

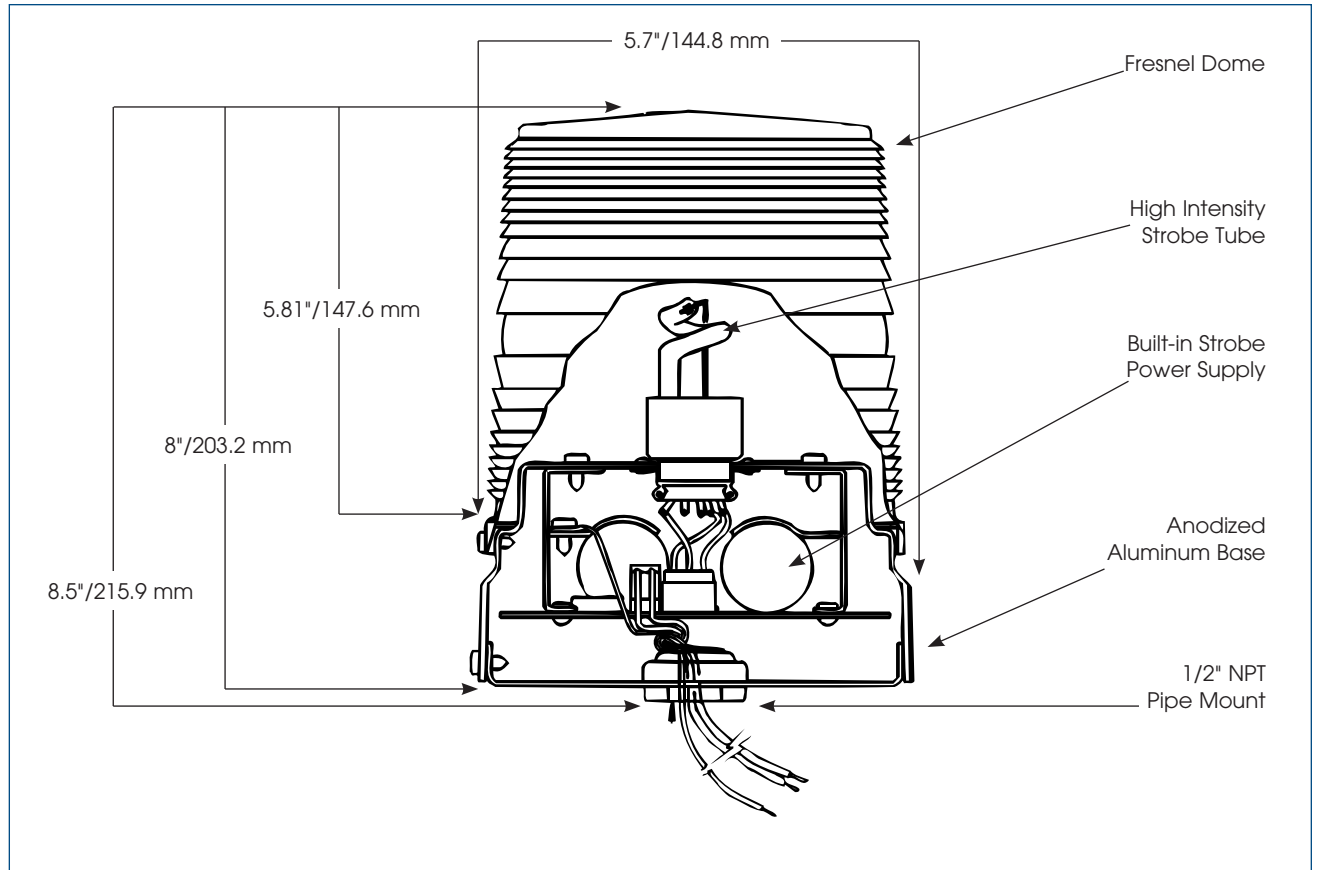
<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily

<sup>3</sup> Double Flash

<sup>4</sup> Magnet and surface mount kits available



## STARFIRE® STROBE WARNING LIGHT (131ST/131DST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Ambient Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	2.0 lbs.	1.0 kg
Shipping Weight:	3.4 lbs.	1.5 kg
Height:	8.5"	215.9 mm
Width:	5.7"	144.8 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)  
Surface Mount (K8444A211B)
- Please refer to Model Number Index 131ST/131DST beginning on page 373

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8422B428A-01	PC Assembly, 12-24VDC (131ST)	K2001260C
Dome, Blue	K8422B428A-02	PC Assembly, 120VAC (131ST)	K2001188C
Dome, Clear	K8422B428A	PC Assembly, 240VAC (131ST)	K2001188C-01
Dome, Green	K8422B428A-03	PC Assembly, 12-24VDC (131DST)	K2001265D
Dome, Red	K8422B428A-04	PC Assembly, 120VAC (131DST)	K200865G
Strobe Tube	K8107178A	PC Assembly, 120VAC (131DST)	K200865G
Surface Mount Kit	K8444A211B	PC Assembly, 240VAC (131DST)	K200865G-01
		Dome Gasket	K8444A193A

# Commander® Double Strobe Hazardous Location Warning Light

## Model 371DST

### DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 12-24VDC, 120VAC and 240VAC
- Five dome colors
- Surface mount and integrated 1-inch NPT pipe mount
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

Federal Signal Model 371DST is a double-flash strobe housed in a Type 4X enclosure. At 80 flashes per minute and 1,000 effective candela, the Commander® is the largest strobe signal in the Federal Signal product line.

The 371DST features an impact resistant polycarbonate dome available in five colors – Amber, Blue, Clear, Green, and Red. The dome and ring assembly simply screws on, allowing for quick access to the strobe tube and printed circuit board assembly.

The new base of the Commander features electrostatically applied, black epoxy paint for greater corrosion resistance. Wiring can be routed through the pipe mount opening in the bottom of the light or the side knockouts can be used for side entry wiring. Installation can be surface- or 1-inch NPT pipe mount. Optional wall and corner mount brackets are available for the 371DST. The Commander is rated Type 4X, IP66 (watertight, dust tight, corrosion resistant).

The 371DST is also rated for Hazardous Location, Class I Division 2, Groups A,B,C, and D, Class II Division 2, Groups F & G; and Class III. The LWMB2 wall mount bracket and the LCMB2 corner mount bracket can be used for all non-hazardous environments. This strobe is also UL and cUL Listed and CSA Certified.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
<b>371DST-012-024 *</b>	12-24 VDC	3.00-1.90 amps	80 <sup>3</sup>	750,000	1,000	1" NPT Pipe or Surface
<b>371DST-120 *</b>	120VAC 50/60Hz	0.60 amps	80 <sup>3</sup>	750,000	1,000	1" NPT Pipe or Surface
<b>371DST-240 *</b>	240VAC 50/60Hz	0.30 amps	80 <sup>3</sup>	750,000	1,000	1" NPT Pipe or Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

### Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C

Hazardous Location

40°C

**Class I, Div 2, Groups A, B, C, D**

T2/300°

**Class II, Div 2, Groups F, G**

T6/85°

**Class III**

T6/85°

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

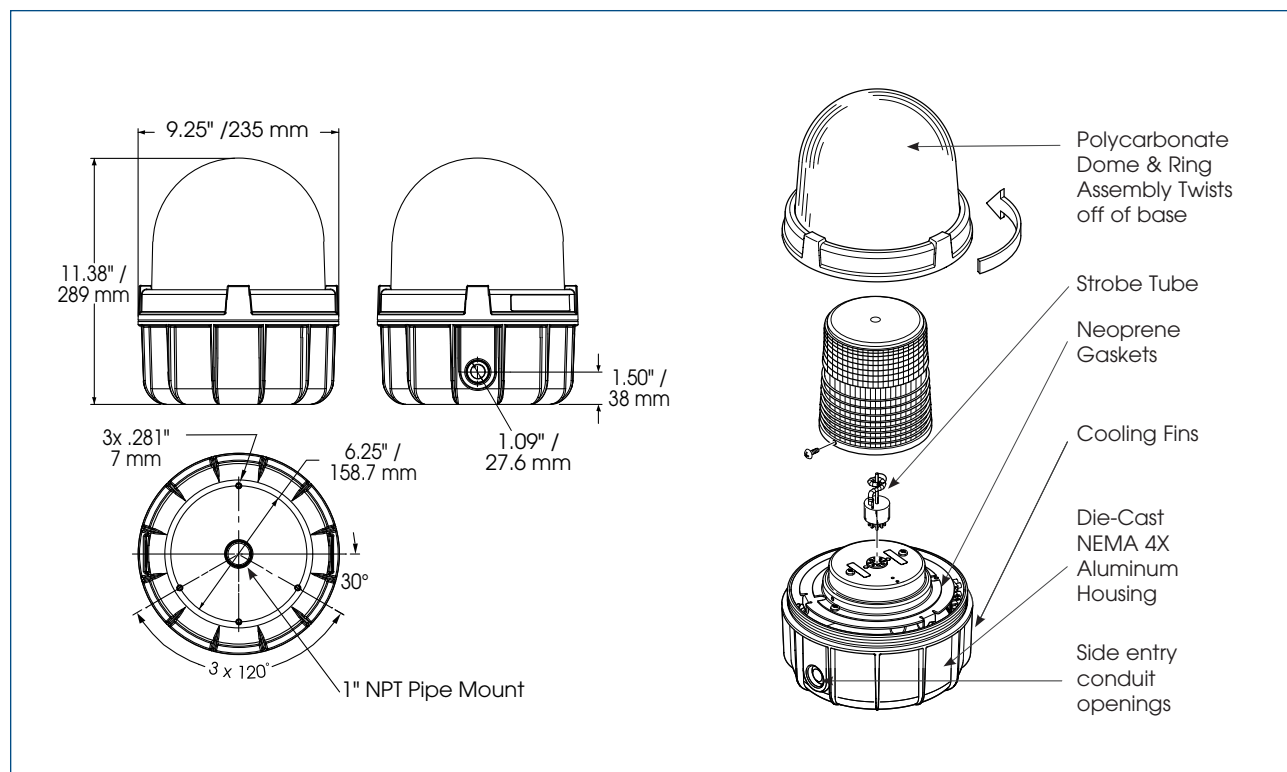
<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily

<sup>3</sup> Double flash





## COMMANDER® STROBE LIGHT (371DST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 104°F	-35°C to 40°C
Net Weight:	6.23 lbs.	2.83 kg
Ship. Weight:	8.3 lbs.	3.76 kg
Height:	11.38"	288.9 mm
Diameter:	9.13"	231.8 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:
  - Solid Surface Mounting Bracket (371BRCKT)
  - Shock Mount Kit (K8459A076C)
  - Hazardous Wall Bracket (LHWB)
  - $\frac{3}{4}$ " Hub Kit (K8459138A)
  - 1" Plug Kit (K8459130A)
- Please refer to Model Number Index 371DST beginning on page 373

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Series B Dome and Ring Assembly		PCB Assembly 12-24VDC	K2001265D-01
Amber Polycarbonate	K8459125A	PCB Assembly 120VAC	K200865G-02
Blue Polycarbonate	K8459125A-01	PCB Assembly 240VAC	K200865G-03
Clear Polycarbonate	K8459125A-02	Gasket, Surface Mount	K8459127A
Green Polycarbonate	K8459125A-03	Strobe Tube	K8107178A
Red Polycarbonate	K8459125A-04		
Clear, Inner Polycarbonate, Lens	K8422B428A		



# Commander® Strobe Warning Light

Model 371ST



## HEAVY DUTY STROBE LIGHT

- Available in 250VDC
- Five dome colors
- Surface mount and integrated 1-inch NPT pipe mount
- Type 4X, IP66 enclosure

Federal Signal Model 371ST is a single-flash strobe housed in a Type 4X enclosure. At 60 flashes per minute and 275 effective candela, the Commander® is the largest strobe signal in the Federal Signal product line.

The 371ST features a heat resistant glass dome available in five colors – Amber, Blue, Clear, Green, and Red. The dome and ring assembly simply screws on, allowing for easy access to the strobe tube and printed circuit board assembly.

The new base of the Commander features electrostatically applied, black epoxy paint for greater corrosion resistance. Wiring can be routed through the pipe mount opening in the bottom of the light or the side knockouts can be used for side entry wiring. Installation can be surface or 1-inch NPT pipe mount. Optional wall and corner mount brackets are available for the 371ST. The Commander is rated Type 4X, IP66 (watertight, dust tight, corrosion resistant).

The LWMB2 wall mount bracket and the LCMB2 corner mount bracket can be used to mount this strobe light.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
371ST-250_*	250VDC	0.25 amps	60	625,000	275	1" NPT Pipe or Surface

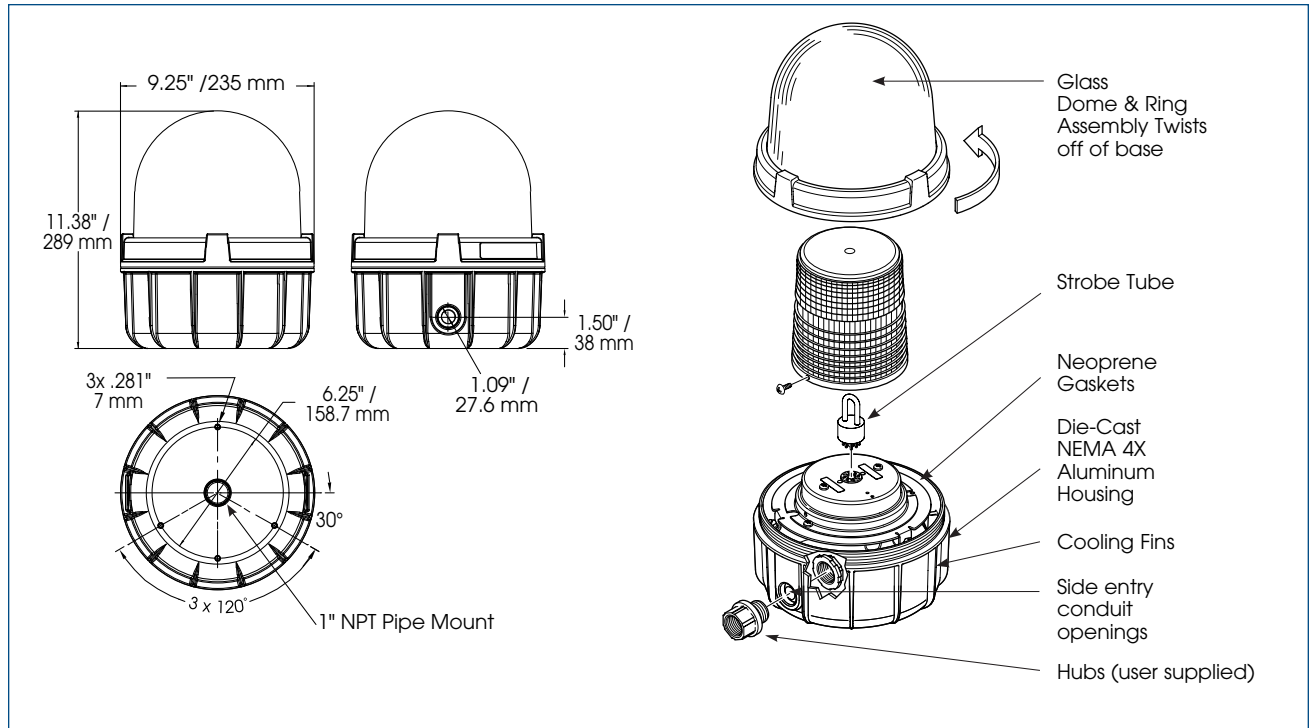
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## COMMANDER® STROBE LIGHT (371ST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	10.0 lbs.	4.54 kg
Shipping Weight:	12.4 lbs.	5.62 kg
Height:	11.38"	288.9 mm
Diameter:	9.13"	231.8 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:
  - Corner Bracket (LCMB2)\*
  - Solid Surface Mounting Bracket (371BRCKT)
  - Shock Mount Kit (K8459A076C)
  - Wall Bracket (LWMB2)\*
  - Hazardous Wall Bracket (LHWB)
  - $\frac{3}{4}$ " Hub Kit (K8459138A)
  - 1" Plug Kit (K8459130A)
- Please refer to Model Number Index 371ST beginning on page 373

\* Type 3R applications.

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Series B Dome and Ring Assembly		Clear, Inner Polycarbonate Dome	K8422B428A
Amber Glass	K8459126A	PC Assembly 250VDC	K2001070B
Blue Glass	K8459126A-01	Gasket, Surface Mount	K8459127A
Clear Glass	K8459126A-03	Strobe Tube	K149122B
Green Glass	K8459126A-04		
Red Glass	K8459126A-02		



## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Available in 12-24VDC and 120VAC
- Five lens colors
- 10,000 hour strobe tube
- Ceiling mount standard; other options available
- Marine Listed
- Type 4X, IP66 enclosure
- UL and cUL Listed

# Fireball® 2 Explosion-Proof Strobe Warning Light

## Model FB2PSTX and FB2PSTX-I

Federal Signal's FB2PSTX explosion-proof strobe light is a compact unit that produces a "lightning bolt" flash of light. Measuring 13.69" (348mm) high and 7.44" (189mm) in diameter, the FB2PSTX is available in 12-24VDC, 24VDC and 120VAC. These strobe lights are well suited for a wide range of explosion-proof warning light applications.

All models are UL and cUL Listed for indoor/outdoor and marine use. This model is UL Listed for Class I, Division 1, Groups C and D; Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class II, Division 2, Groups F and G; and Class III.

Model FB2PSTX has a self-contained power supply. The copper-free aluminum finned base dissipates heat and ensures long life. The outer dome is made of tempered glass. Polycarbonate inner lenses are available in Amber, Blue, Clear, Green and Red. A rugged ceiling mount fixture is standard; optional wall mounts and dome guards are also available.

The FB2PST-I features a voltage in-rush limiting PCB design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices.

The Model FB2PSTX is suited for any application where a superior visual signal is needed and is especially effective for warning of industrial hazards, process control, status indication or in areas with high ambient noise levels.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>
<b>FB2PSTX-012-024 *</b>	12-24VDC	1.70-0.70 amps	80	800,000	320
<b>FB2PSTX-I-024 *</b>	24VDC	0.70 amps (2.0 amp In-rush)	80	800,000	320
<b>FB2PSTX-120 *</b>	120VAC 50/60HZ	0.25 amps	80	800,000	320

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily

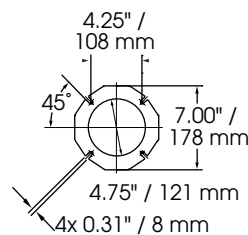
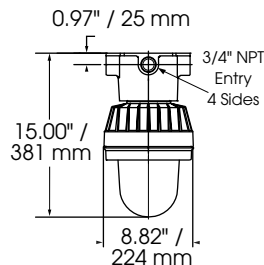
## Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C		
Hazardous Location	40°C	65°C
Class I, Div 1 & 2, Groups C & D	T6/85°	T6/85°
Class I, Div 2, Groups A & B	T4A/120°	T3C/160°
Class II, Div 1 & 2, Groups E, F & G	T4/135°	T4/135°
Class III	T4/135°	T4/135°

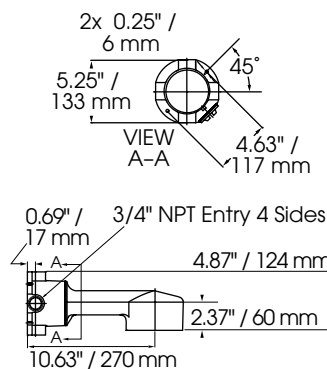
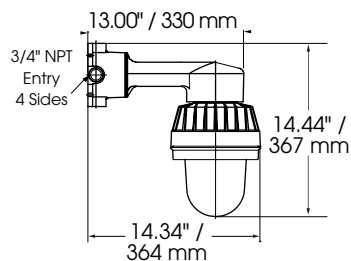


## EXPLOSION-PROOF STROBE LIGHT (FB2PSTX/FB2PSTX-I)

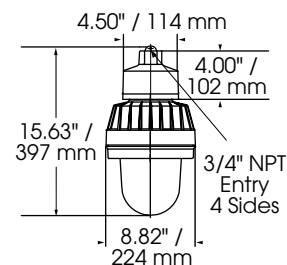
### Standard Product CEILING MOUNT



### Shown with Optional WALL BRACKET MOUNT FSC Model WMXC



### Shown with Optional PENDANT MOUNT FSC Model PMXC



## SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-13°F to 149°F	-25°C to 65°C
Net Weight:	9.6 lbs.	4.35 kg
Shipping Weight:	13.1 lbs.	5.94 kg
Height:	13.69"	348.0 mm
Diameter:	7.44"	189.0 mm

## HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Wall Mount (WMXC)  
Pendant Mount (PMXC)  
Dome Guard (DGFBX)
- Please refer to Model Number Index FB2PSTX beginning on page 373

## REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Inner Lens, Amber	K8550292A-02
Inner Lens, Blue	K8550292A-01
Inner Lens, Clear	K8550292A
Inner Lens, Green	K8550292A-04
Inner Lens, Red	K8550292A-03
Outer Dome Assembly	K8550272A-01
PC Assembly, 12-24VDC	K2001202C
PC Assembly, 120VAC	K200D866G
Strobe Tube	K8107177A



## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Available in 24VDC, 120VAC and 240VAC
- Six lens colors
- 10,000 hour strobe tube
- 3/4-inch NPT pendant mount standard; other options available
- Dome guard optional
- Type 4X, IP66 enclosure
- Marine Rated
- UL and cUL Listed, CSA Certified and CSFM Approved

# Explosion-Proof Strobe Light

## Model 27XST

Federal Signal's Model 27XST explosion-proof strobe light produces 80 high-intensity flashes per minute. This warning light operates on 24VDC, 120VAC, and 240VAC 50/60Hz.

The 27XST is UL Listed for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; Class I, Division 2, Groups A, B; and Class III. The 27XST is CSA Certified and Marine Rated.

The 24VDC 27XST features a voltage in-rush limiting PCB design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices.

The 27XST is Type 4X rated; constructed to IP66. Corrosion resistance is achieved with a powder epoxy finish applied over the copper-free aluminum housing. All exposed hardware is 316 grade stainless steel.

Federal Signal's Model 27XST has an effective candela (ECP) of 850 and a two million peak candela. A pendant mount is supplied and a ceiling mount and 90° wall mount are available options. For easy installation, the mounting box is first installed and the fixture is then threaded onto the mounting box, making the electrical connection. Electrical continuity is made when five threads are engaged.

Federal Signal's Model 27XST is specifically designed for explosion-proof atmospheres and/or corrosive environments. Because it is easy to install and requires very low maintenance, it is ideal for use in areas such as oil rigs, mines, refineries, and chemical plants.

## Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C		
Hazardous Location	40°C	65°C
Class I, Div 1 & 2, Groups C & D	T6/85°	T4A/120°
Class I, Div 2, Groups A & B	T2B/260°	T2A/280°
Class II, Div 1, Groups E, F & G	T6/85°	T4A/120°
Class III	T6/85°	T4A/120°

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
27XST-024 *	24VDC	1.90 amps (3.0 amp In-rush)	80	2,000,000	850	3/4" NPT Pendant
27XST-120 *	120VAC 50/60Hz	1.14 amps	80	2,000,000	850	3/4" NPT Pendant
27XST-240 *	240VAC 50/60Hz	0.52 amps	80	2,000,000	850	3/4" NPT Pendant

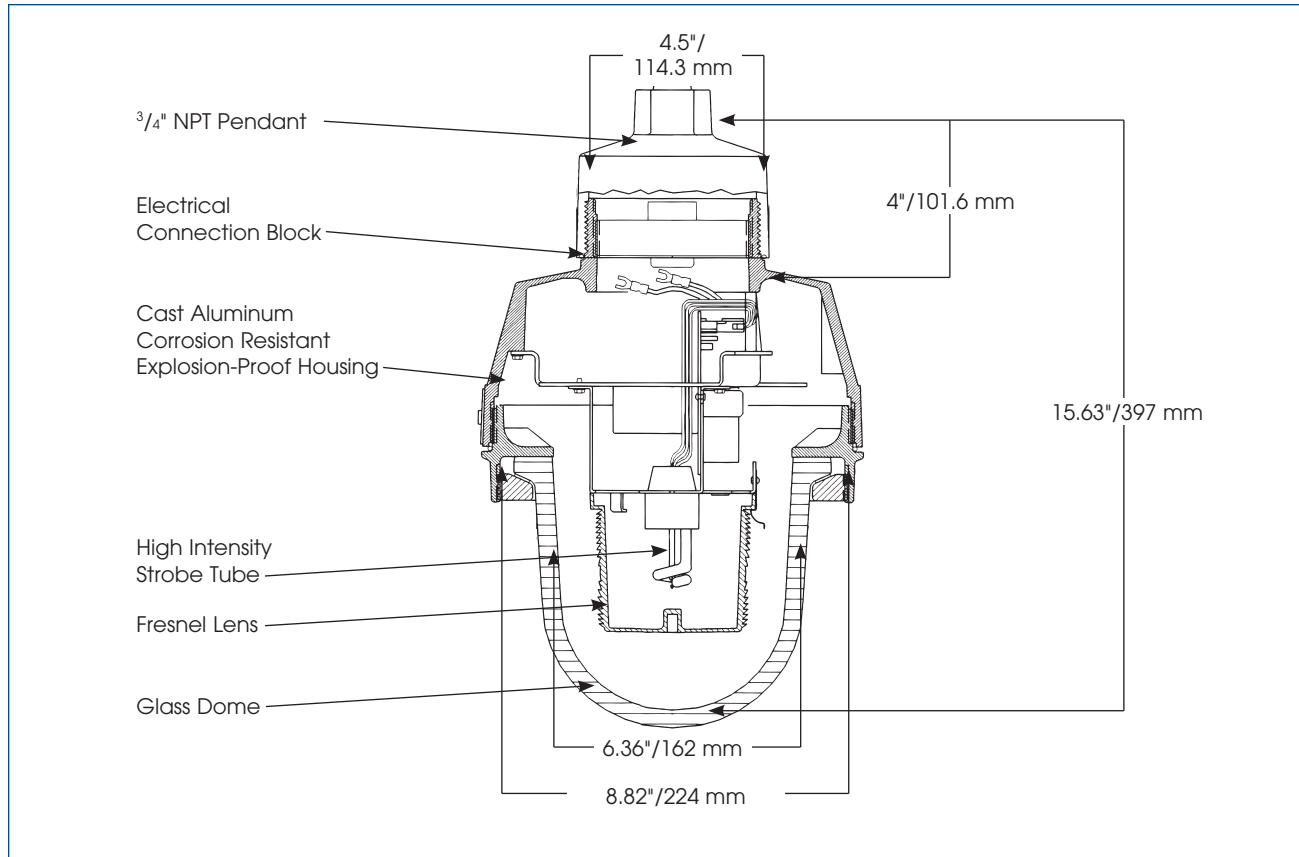
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (M) Magenta or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## EXPLOSION-PROOF STROBE LIGHT (27XST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Ambient Temp. Range:	-50°C to 65°C	Canada
	-25°C to 65°C	USA
Net Weight:	14 lbs.	6.4 kg
Shipping Weight:	18.1 lbs.	8.2 kg
Height:	15.63"	397.0 mm
Diameter:	8.82"	224.0 mm

### HOW TO ORDER

- Specify model, voltage and color (Magenta upon request)
- Optional Accessories:  
Dome Guard (DGXC)  
Ceiling Mount (CMXC)  
Wall Mount (WMXC)
- Please refer to Model Number Index 27XST beginning on page 373

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Exterior Dome Assembly, Clear	K8444C271A-01	24VDC Mechanism	K8436107F-03
Interior Lens Assembly, Amber	K8550C095A-02	120VAC Mechanism	K8436107E-02
Interior Lens Assembly, Blue	K8550C095A-01	240VAC Mechanism	K8436107E-01
Interior Lens Assembly, Clear	K8550C095A	Strobe Tube, Series C1, C2	K8107159A
Interior Lens Assembly, Green	K8550C095A-04	Pendant Mount	K8444A272A
Interior Lens Assembly, Magenta	K8550C095A-07		
Interior Lens Assembly, Red	K8550C095A-03		





# StreamLine® Low Profile Combination Sounder/Strobe

## Model LP7

### Perfect size meets superior performance

- Available in 18–30VDC
- Fully integrated xenon strobe circuit
- Five dome colors — Amber, Blue, Clear, Green, Red
- Heavy duty ABS plastic body
- Type 4X, IP54 (IP65 with optional deep base)
- 82–100dB @ 10'  
(92–110dB @ 1m)
- Type 4X, IP54 (IP65 with optional deep base)
- CE Compliant

Providing an audible/visual warning, the LP7 sounder/strobe combines the features of a mini sounder with a fully integrated xenon strobe circuit. The result is an attractive unit suitable for internal or external locations where a combination of high sound output and visual signal is required.

The strobe color choices include Amber, Clear, Green, Blue or Red. The unit comes with a standard shallow base. An optional deeper base allows 20mm diameter conduit entry.

Operating voltage ranges from 18-30VDC with an average of only 68mA current consumption.

The LP7 has two switchable tone patterns - "Sweeping" and "Continuous".

The LP7 has a range of 82dB–100dB @ 10' (92–110dB @ 1m), dependent upon tone selected. Volume control allows for 20dB of adjustment.

The LP7 features a bright xenon strobe that produces 0.7 Joules of flash energy with a flash frequency of 60 flashes per minute. The beacon will operate with any tone selected.

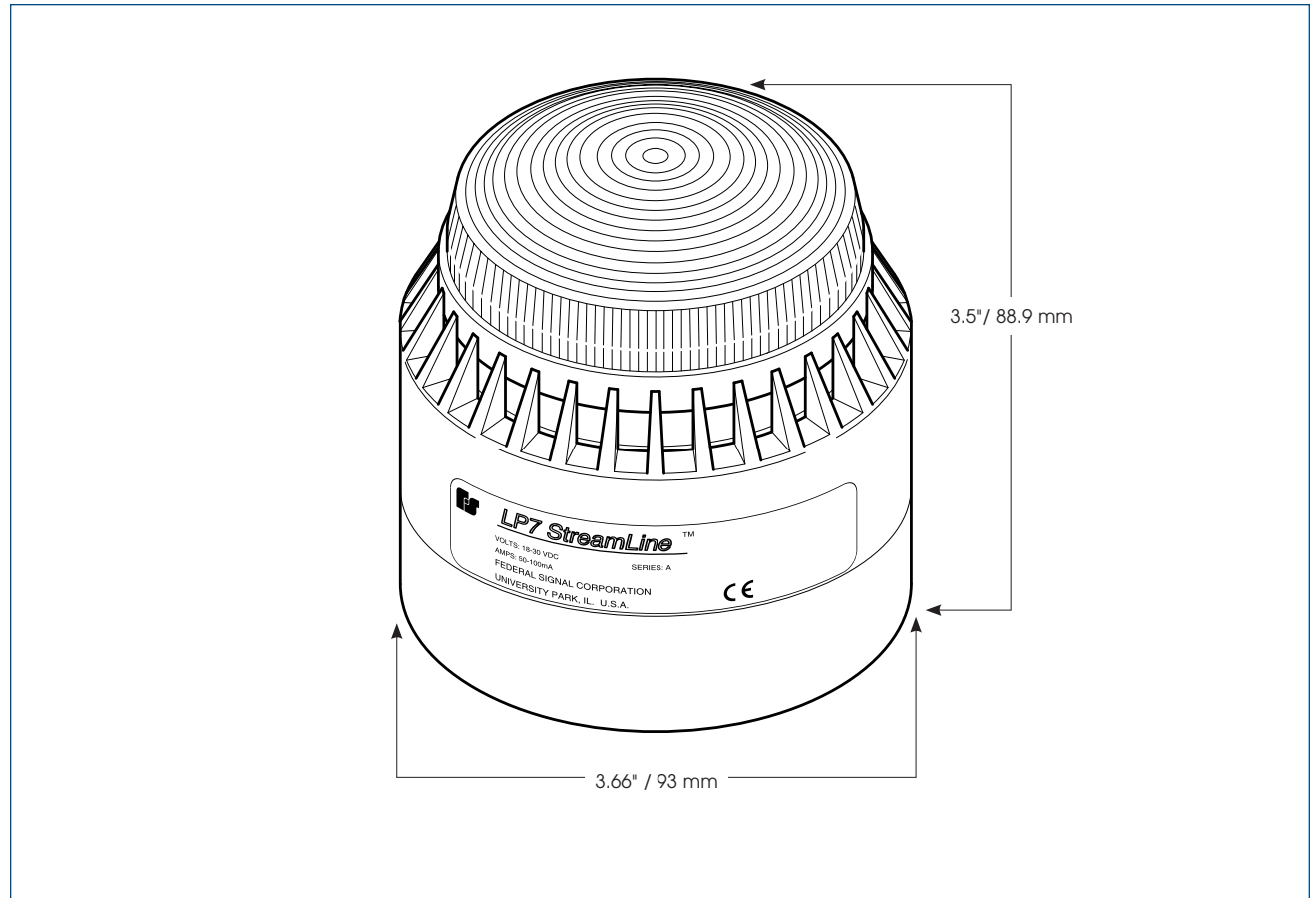
The Federal Signal Model LP7 sounder/strobe is PLC compatible. It is ideal for wall or panel mount applications where low voltage is required.

Model	Voltage	Operating Current	Flash Rate/ Minute	Joule Output	Decibels @ 10'	Decibels @ 1m
LP7-018-030 *	18-30VDC	0.068 amps	60	0.7	82-100	92-110

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## STREAMLINE® LOW PROFILE SOUNDER/STROBE (LP7)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	14°F to 131°F	-10°C to 55°C
Net Weight:	11.1 oz.	315.0 kg
Shipping Weight:	13.5 oz.	383.0 kg
Height:	3.5"	88.9 mm
Diameter:	3.66"	93.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Deep Base (DBLP)
- Please refer to Model Number Index  
LP7 beginning on page 373



# LED Flashing Combination Audible/Visual Signal

## Model AV1-LED

### ECONOMICAL LED AUDIBLE/VISUAL SIGNAL

- Available in 24VDC and 120VAC
- 60,000 hour LED light source
- Surface mount, integrated 1/2-inch NPT pipe mount, and 4-inch electrical box mount
- Five dome colors
- Twist-off lens for easy access
- Internal buzzer produces 85dB at 10' (95dB @ 1m)
- Type 3R enclosure
- UL and cUL Listed

Federal Signal introduces the Model AV1-LED combination audible/visual signal. The AV1-LED features a 100% polycarbonate housing that is rated for Type 3R rain-tight applications. Available dome colors include Amber, Blue, Clear, Green and Red.

The AV1-LED design provides three mounting configurations. The black base will accommodate mounting to a 1/2-inch NPT pipe, a 4-inch octagonal electrical box or any flat surface. The surface mount gasket serves as a template for preparing a flat surface with appropriate mounting holes.

All AV1-LED units feature a unique twist and lock dome to allow for tool-free access to the LED. The fresnel lensing provides superior visibility in all directions.

The integrated buzzer provides 85dB output at 10 feet (95dB @ 1 meter). The unit is capable of independent flashing light and sounder operation. The LED can be field adjusted to two flash patterns 60 FPM or 75 FPM via a jumper on the PC board.

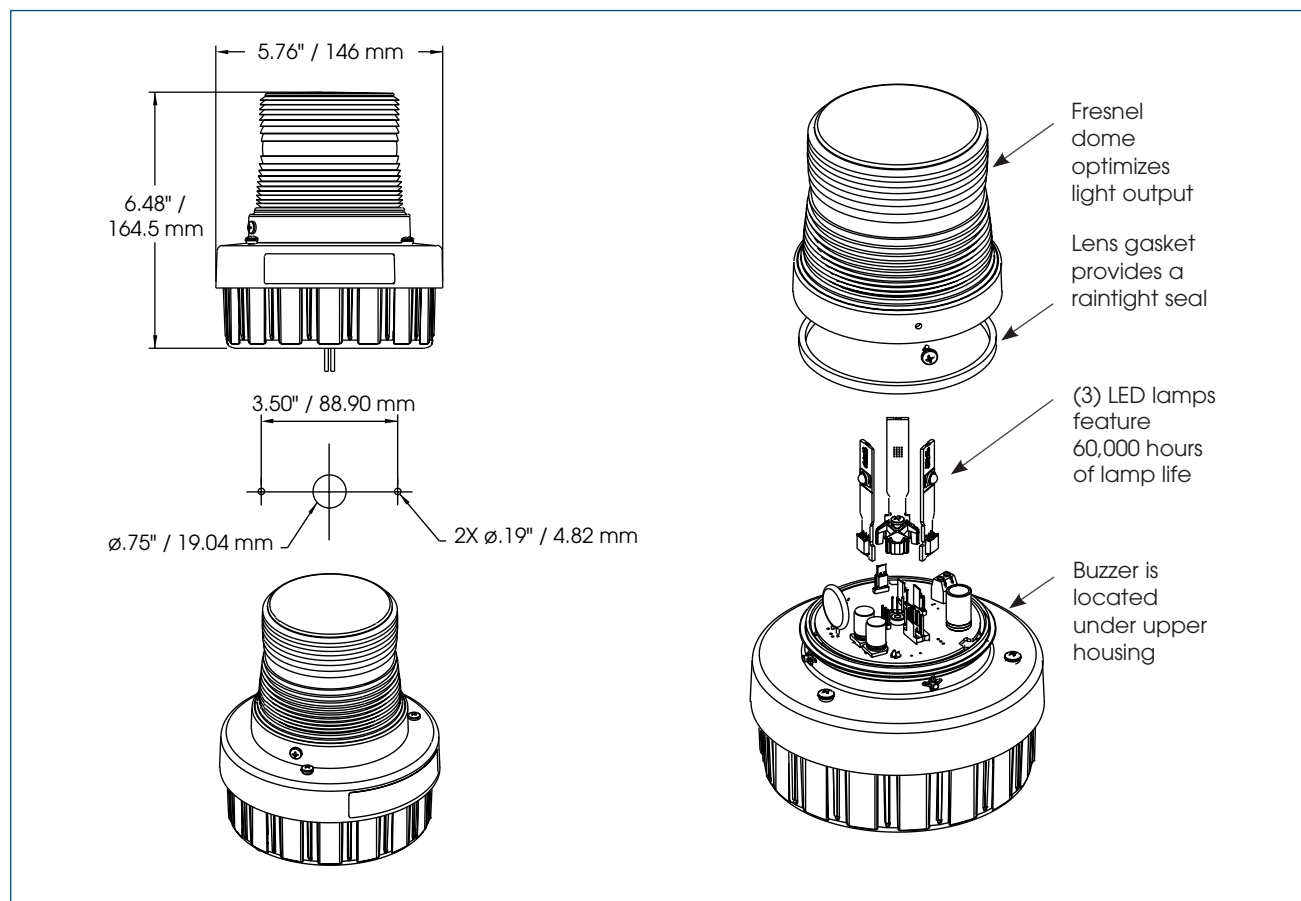
The AV1-LED comes in two voltage variations: 24VDC and 120VAC. Each unit is factory assembled with two color-coded leads. If desired, the user can remove the leads and connect directly to the terminal block located in the base of the unit. The AV1-LED is UL and cUL Listed.

Model	Voltage	Operating Current	Flash Rate/ Minute	Decibels @		Mount
				10'	1m	
AV1-LED-024 *	24VDC	0.27 amps	60/75	85	95	Pipe/Surface
AV1-LED-120 *	120VAC	0.03 amps	60/75	85	85	Pipe/Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## AUDIBLE/VISUAL SIGNALING DEVICE (AV1 LED)



### SPECIFICATIONS

Lamp Life:	60,000 Hours	60,000 Hours
Light Source:	LED	LED
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.25 lbs.	0.57 kg
Shipping Weight:	1.75 lbs.	0.8 kg
Height (from bottom):	6.48"	16.5 cm
Diameter:	5.76"	14.6 cm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index AV1-LED beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550292A-02	LED Stick Amber (3 required)	K2005642A-A
Dome, Blue	K8550292A-01	LED Stick Blue (3 required)	K2005633A-B
Dome, Clear	K8550292A	LED Stick Green (3 required)	K2005642A-G
Dome, Green	K8550292A-04	LED Stick Red (3 required)	K2005642A-R
Dome, Red	K8550292A-03	LED Stick White (3 required)	K2005642A-W
Lens Gasket	K8550306A	Buzzer, 24VDC	K8591002A-03
Surface Mount Gasket	K8591003A	Buzzer, 120VAC	K8591002A



# Flashing Combination Audible/Visual Signal

## Model AV1

### ECONOMICAL AUDIBLE/VISUAL SIGNAL

- Available in 24VDC and 120VAC
- Surface mount, integrated 1/2-inch NPT pipe mount, and 4-inch electrical box mount
- Five dome colors
- Twist-off lens for easy access
- Internal buzzer produces 85dB at 10' (95dB @ 1m)
- Type 3R enclosure
- UL and cUL Listed and CSA Certified

Federal Signal introduces the Model AV1 combination audible/visual signal. The AV1 features a 100% polycarbonate housing that is rated for Type 3R rain-tight applications. Available dome colors include Amber, Blue, Clear, Green and Red.

The AV1 design provides three mounting configurations. The black base will accommodate mounting to a 1/2-inch NPT pipe, a 4-inch octagonal electrical box or any flat surface. The surface mount gasket serves as a template for preparing a flat surface with appropriate mounting holes.

All AV1 units feature a unique twist and lock dome to allow for tool-free access to the incandescent lamp. The fresnel lensing provides superior visibility in all directions.

The integrated buzzer provides 85dB output at 10 feet (95dB @ 1 meter). The sounder is synchronized to buzz at the same rate as the visual signal — 75 times per minute.

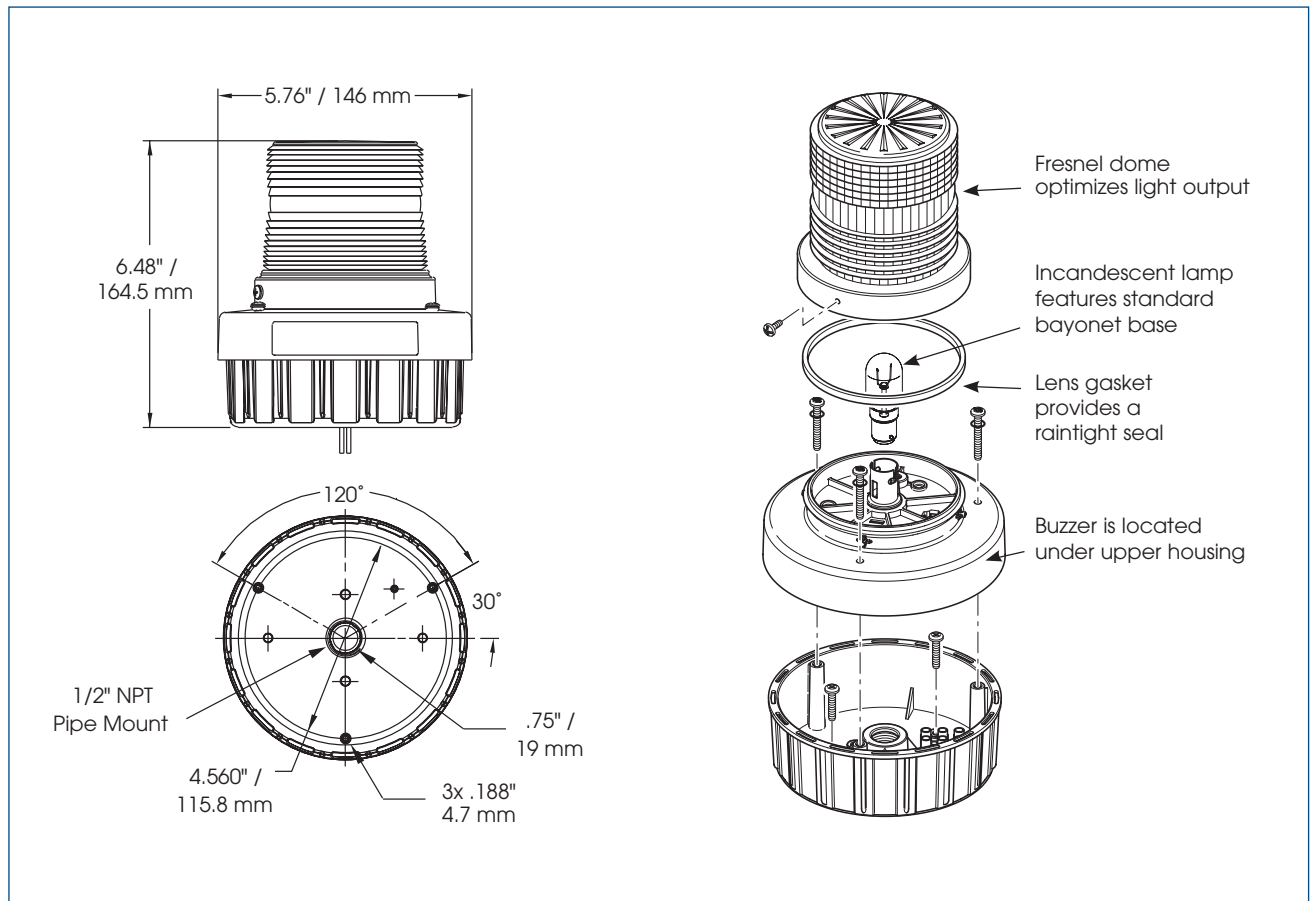
The AV1 comes in two voltage variations: 24VDC and 120VAC. Each unit is factory assembled with two color-coded leads. If desired, the user can remove the leads and connect directly to the terminal block located in the base of the unit. The AV1 is UL and cUL Listed and CSA Certified.

Model	Voltage	Operating Current	Flash Rate/ Minute	Decibels @		Mount
				10'	1m	
AV1-024 *	24VDC	0.98 amps	75	85	95	Pipe/Surface
AV1-120 *	120VAC	0.27 amps	75	85	95	Pipe/Surface

\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red



## AUDIBLE/VISUAL SIGNALING DEVICE (AV1)



### SPECIFICATIONS

Lamp Life:	1,000 Hours	1,000 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.25 lbs.	0.57 kg
Shipping Weight:	1.75 lbs.	0.8 kg
Height (from bottom):	6.48"	16.5 cm
Diameter:	5.76"	14.6 cm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index AV1 beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550292A-02	Incandescent Lamp (24VDC)	K8107210A
Dome, Blue	K8550292A-01	Incandescent Lamp (120VAC)	K149123A
Dome, Clear	K8550292A	Flasher, 24VDC	K8285237A-01
Dome, Green	K8550292A-04	Flasher, 120VAC	K8285238A-01
Dome, Red	K8550292A-03	Buzzer, 24VDC	K8591002A-01
Lens Gasket	K8550306A	Buzzer, 120VAC	K8591002A
Surface Mount Gasket	K8591003A		





# Strobe Combination Audible/Visual Signal

## Model AV1ST

### ECONOMICAL AUDIBLE/ VISUAL SIGNAL

- Available in 24VDC and 120VAC
- Surface mount, integrated 1/2-inch NPT pipe mount, and 4-inch electrical box mount
- Five dome colors
- Twist-off lens for easy access
- Internal buzzer produces 85dB at 10' (95dB @ 1m)
- Type 3R enclosure
- UL and cUL Listed and CSA Certified

Federal Signal introduces the Model AV1ST combination audible/visual signal. The AV1ST features a 100% polycarbonate housing that is rated for Type 3R rain-tight applications. Available dome colors include Amber, Blue, Clear, Green and Red.

The AV1ST design provides three mounting configurations. The black base will accommodate mounting to a 1/2-inch NPT pipe, a 4-inch octagonal electrical box or any flat surface. The surface mount gasket serves as a template for preparing a flat surface with appropriate mounting holes.

All AV1ST units feature a unique twist and lock dome to allow for tool free access to the strobe tube. The fresnel lensing provides superior visibility in all directions.

The integrated buzzer provides 85dB output at 10 feet (95dB @ 1 meter).

The AV1ST comes in two voltage variations: 24VDC and 120VAC. Each unit is factory assembled with two color-coded leads. If desired, the user can remove the leads and connect directly to the terminal block located in the base of the unit. The AV1ST is UL and cUL Listed and CSA Certified.

Model	Voltage	Operating Current	Flash Rate/ Minute	Joule Output	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Decibels @ 10'	1m	Mount
<b>AV1ST-024 *</b>	24VDC	0.39 amps	65-95	2.2	175,000	51.5	85	95	Pipe/Surface
<b>AV1ST-024 *</b>	120VAC	0.15 amps	65-95	2.2	175,000	51.5	85	95	Pipe/Surface

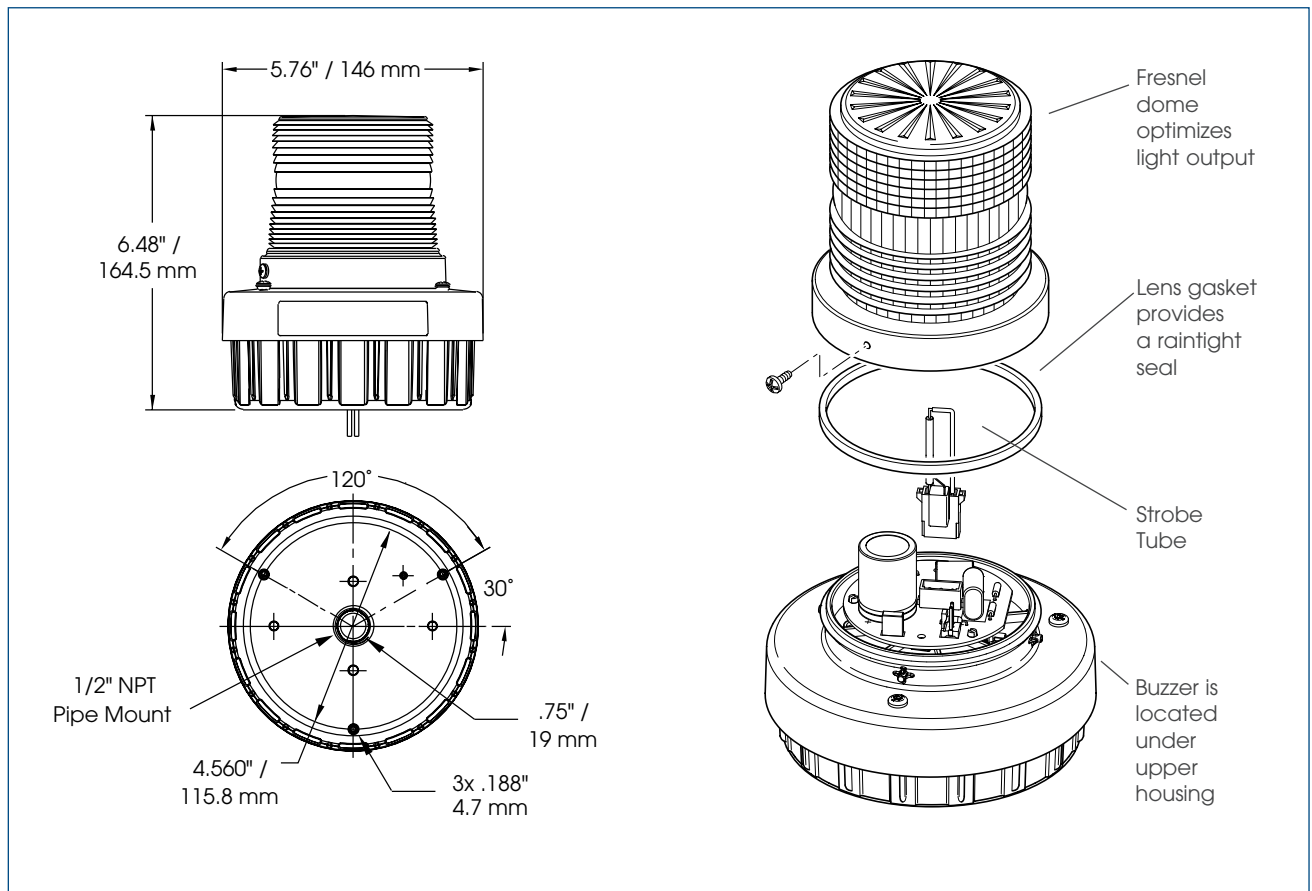
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## AUDIBLE/VISUAL SIGNALING DEVICE (AV1ST)



### SPECIFICATIONS

Lamp Life	7000 Hours	7000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.25 lbs.	0.57 kg
Shipping Weight:	1.75 lbs.	0.8 kg
Height (from bottom):	6.48"	16.5 cm
Diameter:	5.76"	14.6 cm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index AV1ST beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550292A-02	PCB Assembly (120VAC)	K2001887A
Dome, Blue	K8550292A-01	PCB Assembly (24VDC)	K2005083A
Dome, Clear	K8550292A	Lens Gasket	K8550306A
Dome, Green	K8550292A-04	Surface Mount Gasket	K8591003A
Dome, Red	K8550292A-03	Strobe Tube	K149130A
		Buzzer, 24VDC	K8591002A-01
		Buzzer, 120VAC	K8591002A

# Rotating Combination Audible/Visual Warning Signal

Model 400R



## AUDIBLE AND VISUAL WARNING IN A SINGLE VERSATILE UNIT

- Available in 120VAC
- Four dome colors
- Wall mount
- Sounder/Horn (Model 350) sold separately
- Indoor/outdoor use
- Type 3R enclosure
- UL and cUL Listed

Federal Signal's Model 400R audible/visual signal combines the effective warning of a rotating light with an optional Federal Signal Model 350 horn.

The Model 400R includes a large 4<sup>1</sup>/<sub>4</sub>-inch diameter rotating reflector assembly for projecting light beams. The unit features an incandescent lamp that produces 60 flashes per minute.

Available in four dome colors – Amber, Blue, Green and Red.

The Model 400R is ideal for use wherever both audible and visual warning signals are needed. This rugged unit is excellent for industrial use and adaptable to most in-plant signaling needs.

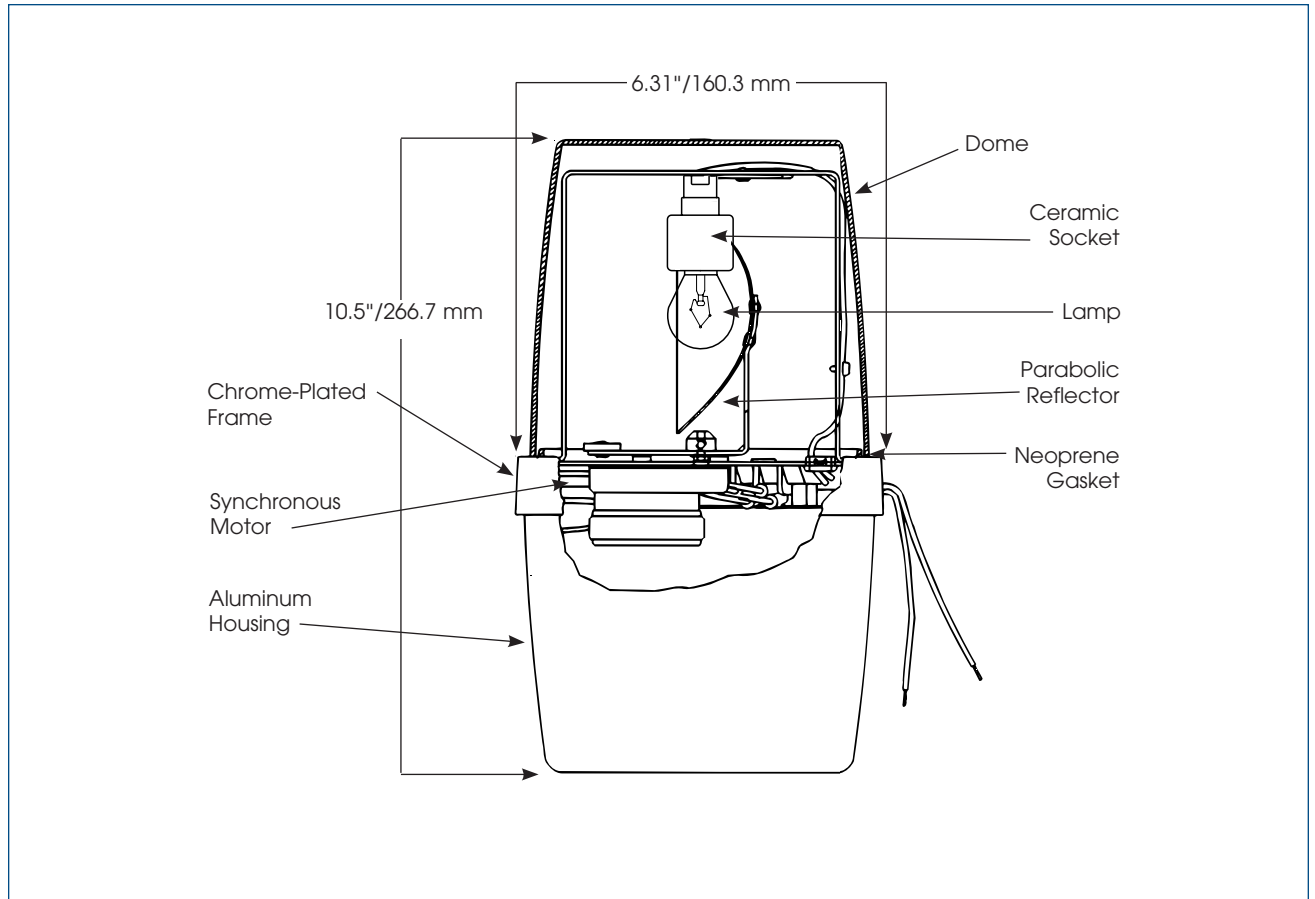
A modern housing design makes the Model 400R suitable for use in institutional or non-industrial settings requiring an audible/ visual alarm system, where heavy-duty industrial equipment might not be appropriate. Sounder/Horn (Model 350 and required 400HMK-AC) sold separately.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela	Mount
400R-120 *	120VAC 50/60Hz	0.33 amps	60	85	Wall/Surface

\* Indicates color: (A) Amber, (B) Blue, (G) Green or (R) Red



## ROTATING AUDIBLE/VISUAL WARNING SIGNAL (400R)



### SPECIFICATIONS

Lamp Life:	7,000 Hours	7,000 Hours
Light Source:	Incandescent	Incandescent
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	4.5 lbs.	2.0 kg
Shipping Weight:	5.1 lbs.	2.3 kg
Height:	10.5"	266.7 mm
Diameter:	6.31"	160.3 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Audible signaling horn (350)  
and required mounting kit  
(400HMK-AC) sold separately
- Please refer to Model Number Index  
400R beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Exterior Dome, Amber	K8547C001A-04
Exterior Dome, Blue	K8547C001A-02
Exterior Dome, Clear	K8547C001A-05
Exterior Dome, Green	K8547C001A-03
Exterior Dome, Red	K8547C001A-01
Lamp, 120VAC	K8107181A

# Strobe Combination Audible/Visual Warning Signal

## Model 400ST



### AUDIBLE AND VISUAL WARNING IN A SINGLE VERSATILE UNIT

- Available in 120VAC
- Five dome colors
- 10,000 hour strobe tube
- Wall mount
- Sounder/Horn (Model 350) sold separately
- Indoor / outdoor use
- Type 3R enclosure  
(In dome up orientation)
- UL and cUL Listed

Federal Signal's Model 400ST audible/visual signal combines the effective warning of a strobe light with an optional Federal Signal Model 350 horn.

The Model 400ST includes a fresnel lens, providing 360-degree flash coverage. Its strobe tube produces bright, high-intensity flashes at 400 effective candela at 75 flashes per minute.

Available in five dome colors: Amber, Blue, Clear, Green and Red.

The Model 400ST is ideal for use wherever both audible and visual warning signals are needed. This rugged unit is excellent for industrial use and adaptable to most in-plant signaling needs.

A modern housing design makes the Model 400ST suitable for use in institutional or non-industrial settings requiring an audible/visual alarm system, where heavy-duty industrial equipment might not be appropriate. Sounder/Horn (Model 350 and required 400HMK-AC) sold separately.

Model	Voltage	Operating Current	Flash Rate/ Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
<b>400ST-120 *</b>	120VAC 50/60Hz	0.6 amps	75	900,000	400	Wall/Surface

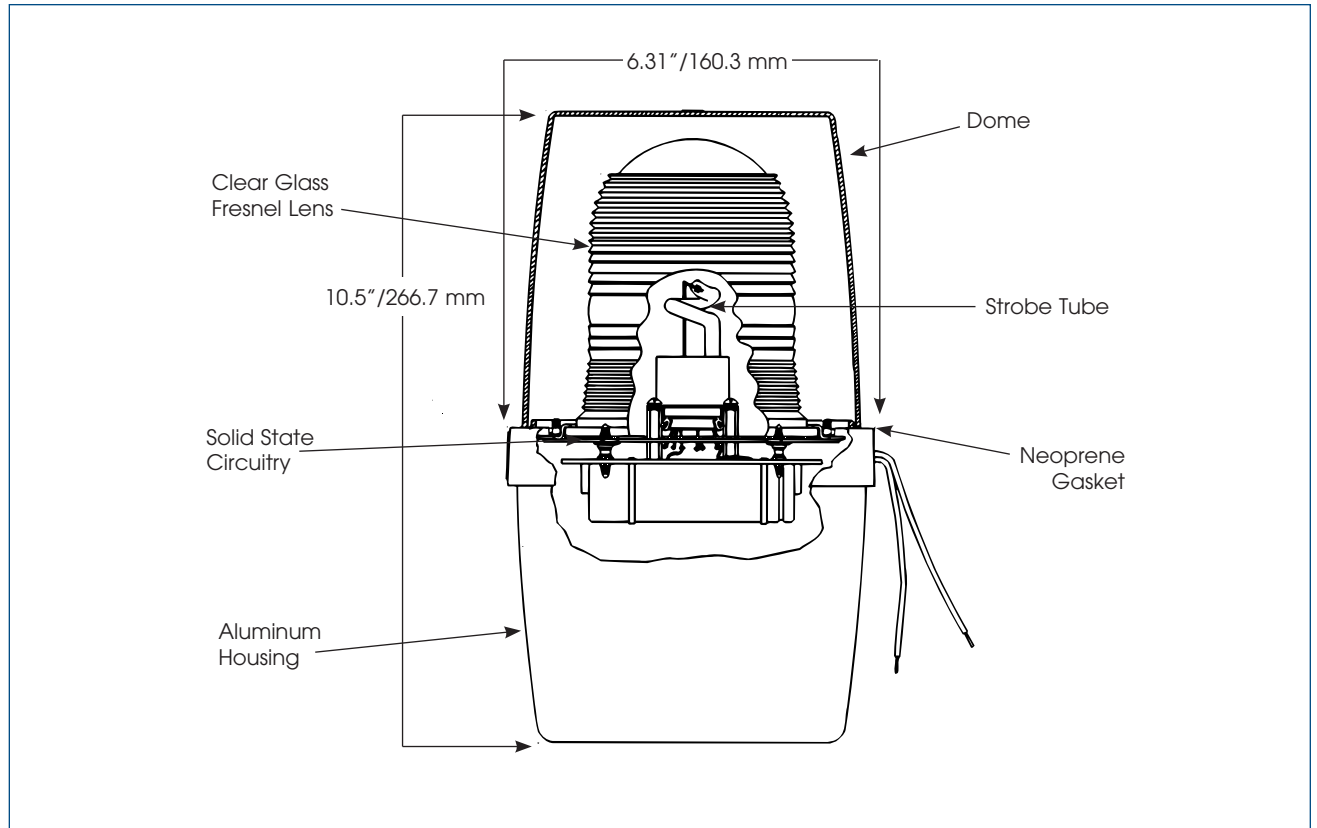
\* Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green or (R) Red

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## STROBE AUDIBLE/VISUAL WARNING SIGNAL (400ST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	4.5 lbs.	2.0 kg
Shipping Weight:	5.1 lbs.	2.3 kg
Height:	10.5"	266.7 mm
Diameter:	6.31"	160.3 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Audible signaling horn (350)  
and required mounting kit  
(400HMK-AC) sold separately
- Please refer to Model Number Index  
400ST beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Exterior Dome, Amber	K8547C001A-04
Exterior Dome, Blue	K8547C001A-02
Exterior Dome, Clear	K8547C001A-05
Exterior Dome, Green	K8547C001A-03
Exterior Dome, Red	K8547C001A-01
Interior Fresnel Lens, Clear	K8248C004E-04
Strobe Tube	K8107178A
PC Assembly, 120VAC	K200D825E



# Mounting Kits

Models LWMB2 and LCMB2



## CUSTOM MOUNTING BRACKETS

- Heavy-duty construction
- Easy installation
- For walls and outside corners
- Replaces unsightly and hazardous makeshift supports
- 1/2-inch, 3/4-inch and 1-inch NPT pipe mount
- Indoor and outdoor use
- Type 3R

Federal Signal's Models LWMB2 and LCMB2 mounting brackets are specifically designed for use with Federal Signal's stationary warning lights to provide an easy and consistent means of mounting lights throughout a facility.

Federal Signal's Models LWMB2 and LCMB2 are constructed of durable cast aluminum and sealed with gray powder coat paint. Easy to install, these units can be wired through the back of the bracket for electrical box mounting or through the threaded hole in the base for external 1/2-inch conduit connection. Each kit includes a bracket, plate and mounting screws.

Easy installation, heavy-duty construction and a professional appearance make the brackets suitable for use in commercial, institution and industrial environments.

These brackets are suitable for any Type 3R application in ordinary (non Division 1/Division 2) environments.

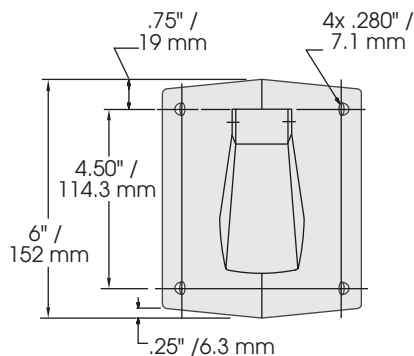
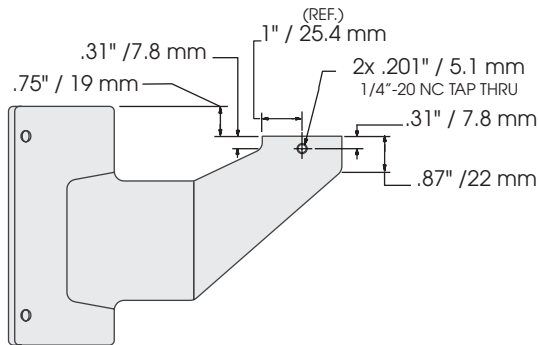
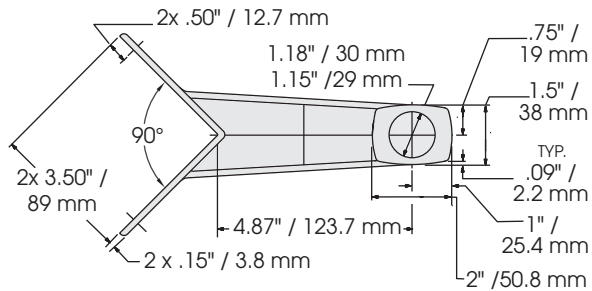
The LCMB2 and LWMB2 mounting kits may be used with the following Federal Signal models: 121S, 131ST, 131DST, 131C, 141(120V), 141ST, 225, 371, 371L, 371ST, 371DST, AV1, AV1ST, FB2PST and the FB24ST.

Model	Height	Width	Extension	Net Weight	Shipping Weight
LWMB2	6.0"	6.375"	5.875"	2.6 lbs.	2.95 lbs.
LCMB2	6.0"	5.000"	5.750"	2.3 lbs.	2.50 lbs.

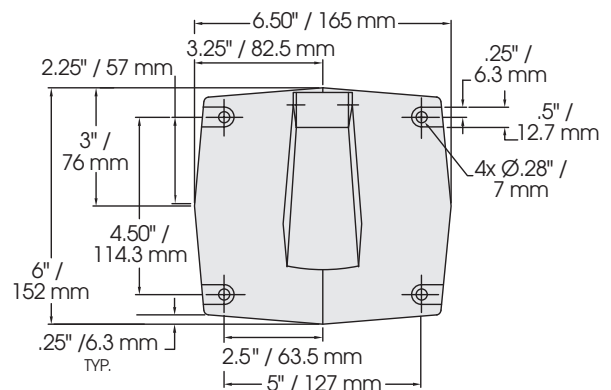
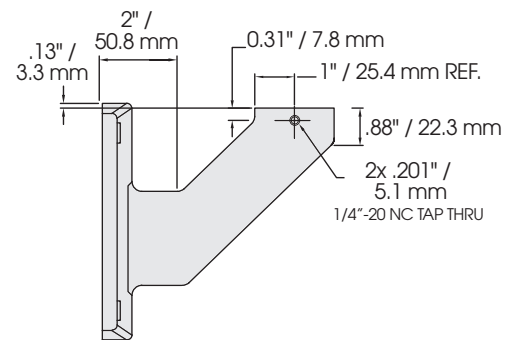
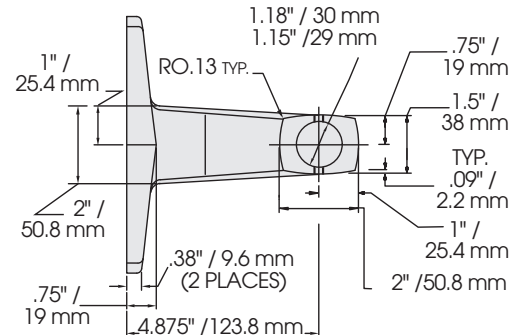


## MOUNTING KITS (LWMB2/LCMB2)

### LCMB2 – Corner Mount



### LWMB2 – Wall Mount



### HOW TO ORDER

- Specify model  
Corner Bracket (LCMB2)  
Wall Bracket (LWMB2)



# Hazardous Location Light Mounting Kit

Models LHWB

## CUSTOM MOUNTING BRACKETS

- Heavy-duty construction
- Easy installation
- For wall mount applications
- Replaces unsightly and hazardous makeshift supports
- Provides  $\frac{3}{4}$ -inch NPT standard pipe mount
- Indoor and outdoor use
- Class I, Division 2
- Type 4X
- IP66
- UL & cUL listed

Federal Signal's Model LHWB Hazardous Location mounting bracket is specifically designed for use with Federal Signal's stationary warning lights to provide an easy and consistent means of securely mounting lights throughout a facility. The bracket features a  $\frac{3}{4}$ -inch NPT male pipe connection. Optional bushings available for  $\frac{1}{2}$ -inch and 1 inch fixture mounting.

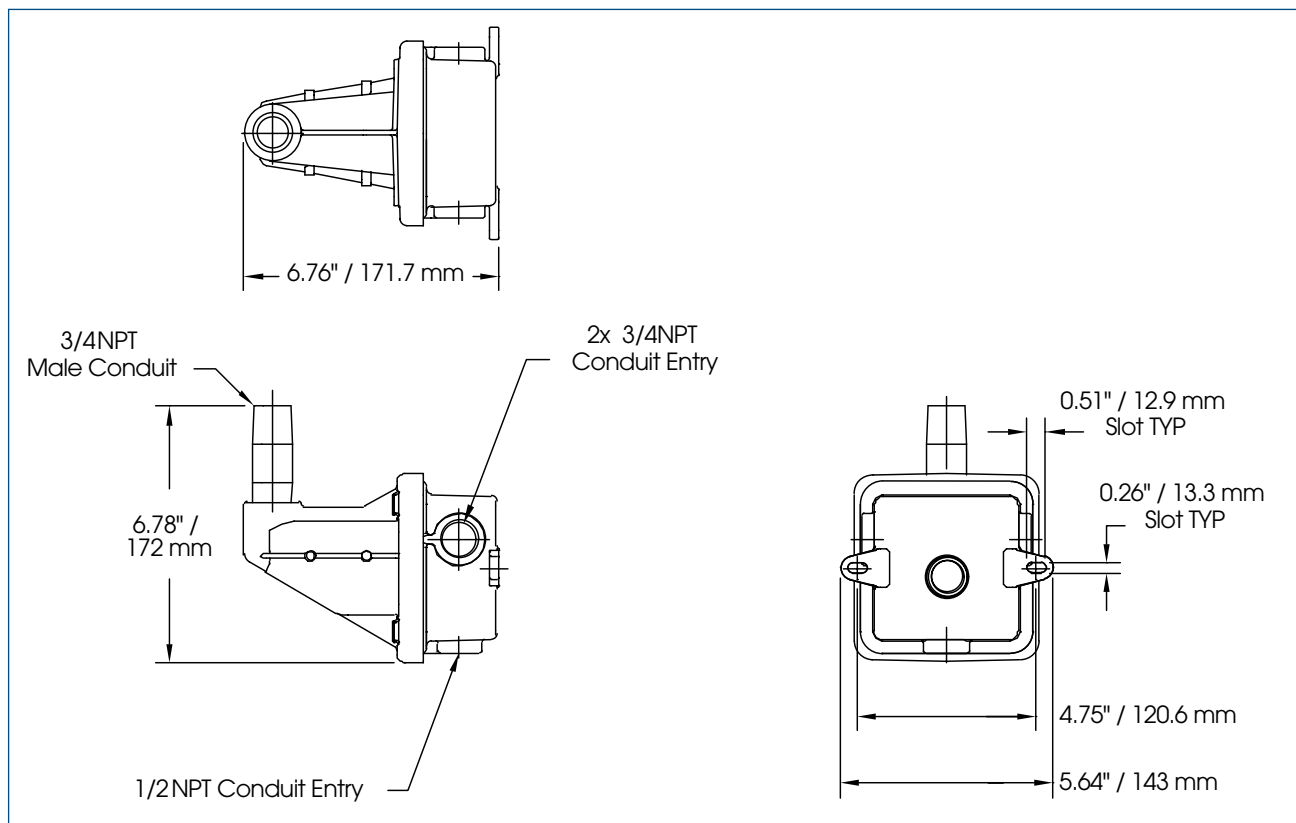
Federal Signal's Model LHWB is constructed of durable cast aluminum and sealed with a durable black powder coat paint. Easy to install, these units can be wired through either the  $\frac{1}{2}$ -inch or  $\frac{3}{4}$ -inch conduit openings located in the weather proof back box, included. Each kit includes a bracket, weather proof back box and hardware kit. Easy installation, heavy-duty construction and a professional appearance make this bracket suitable for use in commercial, institution and industrial environments.

The LHWB bracket is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II Division 2, Groups F and G; and Class III. This bracket may NOT be used in Class II, Division 1 applications. NEMA 4X and IP66 rated when used with the appropriate conduit fittings.

Model	Height	Width	Extension	Net Weight	Shipping Weight
LHWB	6.78"	5.64"	6.76"	2.0 lbs.	2.3 lbs.



## HAZARDOUS LOCATION LIGHT MOUNTING KIT (LHWB)



### SPECIFICATIONS

Operating Temperature:	-58°F to 150°F	-50°C to 66°C
Net Weight:	2 lbs.	0.91 kg
Shipping Weight:	2.3 lbs.	1.04 kg
Height:	6.78"	172.2 mm
Width:	5.64"	143.2 mm
Depth:	6.76"	172.7 mm

### REPLACEMENT PARTS AND OPTIONAL EQUIPMENT

<u>Description</u>	<u>Part Number</u>
Hardware Kit, LHWB	K2881358A
3/4" to 1/2" NPT Pipe Mount	K2881337A
3/4" to 1" NPT Pipe Mount	K2881338A

### HOW TO ORDER

- Specify Model  
LHWB – Wall Bracket
- Please refer to Model Number Index  
LHWB beginning on page 374

# Vehicular Light Bar

## Model VLB



### MINI LIGHTBAR

- Modular system
- 360 degree light distribution
- Quad flash, 9 joule output
- Magnet mount or permanent mount
- Low current draw
- Weather resistant housing
- Meets, SAE J1318 Class II

The Highlighter Strobe is designed for those who prefer the look of the traditional halogen light bar, but require strobe technology.

The Highlighter Strobe features 2 strobe heads and an integrated microprocessor controlled power supply that produces an alternating quad flash of 9-joules per head. The alternating flash tubes are positioned under onmi-directional Fresnel lens for maximum lens fill and off-axis visibility.

All Highlighter Strobe models meet SAE J1318 Class 2 requirements.

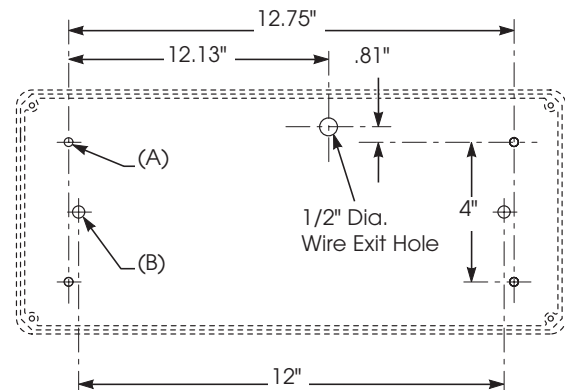
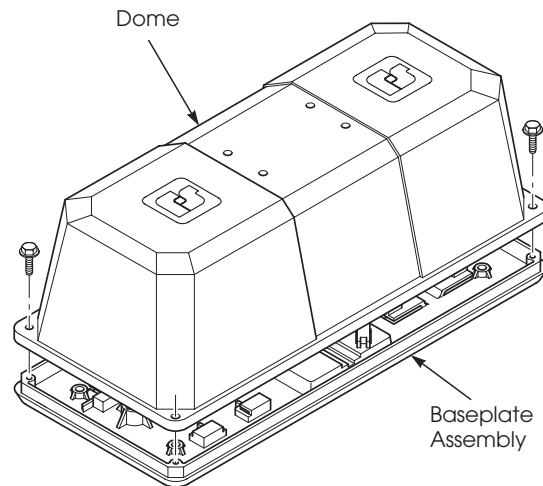
Mounting options include permanent mount or the flexibility of a suction cup/magnetic mounting. Magnetic mount unit come equipped with a cigarette lighter power plug with an integrated ON/OFF switch for easy operational control. Permanent mounting can be achieve with any of the available mounting kits<sup>1</sup>; FMK – Flat Mounting Kit, RMK – Riser Mounting Kit.

<sup>1</sup> Permanent mounting requires one of the available mounting kits for installation

Model	Operating Voltage	Operating Current	Mounting Configuration
VLB-012AP	12VDC	3.6 amps @ 12.8VDC	Permanent
VLB-012AM	12VDC	3.6 amps @ 12.8VDC	Magnetic



## VEHICULAR LIGHT BAR (VLB)



(A) Drill 0.20" Dia. holes (4) for top mounting or  
Drill 0.28" Dia. holes (4) for bottom mounting

(B) Drill 0.38" Dia. holes (2) for center mounting only

### SPECIFICATIONS

#### Shipping Weight:

Permanent	5.0 lbs.	2.3 kg
Magnetic	5.0 lbs.	2.3 kg

#### Height:

Permanent	5.0"	127.0 mm
Magnetic	5.0"	127.0 mm

#### Width:

Width:	9.0"	229.0 mm
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#### Length:

Length:	15.0"	381.0 mm
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### HOW TO ORDER

- Specify model, mounting, color and voltage
- Specify Mandatory Accessories for Permanent Mounting;  
Flat mount kit (FMK)  
Riser mount kit (RMK)
- Please refer to Model Number Index VLB beginning on page 374

### REPLACEMENT PARTS

#### Description

#### Part Number

Strobe tube assembly with connector

KZ8560082A

Power supply assembly

KZ8560081A

Clear internal lens

K208669

Outer dome, Amber

K452510-02





# Hazardous Location GRP Strobe Light

Model WV450XD and WV450XE

## GLASS REINFORCED POLYESTER DESIGN FOR LOW MAINTENANCE AND CORROSION RESISTANCE

- Available in 24-48VDC, 110VAC, 220-248VAC
- Available in 5, 10, 15 and 21 Joule Units
- Seven available lens colors: Amber, Blue, Clear Green, Magenta, Red and Yellow
- 316 Stainless steel mounting bracket included
- Toughened, impact resistant dome
- IP66
- Included dome guard
- Two M20 entries standard
- Zone rated, IECEx  
ATEX EExd IIB +T3  
ATEX EExd H2 +IIB + T4

# ATEX



The Federal Signal Model WV450X Hazardous Location GRP Strobe Light is designed to serve the needs of rugged land-based and off-shore industrial applications that demand reliable, long life operation while complying with stringent International approval requirements.

The Federal Signal Model WV450X Hazardous Location GRP Strobe Light utilizes the latest technology in non-metallic housing construction. The housing of the WV450X is comprised entirely of Glass Reinforced Polyester (GRP) which makes the product corrosion free and lighter than a comparable metallic fixture. The fact that the WV450X is corrosion free also makes the product safer, and "maintenance-free" by eliminating the need to regularly inspect the flame path. An electro-polished stainless steel dome guard is also provided for protection of the glass lens in the event of accidental impact.

Two versions of the WV450X are available. The "D" version of the product (WV450XD) comes standard with a stainless steel mounting bracket for wall mounting or fastening to a vertical surface. Two holes are tapped for M20 thread in the bottom of the product allowing for field gland connection. The "E" version of the product (WV450XE) includes the same features as the WV450XD, but incorporates a terminal chamber with three M20 tapped holes on the very bottom of the fixture. This terminal chamber is designed to house field terminations and through going power supplies.

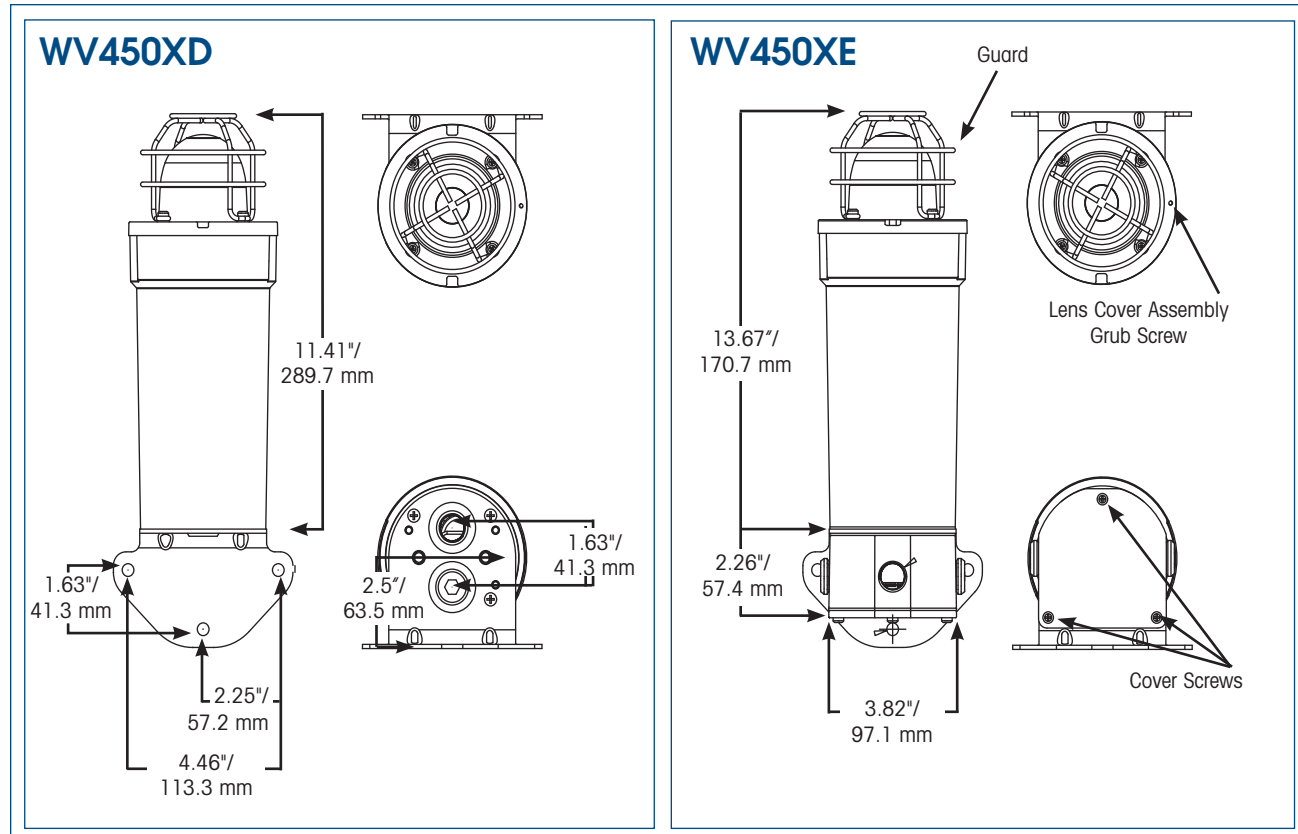
The WV450X is available in seven standard colors and three voltage ranges to satisfy most applications. There are also three different Joule output ratings available for each model and each voltage range, providing the ability to tailor the light output and current draw for a given area. The WV450X is ATEX, IECEx approved, making it ideal for applications that require International third party safety standards.

Model	Operating Voltage	Maximum Operating Current	Temperature Code at 55°C	Flash Rate	Lamp Life
WV450	24-48VDC	0.94/0.48 A @ 24-48VDC	T4	60	10,000 hrs
	110VAC	0.57 A @ 110VAC 50/60Hz	T3	60	10,000 hrs
	220-248VAC	0.30 A @ 220-248VAC 50/60Hz	T3	60	10,000 hrs

Specify color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (M) Magenta, (R) Red or (Y) Yellow



## HAZARDOUS GRP STROBE (WV450XD/WV450XE)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Light Source:	Strobe tube	Strobe tube
Operating Temperatures:		
“d” version without terminal chamber		

ATEX -55°C to 55°C (-67°F to 131°F)  
IECEX -20°C to 55°C (-4°F to 131°F)

“e” version with terminal chamber

ATEX -20°C to 55°C (-22°F to 131°F)  
IECEX -20°C to 55°C (-4°F to 131°F)

#### WV450XD

Net Weight:	7.1 lbs.	3.23 kg
Shipping Weight:	8.6 lbs.	3.88 kg
Height:	11.41"	289.7 mm
Diameter:	4.46"	113.3 mm

#### WV450XE

Net Weight:	8.6 lbs.	3.9 kg
Shipping Weight:	10.0 lbs.	4.54 kg
Height:	13.67"	170.7 mm
Diameter:	3.82"	97.1 mm

Certificate Number:	IECEX UL	06.0010X
	06 UL DEMKO ATEX	0425693X

### HOW TO ORDER

1	2	3	4	5	6
<b>WV450X</b>	<b>D</b>	<b>15</b>	<b>220</b>	<b>R</b>	<b>00</b>

#### 1 TYPE

#### 2 PROTECTION

**D** Flameproof, Increased Safety  
**E** Terminal Box

#### 3 RATING

**05** 5 Joule  
**10** 10 Joule  
**15** 15 Joule  
**21** 21 Joule

#### 4 VOLTAGE ± 15%

**024** 24-48VDC  
**110** 110-120VAC  
**220** 220-248VAC

#### 5 COLOR

**R** - Red, **A** - Amber, **Y** - Yellow,  
**B** - Blue, **G** - Green,  
**M** - Magenta, **C** - Clear

#### 6 SPECIAL FEATURES

**00** None  
— Body Color  
— Retrofit Plate



## DESIGNED FOR USE IN ATEX ZONE RATED ATMOSPHERES

- Twin Fluorescent lamps for security (sold separately)
- Individual lamp control gear
- 8,000 hour lamp life
- Available in five colors and clear
- Ex 'e' terminal chamber available
- AC and DC voltage ranges
- Approved for use in Zone 1, 2, 21, 22 Atmospheres

# Explosion-Proof Static Warning Lights

## 2000 Series Models FL18 and FL36

The 2000 Series model FL18 and FL36 static warning beacons are visual signals designed for use in hazardous locations that require ATEX approval. At the heart of its design is a compact fluorescent lamp configuration that provides long life, excellent vibration resistance and a signal-specific colored glow.

FL18 and FL36 beacons are sealed from dust and water by a nitrile rubber o-ring seal. All exterior cast aluminum surfaces are finished in powder coat paint and external hardware is manufactured from stainless steel to resist corrosion. Available signal colors are Amber, Blue, Clear, Green, Red, and Yellow.

The FL18 and FL36 beacons are externally powered by an AC or DC source. Screw type terminal blocks are provided for field wiring on all units.

All variations of the FL18 and FL36 beacons feature a four entry fixture to allow cable looping. These cable entries are metric M20 X 1.5, but other configurations are available upon request.

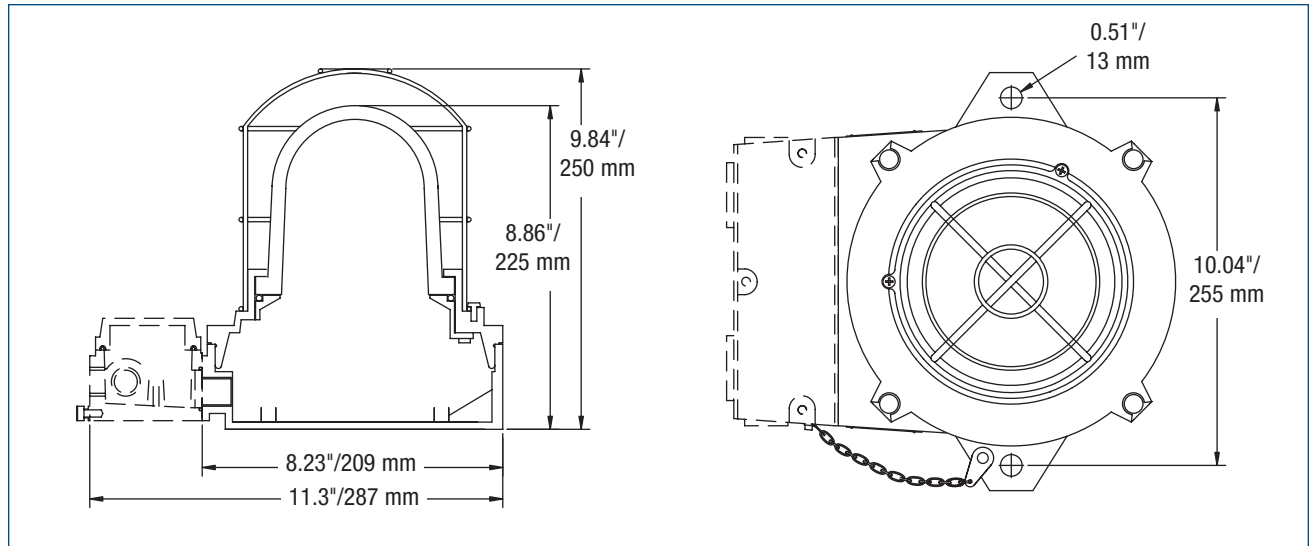
**ATEX IEC**  

Model	Voltage	Operating Current	Equivalent Wattage
FL18	240VAC	0.18 amps	17.5 watt
FL18	110VAC	0.27 amps	16.0 watt
FL18	110VDC	0.14 amps	14.5 watt
FL18	48VDC	0.42 amps	19.2 watt
FL18	24VDC	0.87 amps	20.9 watt
FL36	240VAC	0.18 amps	40.2 watt

*Specify color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (R) Red or (Y) Yellow*



## EXPLOSION-PROOF STATIC WARNING LIGHTS (2000 SERIES FL18/FL36)



### SPECIFICATIONS

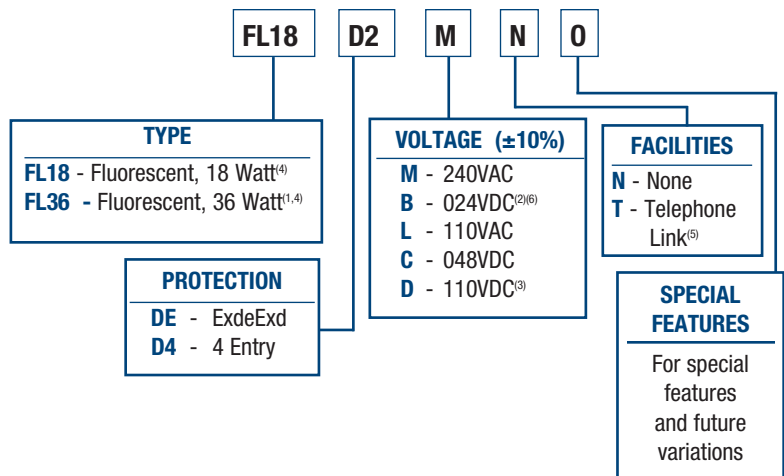
Lamp Life:	8,000 Hours	8,000 Hours	Terminals:	
Light Source:	Fluorescent	Fluorescent	Ex d:	4 way block mounted PCB
Operating Temperature:			Ex de:	12 way block in terminal
Ex d and Ex de:	-40°F to 158°F	-40°C to 70°C(T4)	Cable entries:	
chamber			Ex d:	4 entries - M20 x 1.5
Net Weight:			Ex de:	4 entries - M20 x 1.5
Ex d:	13.23 lbs.	6.0 kg	Mounting:	Via fixed cast lugs at two mounting points
Ex de:	15.43 lbs.	7.0 kg	Body:	Marine Grade Alloy painted Regal Red
Shipping Weight:	16.5 lbs.	7.5 kg	Exterior dome:	Toughened glass
Height:	9.84"	250.0 mm	Guard:	316 Stainless steel
Width:	10.04"	255.0 mm	Ingress Protection:	IP66
Length:	8.23"	209.0 mm		
ATEX Certificate Number:	Baseefa 07ATEX0150			
IECEx Certificate Number:	IECEx BAS 07.0038			
Certification Marking:	Ex d IIB T4 Ex tD A21	Ex de IIB T4 Ex tD A21		

### HOW TO ORDER

Fluorescent Lamps Sold Separately:

Two Required for FL18,  
Four Required for FL36

FL Tube, Amber	P/N A2158A
FL Tube, Blue	P/N A2158B
FL Tube, Clear	P/N A2158
FL Tube, Green	P/N A2158G
FL Tube, Red	P/N A2158R
FL Tube, Yellow	P/N A2158Y



#### NOTES:

(1) Only the 240VAC voltage is available with FL36 beacon

(2) Range 22VDC to 32VDC with FL18 beacon

(3) Range 100VDC to 135VDC with xenon beacons (inclusive of ±10%).

FL18 is 100VDC to 150VDC inclusive of ±10%.

(4) 2 pcs. required for FL18, 4 pcs. required for FL36

(5) Applicable to Xenon AND LED beacons only

(6) LED beacon available in 24VDC and 110-240VAC only



## DESIGNED FOR USE IN ATEX ZONE RATED ATMOSPHERES

- Single and four tube models
- Internal fresnel lens (sold separately)
- Available in five colors and clear
- Ex 'e' terminal chamber available
- AC and DC voltage ranges
- Approved for use in Zone 1, 2, 21, 22 Atmospheres

**ATEX IEC**  **CE**



# Explosion-Proof Strobe Lights

## 2000 Series Models XEN1 and XEN4

The 2000 Series Models XEN1 and XEN4 Xenon beacons are visual warning lights for use in hazardous locations that require ATEX approval. Model XEN1 is a strobe light that contains a single xenon flashing tube. This makes it ideally suited for use in indoor explosion-proof areas that require compliance to European electrical safety directives.

Model XEN4 is a strobe light that utilizes four strobe tubes, timed in a sequential manner, to simulate the operation of a mechanical rotating beacon. This four-strobe version is ideal in outdoor situations where a conventional beacon may not be adequate.

The 2000 Series Xenon beacon is sealed from dust and water by a nitrile rubber o-ring seal. All exterior cast aluminum surfaces are finished in powder coat paint and external hardware is manufactured from stainless steel to resist corrosion. Available signal colors are Amber, Blue, Clear Green, Red, and Yellow. An optional telephone initiation feature is also available for either beacon that allows the product to flash when telephone ringing voltage is present.

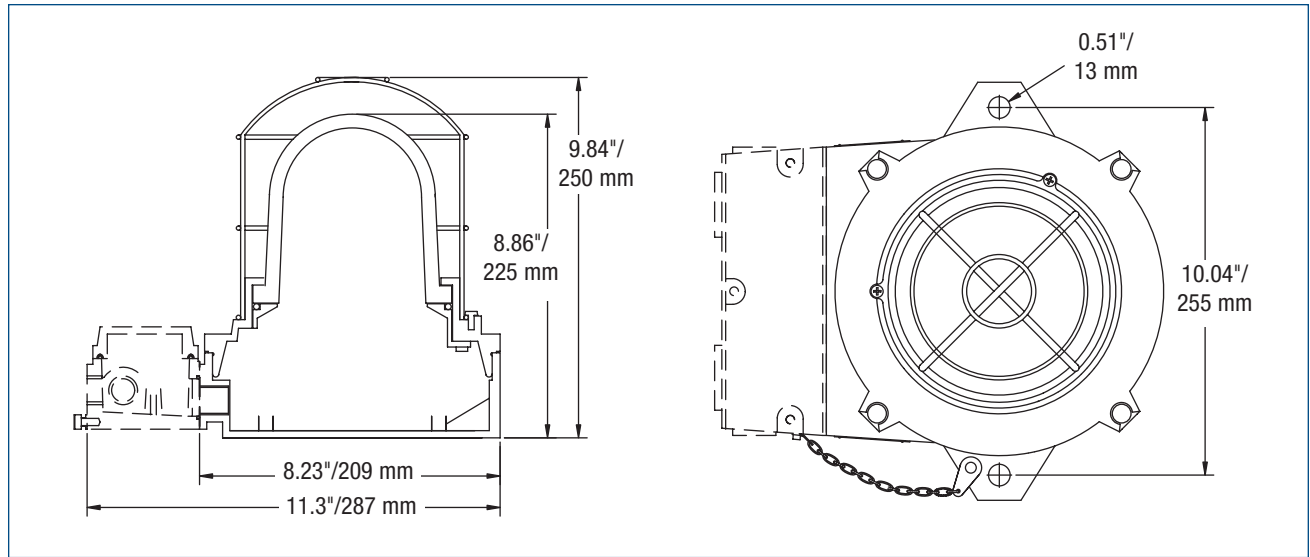
The 2000 Series Xenon beacon is externally powered by a DC or AC power source. Screw type terminal blocks are provided for field wiring on all units.

All variations of the 2000 Series Xenon beacon feature a four entry fixture to allow cable looping. These cable entries are metric M20 X 1.5, but other configurations are available upon request.

Model	Voltage	Operating Current	Flash Rate/Minute
XEN1	24VDC	0.93 amps	80
XEN1	48VDC	0.81 amps	80
XEN1	110VDC	0.61 amps	80
XEN1	110VAC	0.48 amps	80
XEN1	240VAC	0.38 amps	80
XEN4	24VDC	1.90 amps	N/A
XEN4	48VDC	1.22 amps	N/A
XEN4	110VDC	0.92 amps	N/A
XEN4	110VAC	0.53 amps	N/A
XEN4	240VAC	0.41 amps	N/A

*Specify color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (R) Red or (Y) Yellow*

## EXPLOSION-PROOF STROBE LIGHTS (2000 SERIES XEN1/XEN4)



### SPECIFICATIONS

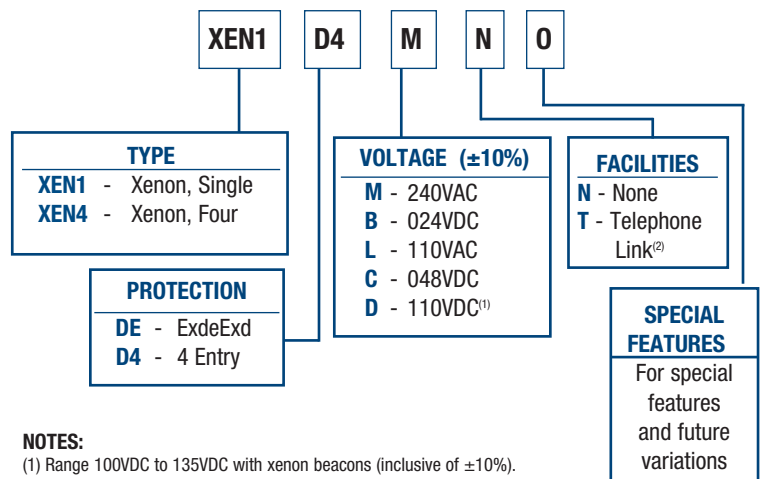
Lamp Life:	5,000 Hours	5,000 Hours	Terminals:	
Light Source:	Xenon	Xenon	Ex d:	4 way block mounted PCB
Operating Temperature:			Ex de:	12 way block in terminal chamber
Ex d and Ex de:	-40°F to 131°F	-40°C to 70°C	Cable entries:	
Net Weight:			Ex d:	4 entries - M20 x 1.5
Ex d:	13.23 lbs.	6.0 kg	Ex de:	4 entries - M20 x 1.5
Ex de:	15.43 lbs.	7.0 kg	Mounting:	Via fixed cast lugs at two mounting points
Shipping Weight:	16.5 lbs.	7.5 kg	Body:	Marine Grade Alloy painted Regal Red
Height:	9.84"	250.0 cm	Exterior dome:	Toughened glass
Width:	10.04"	255.0 cm	Guard:	316 Stainless steel
Length:	8.23"	209.0 cm	Ingress Protection:	IP66
ATEX Certificate Number:	Baseefa 07ATEX0150			
IECEX Certificate Number:	IECEX BAS 07.0038			
Certification Marking:	Ex d IIB T4 Ex tD A21	Ex de IIB T4 Ex tD A21		

### LIGHT OUTPUT

Colored Xenon Lens Ordered Separately  
Part Numbers Are As Follows:

Amber	A1131S
Blue	A1111S
Clear	A2133S
Green	A1198S
Red	A1779S
Yellow	A3410S

### HOW TO ORDER



#### NOTES:

- (1) Range 100VDC to 135VDC with xenon beacons (inclusive of  $\pm 10\%$ ). FL18 is 100VDC to 150VDC inclusive of  $\pm 10\%$ .
- (2) Applicable to Xenon AND LED beacons only





LED

# Explosion-Proof LED Warning Light

## 2000 Series Model LED

### DESIGNED FOR USE IN ATEX ZONE RATED ATMOSPHERES

- Super bright output with XLT™ Technology
- 3 remotely selectable flash patterns
- 50,000 hour lamp life
- Available in six colors
- Ex 'e' terminal chamber available
- AC and DC voltage ranges
- Approved for use in Zone 1, 2, 21, 22 Atmospheres

The 2000 Series Model LED beacon, with XLT™ technology, is a visual signal warning light for use in hazardous locations requiring ATEX approval. The beacon can produce three light patterns depending on the configuration of a field selectable jumper wire or remote contact closure. The light patterns are: steady-on, slow flash and rapid flash. An optional telephone initiation feature also allows the beacon to flash when telephone ringing voltage is present.

The 2000 Series LED beacon is sealed from dust and water by a nitrile rubber o-ring seal. All exterior cast aluminum surfaces are finished in powder coat paint and external hardware is manufactured from stainless steel to resist corrosion. Available signal colors are Amber, Blue, Clear, Green, Red and Yellow.

The 2000 Series LED beacon is externally powered by 24VDC or 110-240VAC source. All AC powered units feature a switch mode power supply that accommodates a wide input voltage range without requiring any additional configuration from the user. The current consumption from the beacon is less than 500mA and the in-rush current is low enough to allow PLC initiation without the use of an external relay. Screw type terminal blocks are provided for field wiring on all units.

All variations of the 2000 Series LED beacon feature a four entry fixture to allow cable looping. These cable entries are metric M20 X 1.5, but other configurations are available upon request.

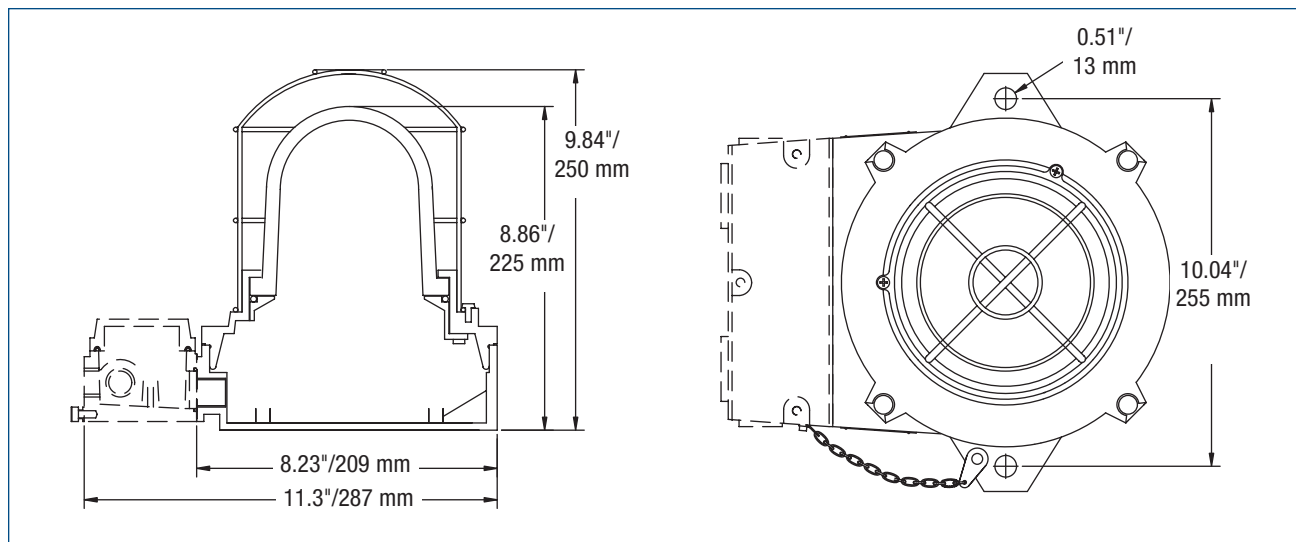
**ATEX IEC**  

Model	Voltage	Operating Current	Flash Rate/Minute	Max In-Rush Current
LED	24VDC	0.50 amps	60-80	1.75A for 5.00mS
LED	110VAC	0.22 amps	60-80	2.00A for 0.25mS
LED	240VAC	0.13 amps	60-80	2.00A for 0.25mS

*Specify color: (A) Amber, (B) Blue, (C) Clear, (G) Green, (R) Red or (Y) Yellow*



## EXPLOSION-PROOF WARNING LIGHT (2000 SERIES LED)



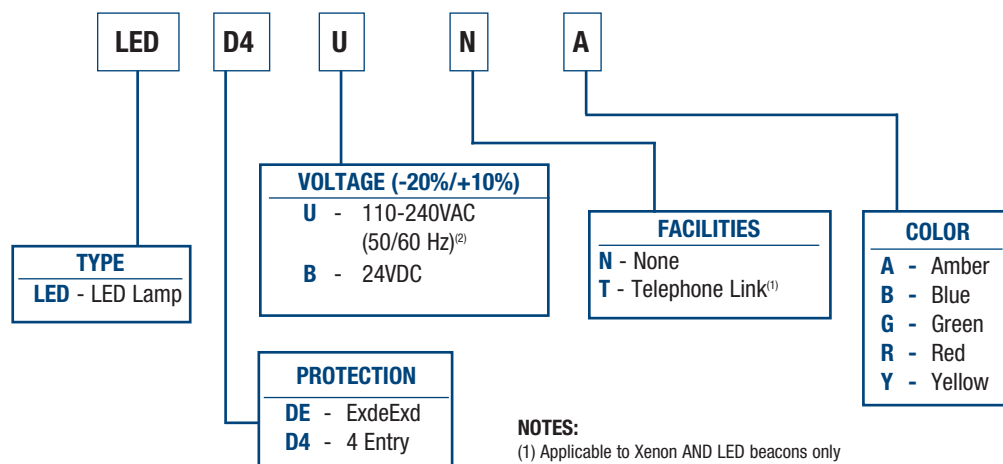
### SPECIFICATIONS

Lamp Life:	50,000 Hours	50,000 Hours	Terminals:
Light Source:	LED Array	LED Array	Ex d: 4 way block mounted PCB
Operating Temperature:			Ex de: 12 way block in terminal chamber
Ex d and Ex de:	-40°F to 131°F	-40°C to 55°C	
Net Weight:			Cable entries:
Ex d:	13.23 lbs.	6.0 kg	Ex d: 4 entries - M20 x 1.5
Ex de:	15.43 lbs.	7.0 kg	Ex de: 4 entries - M20 x 1.5
Shipping Weight:	16.5 lbs.	7.5 kg	Mounting: Via fixed cast lugs at two mounting points
Height:	9.84"	250.0 cm	Body: Marine Grade Alloy painted Regal Red
Width:	10.04"	255.0 cm	Exterior dome: Toughened glass
Length:	8.23"	209.0 cm	Guard: 316 Stainless steel
ATEX Certificate Number:	Baseefa 07ATEX0150		Ingress Protection: IP66
IECEX Certificate Number:	IECEX BAS 07.0038		
Certification Marking:	Ex d IIB T6 Ex tD A21	Ex de IIB T6 Ex tD A21	

### LIGHT OUTPUT

Amber	113cd
Blue	12cd
Green	66cd
Yellow	60cd
Red	63cd

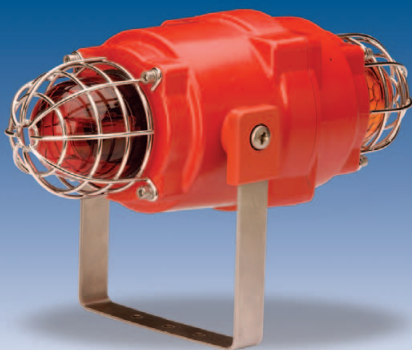
### HOW TO ORDER



#### NOTES:

(1) Applicable to Xenon AND LED beacons only

(2) LED beacon available in 24VDC and 110-240VAC only



# ATEX Visual Dual Strobe

## Model WVDS

### FEATURES:

- Automatic synchronisation on multi-strobe system
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-strobe systems
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & stainless steel guard
- Very large termination area
- Ratchet adjustable stainless steel 'U' bracket

### APPROVALS:

ATEX certificate: KEMA 01ATEX2222  
EN 60079-0 : 2006 EN 60079-1 : 2007  
EN 61241-0 : 2006 EN 61241-1 : 2004

IECEx certificate: IECEx KEM 10.0024  
IEC 60079-0 : 2004 (Ed4) IEC 60079-1 : 2007 (Ed6)  
IEC 61241-0 : 2004 (Ed1) IEC 61241-1 : 2004 (Ed1)

- Certificate approvals pending.  
Visit [www.federal-signal-indust.com](http://www.federal-signal-indust.com)  
for the latest information.

The flameproof Model WVDS dual xenon beacons are suitable for Zone 1, 2, 21 & 22 applications.

With a dual flash energy of 5 Joules (60 fpm) the WVDS units are ideal for general signalling duties while their robust construction makes installation in the harshest of environments possible. The beacons may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.

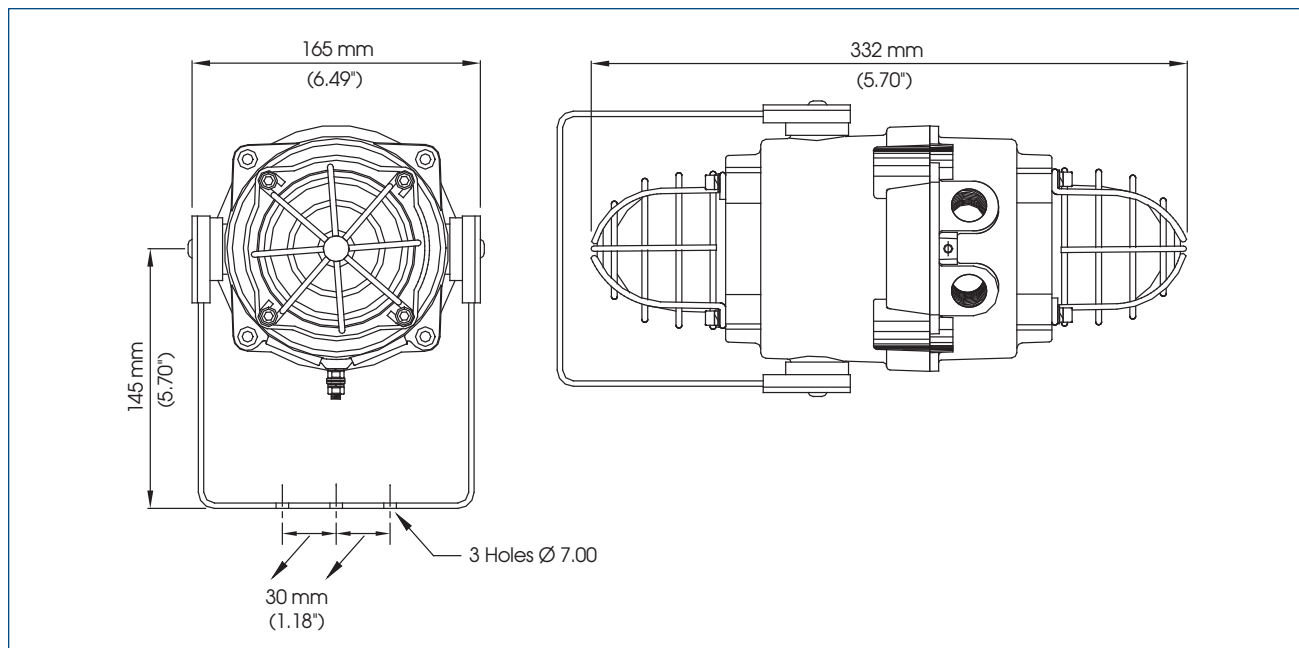
Additional features include automatic synchronisation on multi-beacon systems and stainless steel guard and mounting bracket as standard.

The WVDS range features enclosures manufactured from corrosion proof, marine grade copper free LM6 aluminium which is phosphated and powder coated. All models have two M20 cable entries, large termination areas and an ingress protection of IP66/67.

Model	Voltage	Voltage Range	Operating Current	Flash Rate/
<b>WVDS-024</b>	24VDC	20-24VDC	270mA	60
<b>WVDS-048</b>	48VDC	42-54VDC	180mA	60
<b>WVDS-115</b>	115VAC	104-126	140mA	60
<b>WVDS-230</b>	230VAC	207-253	55mA	60



## ATEX VISUAL DUAL STROBE (WVDS)



### SPECIFICATIONS

ATEX / IECEx:

II 2G Ex d IIC T4 Ta. -50°C to +70°C

II 2G Ex d IIC T5 Ta. -50°C to +55°C

II 2D Ex td A21 IP67 T115°C

based on max. Ta. of +70°C

Energy: 5 Joules x 2 (5Ws)

Flash rate: 1Hz (60 fpm)

Peak Candela: 34,812 cd x 2

Effective Intensity cd: 54 cd x 2

Lens colors: Amber, Blue, Clear,  
Green, Red & Yellow

Voltages DC: 24VDC; 48VDC

Voltages AC: 115VAC; 230VAC (50  
Hz / 60Hz ±10%)

Ingress protection:

IP66/67

Housing material:

Marine grade copper free LM6 Aluminium

Housing finish:

Phosphated & powder coated finish - anti-corrosion

Colour:

RAL3000 Red (others available on request)

Cable entries:

Dual M20 ISO (one stopping plug included)

Terminals:

0.5 to 4.0mm<sup>2</sup> cables

Line monitoring :

Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res.  
or diode within Exd enclosure (dc versions)

Product Weight :

DC: 2.95 Kg

AC: 3.00 Kg

Shipping Weight :

DC: 3.70 Kg

AC: 3.75 Kg

### HOW TO ORDER

**WVDS - 024 - R - A**

TYPE	VOLTAGE	1st LENS COLOR	2nd LENS COLOR
<b>WVDS</b> ATEX Visual Dual Strobe	<b>024</b> - 24VDC <b>048</b> - 48VDC <b>115</b> - 115VAC <b>230</b> - 230VAC	<b>R</b> - Red	<b>A</b> - Amber <b>B</b> - Blue <b>C</b> - Clear <b>G</b> - Green <b>R</b> - Red <b>Y</b> - Yellow

#259361A Rev A

2645 Federal Signal Dr., University Park, IL 60484 Tel: 708.534.4756 Fax: 708.534.4852 www.federal-signal-indust.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com



# ATEX Audible Visual Sounder

## Model WAVS

The flameproof Model WAVS combination alarm sounders and Xenon beacons are suitable for Zone 1 & Zone 2 applications.

Sound level outputs are up to 117dB(A) at 1 meter with a choice of 32 alarm tones and 3 remotely selectable stages.

Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.

### FEATURES:

- Automatic synchronisation on multi-strobe & sounder systems.
- Beacons can be set to 'flip-flop' alternating mode with other units on multi-strobe systems.
- Xenon tubes mechanically secured against shock & vibration
- Glass lens & Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket

ATEX certificate: KEMA 01ATEX2223  
EN 60079-0 : 2006 EN 60079-1 : 2007  
EN 61241-0 : 2006 EN 61241-1 : 2004

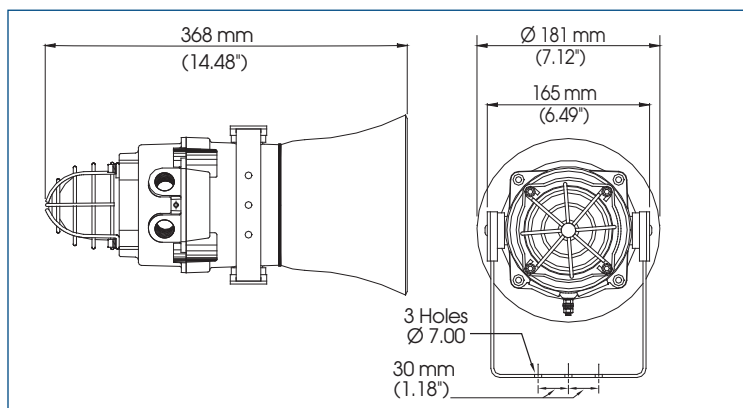
IECEx certificate: IECEx KEM 10.0025  
IEC 60079-0 : 2004 (Ed4) IEC 60079-1 : 2007 (Ed6)  
IEC 61241-0 : 2004 (Ed1) IEC 61241-1 : 2004 (Ed1)

- Certificate approvals pending.  
Visit [www.federal-signal-indust.com](http://www.federal-signal-indust.com)  
for the latest information.

Model	Voltage	Alarm Sounder		Xenon Beacon		
		Voltage Range	Current	Voltage Range	Current	Flash Rate
<b>WAVS-024</b>	24VDC	+/-25%	265mA	20-28V	300mA	60
<b>WAVS-048</b>	48VDC	+/-25%	130mA	42-54V	180mA	60
<b>WAVS-115</b>	115VAC	+/-10%	110mA	+/-10%	140mA	60
<b>WAVS-230</b>	230VAC	+/-10%	56mA	+/-10%	55mA	60



## ATEX AUDIBLE VISUAL SOUNDER (WAVS)



### HOW TO ORDER

#### WAVS - 024 - A

TYPE	VOLTAGE	LENS COLOR
<b>WAVS</b> ATEX Audible Visual Sounder	<b>024</b> - 24VDC <b>048</b> - 48VDC <b>115</b> - 115VAC <b>230</b> - 230VAC	<b>A</b> - Amber <b>B</b> - Blue <b>C</b> - Clear <b>G</b> - Green <b>R</b> - Red <b>Y</b> - Yellow

### SPECIFICATIONS

ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C  
GOST-R: 1ExdIIBT4 Ta. -50° to +55°C

#### SOUNDER/HORN:

Maximum output: 117dB(A) @ 1 meter  
Nominal output: 110dB(A) @ 1m +/- 3dB - Tone 2  
No. of tones: 32 (UK00A / PFEER compliant)  
No. of stages: 3  
Volume control: Max. 110dB(A); Min. 72dB(A)-Tone 2  
Voltages DC: 24VDC; 48VDC  
Voltages AC: 115VAC; 230VAC (50Hz/60Hz ±10%)  
Stage switching: Negative or positive

#### BEACON:

Energy: 5 Joules (5Ws)  
Flash rate: 1Hz (60 fpm)  
Peak Candela: 34,812 cd  
Effective Intensity cd: 54 cd  
Lens colors: Amber, Blue, Clear, Green, Red & Yellow

#### GENERAL:

Ingress protection: IP66/67  
Housing material: Marine grade copper free LM6 Aluminium  
Housing finish: Phosphated & powder coated  
WAVS flare: High impact UL94 V0 & 5VA FR ABS (Red)  
Cable entries: Dual M20 ISO (one stopping plug included)  
Terminals: 0.5 to 4.0mm<sup>2</sup> cables.  
Line monitoring : Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions).  
Product Weight : DC: 4.00 Kg  
AC: 4.20 Kg  
Shipping Weight : DC: 4.70 Kg  
AC: 4.90 Kg

### TONES

Stage 1	Frequency Description	dB @ 1m*	Stage 2	Stage 3
Tone 1	1000 Hz Continuous - PFEER Toxic Gas	110.0dB(A) @ 1m	Tone 31	Tone 11
Tone 2	800/1000Hz @ 0.25 sec Alternating	110.0dB(A) @ 1m	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 6	Tone 5
Tone 5	2400Hz Continuous	109.0dB(A) @ 1m	Tone 3	Tone 27
Tone 6	2400/2900Hz @ 7Hz Sweeping	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	110.5dB(A) @ 1m	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 11	1000Hz @ 0.5Hz Intermittent	110.0dB(A) @ 1m	Tone 31	Tone 1
Tone 12	800/1000Hz @ 0.875Hz Alternating	110.0dB(A) @ 1m	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	109.0dB(A) @ 1m	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	103.0dB(A) @ 1m	Tone 4	Tone 5
Tone 15	800Hz Continuous	103.0dB(A) @ 1m	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	104.0dB(A) @ 1m	Tone 18	Tone 5
	544Hz (100mS)/			
Tone 17	440Hz (400mS) - NF S 32-001	107.0dB(A) @ 1m	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	105.0dB(A) @ 1m	Tone 2	Tone 5
	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s			
Tone 19	-NFC48-265	117.0dB(A) @ 1m	Tone 2	Tone 5
Tone 20	660Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	103.0dB(A) @ 1m	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	107.0dB(A) @ 1m	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	109.0dB(A) @ 1m	Tone 29	Tone 5
Tone 26	Bell	117.0dB(A) @ 1m	Tone 2	Tone 1
Tone 27	554Hz Continuous	107.0dB(A) @ 1m	Tone 26	Tone 5
Tone 28	440Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	106.0dB(A) @ 1m	Tone 7	Tone 5
	AS2220: 420Hz repeating 0.625 sec on,			
Tone 30	0.625 sec off.	104.0dB(A) @ 1m	Tone 32	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	110.5dB(A) @ 1m	Tone 11	Tone 1
	AS2220: 500-1200Hz 3.75s on 0.25s off			
Tone 32	(15 cycles/min)	110.5dB(A) @ 1m	Tone 26	Tone 1

#259362A Rev A





# ATEX Audible Visual Sounder LED

Model WAVS-L

## FEATURES:

- Glass dome with optically enhanced Fresnel Polycarbonate lens
- Stainless Steel guard
- Very large termination area.
- Ratchet adjustable stainless steel 'U' bracket.
- The sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.

The flameproof Model WAVS-L combination alarm sounders and high output LED beacons are suitable for Zone 1 & Zone 2 applications.

The WAVS-L features sound level outputs of up to 117dB(A) at 1 meter with a choice of 32 alarm tones and 3 remotely selectable stages.

The beacon contains an array of 32 high output, multi function LEDs with a total of 9 modes of operation - 4 rotating effect modes, 4 flashing modes and a steady mode for use in indicator/ status applications. Based on the mode selected the user can also select two alternative LED modes remotely.

## APPROVALS:

- ATEX certificate: KEMA 01ATEX2223  
EN 60079-0 : 2006 EN 60079-1 : 2007  
EN 61241-0 : 2006 EN 61241-1 : 2004

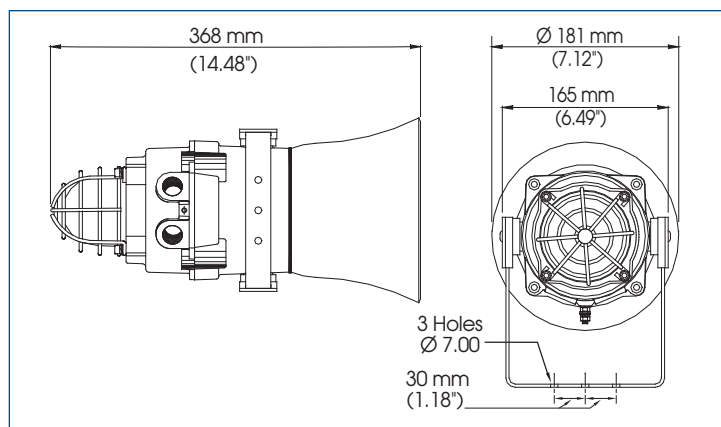
- IECEx certificate: IECEx KEM 10.0025  
IEC 60079-0 : 2004 (Ed4) IEC 60079-1 : 2007 (Ed6)  
IEC 61241-0 : 2004 (Ed1) IEC 61241-1 : 2004 (Ed1)
- GOST-R certificate: POCC GB.JB05.B02205
- Safety-integrity suitability: SIL1

- Certificate approvals pending.  
Visit [www.federal-signal-indust.com](http://www.federal-signal-indust.com)  
for the latest information.

Model	Voltage	Alarm Sounder		LED Beacon	
		Voltage Range	Current	Voltage Range	Current
<b>WAVS-L-024</b>	24VDC	+/-25%	265mA	10-50V	400mA
<b>WAVS-L-048</b>	48VDC	+/-25%	130mA	10-50V	210mA
<b>WAVS-L-115</b>	115VAC 50/60Hz	+/-10%	110mA	+/-10%	135mA
<b>WAVS-L-230</b>	230VAC 50/60Hz	+/-10%	56mA	+/-10%	65mA



## ATEX AUDIBLE VISUAL SOUNDER (WAVS-L)



### HOW TO ORDER

#### WAVS-L - 024 - A

TYPE	VOLTAGE	LENS COLOR
WAVS-L ATEX Visual Sounder LED	024 - 24VDC 048 - 48VDC 115 - 115VAC 230 - 230VAC	A - Amber B - Blue G - Green R - Red Y - Yellow

### SPECIFICATIONS

ATEX / IECEx: II 2G Ex d IIB T4 Ta. -50° to +70°C

GOST-R: 1ExdIIBT4 Ta. -50° to +55°C

#### SOUNDER/HORN:

Maximum output: 117dB(A) @ 1 meter

Nominal output: 110dB(A) @ 1m +/- 3dB - Tone 2

No. of tones: 32 (UK00A / PFEER compliant)

No. of stages: 3

Volume control: Max. 110dB(A); Min. 72dB(A) - Tone 2

Voltages DC: 24VDC; 48VDC

Voltages AC: 115VAC; 230VAC

Stage switching: Negative or positive

#### LED BEACON:

Light source: Array of 32 high output LEDs

Lens colors: Amber, Blue, Green, Red & Yellow

Voltages DC: 10-50VDC

Voltages AC: 115VAC; 230VAC (50Hz/60Hz ±10%)

#### GENERAL:

Ingress protection: IP66/67

Housing material: Marine grade copper free LM6 Aluminium

Housing finish: Phosphated & powder coated

WAVS-L flare: High impact UL94 V0 & 5VA FR ABS (Red)

Cable entries: Dual M20 ISO (one stopping plug included)

Terminals: 0.5 to 4.0mm<sup>2</sup> cables

Line monitoring : Min. 500 Ohm 2w, or 3k3 Ohm 0.5w res. or diode within Exd enclosure (dc versions)

Product Weight : DC: 4.00 Kg

AC: 4.20 Kg

Shipping Weight : DC: 4.70 Kg

AC: 4.90 Kg

### TONES

Stage 1	Frequency Description	dB @ 1m*	Stage 2	Stage 3
Tone 1	1000 Hz Continuous - PFEER Toxic Gas	110.0dB(A) @ 1m	Tone 31	Tone 11
Tone 2	800/1000Hz @ 0.25 sec Alternating	110.0dB(A) @ 1m	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 6	Tone 5
Tone 5	2400Hz Continuous	109.0dB(A) @ 1m	Tone 3	Tone 27
Tone 6	2400/2900Hz @ 7Hz Sweeping	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	110.0dB(A) @ 1m	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	110.5dB(A) @ 1m	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	110.5dB(A) @ 1m	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	109.0dB(A) @ 1m	Tone 7	Tone 5
Tone 11	1000Hz @ 0.5Hz Intermittent	110.0dB(A) @ 1m	Tone 31	Tone 1
Tone 12	800/1000Hz @ 0.875Hz Alternating	110.0dB(A) @ 1m	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	109.0dB(A) @ 1m	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	103.0dB(A) @ 1m	Tone 4	Tone 5
Tone 15	800Hz Continuous	103.0dB(A) @ 1m	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	104.0dB(A) @ 1m	Tone 18	Tone 5
Tone 17	544Hz (100mS)/ 440Hz (400mS) - NF S 32-001	107.0dB(A) @ 1m	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	105.0dB(A) @ 1m	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s -NFC48-265	117.0dB(A) @ 1m	Tone 2	Tone 5
Tone 20	660Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	107.0dB(A) @ 1m	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	103.0dB(A) @ 1m	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	107.0dB(A) @ 1m	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	109.0dB(A) @ 1m	Tone 29	Tone 5
Tone 26	Bell	117.0dB(A) @ 1m	Tone 2	Tone 1
Tone 27	554Hz Continuous	107.0dB(A) @ 1m	Tone 26	Tone 5
Tone 28	440Hz Continuous	104.0dB(A) @ 1m	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping AS2220: 420Hz repeating 0.625 sec on, 0.625 sec off.	106.0dB(A) @ 1m	Tone 7	Tone 5
Tone 30	660/1200Hz @ 1Hz Sweeping	110.5dB(A) @ 1m	Tone 32	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	110.5dB(A) @ 1m	Tone 11	Tone 1
Tone 32	AS2220: 500-1200Hz 3.75s on 0.25s off (15 cycles/min)	110.5dB(A) @ 1m	Tone 26	Tone 1

#259363A Rev A

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Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com



## DESIGNED FOR ROUTINE SIGNALING

- Range of up to 200 feet
- Coded or sustained tones
- Model 350 – 12, 24, 120 and 240VAC; Model 450 – 12, 24, 125 and 250VDC
- Model 350 produces 100dBa at 10'
- Model 450 produces 99dBa at 10'
- Type 4X when installed with Panel Mount Gasket Kit or Weatherproof Backbox (Model WB); Type 4X and Type 12 when installed with Surface Mount Trim Ring (Model TR)
- UL and cUL Listed, CSA Certified and FM Approved

# Vibratone® Horns

## Models 350 and 450

The Models 350 and 450 Vibratone Horns produce a very loud horn tone by the electro-mechanical vibration of a diaphragm. Capable of reproducing coded blasts or sustained tones through the use of a number of control devices from a push button to a PLC. Federal Signal's Vibratone horn is excellent for general alarm, start and dismissal, coded paging, and process control signaling in areas of high ambient noise levels.

The Vibratone Model 350 is available in AC voltages; 12VAC, 24VAC, 120VAC and 240VAC. The Model 350 produces 100dBa @ 10', except the 12VAC model, which produces 94dBa @ 10'.

The Model 450 is available in DC voltages; 12VDC, 24VDC, 125VDC and 250VDC. The Model 450 produces 99dBa @ 10'.

Vibratone mounting options provide for surface, flush or semi-flush mounting on walls, panels, in cabinets, on 4-inch square outlet boxes, or in concrete and deep wall constructions.

Installed on the front of a Vibratone Horn, the optional Model PR Projector or Model PR2 Double Projector direct sound output straight ahead or to the sides, optimizing sound output for long, narrow rooms or corridors.

Vibratone horns are UL and cUL Listed, CSA Certified and FM Approved. They are designed and approved for use in Type 4X applications when installed with the Panel Mount Gasket Kit or Weatherproof Backbox (Model WB). They are approved for Type 4X and Type 12 applications when installed with the Surface Mount Trim Ring (Model TR, illustrated on page 124).

Each Vibratone horn is enclosed in a zinc die-cast housing and sealed with grey powder-coat paint. The Model 350 features a stainless steel diaphragm. The Model 450 utilizes an aluminum diaphragm and heavy duty contacts. The rugged construction of the Vibratone horns resists vandalism and the effects of harsh industrial environments.

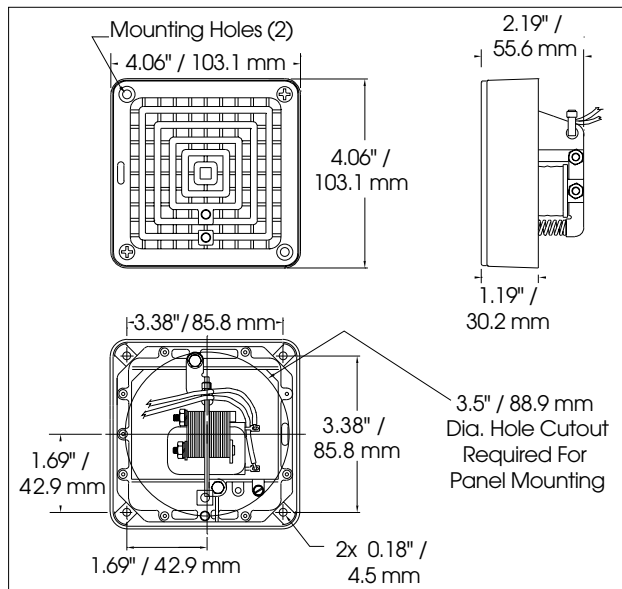
Compact size, loud output and heavy-duty construction make the Vibratone horns ideal for industrial and institutional signaling applications.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
350-012-30	12VAC 50/60Hz	0.90 amps	94	104
350-024-30	24VAC 50/60Hz	0.90 amps	100	110
350-120-30	120VAC 50/60Hz	0.18 amps	100	110
350-240-30	240VAC 50/60Hz	0.09 amps	100	110
450-012-30	12VDC	0.13 amps	93	103
450-012-31	12VDC	0.50 amps	99	109
450-024-31	24VDC	0.25 amps	99	109
450-125-30	125VDC	0.05 amps	99	109
450-250-30	250VDC	0.03 amps	99	109

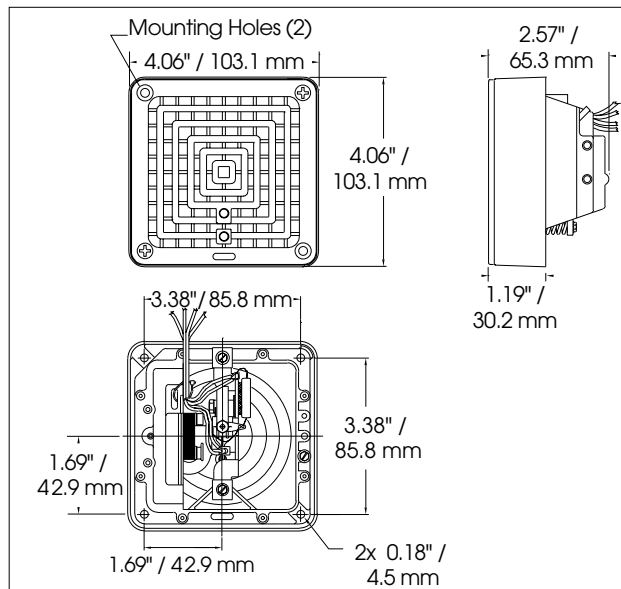


## VIBRATONE® HORNS (350/450)

### 350 HORN



### 450 HORN



## SPECIFICATIONS

Operating Temperature:	-65°F to 150°F	-54°C to 66°C
Net Weight:	1.4 lbs.	0.6 kg
Shipping Weight:	1.5 lbs.	0.7 kg
Height:	4.0"	102.0 mm
Width:	4.0"	102.0 mm
Depth:	2.5"	64.0 mm

## HOW TO ORDER

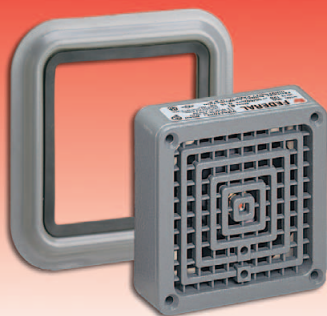
- Specify model and voltage
- Specify accessories from list
- Please refer to Model Number Index 350/450 beginning on page 374

## ACCESSORIES

<b>FB</b>	Wall box for flush mounting the Vibratone® horn in stud, 4" block, or other shallow wall construction; 4 <sup>3</sup> / <sub>8</sub> " square box; 2 <sup>7</sup> / <sub>8</sub> " deep; shipping weight 2 lbs. (0.91 kg)
<b>FBL</b>	Same as FB, but 3 <sup>13</sup> / <sub>16</sub> " deep for 6" x 8" concrete block, cinder block or other deep wall construction; shipping wt. 3 lbs. (1.36 kg)
<b>FG</b>	Flush grille which attaches to the basic unit and serves as the cover of the plastered-in FB flush box; 6" H x 6" W x 1 <sup>1</sup> / <sub>8</sub> " D; shipping wt. 1 lb. (0.45 kg)
<b>K8435666A</b>	Optional Panel Mounting Gasket Kit includes a gasket and hardware for surface or flush mounting the horn for NEMA Type 4X applications.
<b>PR</b>	Projector which concentrates sound into a basic area when attached to the basic model 350/450 units; 4" H x 4" W x 6" D; shipping weight 1 lb. (0.45 kg)
<b>PR2</b>	Double projector directs sounds to both sides when attached to the basic model 350/450 units; ideal for use in hallways; 4" H x 11 <sup>1</sup> / <sub>2</sub> " W x 4" D; shipping weight 2 lbs. (0.91 kg)
<b>SF</b>	Stamped surface plate used for installations on plastered-in 4" outlet switch boxes for semi-flush mountings; 6" H x 6" W x 1 <sup>1</sup> / <sub>2</sub> " D; shipping weight 1 lb. (0.45 kg)
<b>TR</b>	Gasketed trim ring allowing surface mount installations of 350/450 units while maintaining Type12 and Type 4X rating of enclosure.
<b>WB</b>	Cast aluminum neoprene-gasketed weatherproof housing for outside use, complete with mounting lugs; tapped for 1/2", 3/4" conduit; 4 <sup>3</sup> / <sub>8</sub> " square box; 2" deep mounting lugs on 4 <sup>1</sup> / <sub>2</sub> " centers; shipping weight 1 lb. (0.45 kg)

## REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Panel Mount Gasket Kit	K8435666A
Coil (120VAC only)	KFC1516C
Volume Control Kit (350 Horn only)	K8435663B
Gasket for WB	K8435696A



## DESIGNED FOR ROUTINE SIGNALING

- Effective range of 200 feet
- Coded or sustained tones
- Model 350TR – 24 and 120VAC  
Model 450TR – 24VDC
- Model 350TR produces 100dBa at 10' (110dBa at 1m)  
Model 450TR produces 99dBa at 10' (109dba at 1m)
- Type 4X and Type 12 enclosure
- UL and cUL Listed\*,  
CSA Certified and FM Approved

\* Only 350TR is cUL Listed

# Vibratone® Horns

## Models 350TR and 450TR

The Models 350TR and 450TR Vibratone Horns produce a very loud horn tone by the electro-mechanical vibration of a diaphragm. Capable of reproducing coded blasts or sustained tones, Federal Signal's Vibratone horn is excellent for general alarm, start and dismissal, coded paging, and process control signaling in areas of high ambient noise levels.

Well suited to the requirements of panel builders and other OEM customers, the 350TR and 450TR offer the benefits of quick and simple surface mount installation. Each horn is supplied with a gas-ketted trim ring. The trim ring is streamlined but durable, constructed of 18-gauge aluminum with Neoprene™ gaskets between the mounting surface and trim ring and between the trim ring and horn. The trim ring is sealed with gray powder coat paint for long life and corrosion resistance.

The Vibratone Model 350TR is available in 24VAC and 120VAC operating voltages. The Model 350TR produces 100dBa at ten feet (110dBa at 1 meter).

The Vibratone Model 450TR is available 24VDC. The Model 450TR produces 99dBa at ten feet (109dBa at 1 meter).

Vibratone horns are UL Listed, CSA Certified and FM Approved. The Models 350TR and 450TR are approved for Type 4X and Type 12 applications.

Each Vibratone horn is enclosed in a zinc die-cast housing and sealed with powder-coat paint. The Model 350TR features a stainless steel diaphragm. The Model 450TR utilizes an aluminum alloy diaphragm and heavy duty contacts. The rugged construction of the Vibratone horns resists vandalism and the effects of harsh industrial environments.

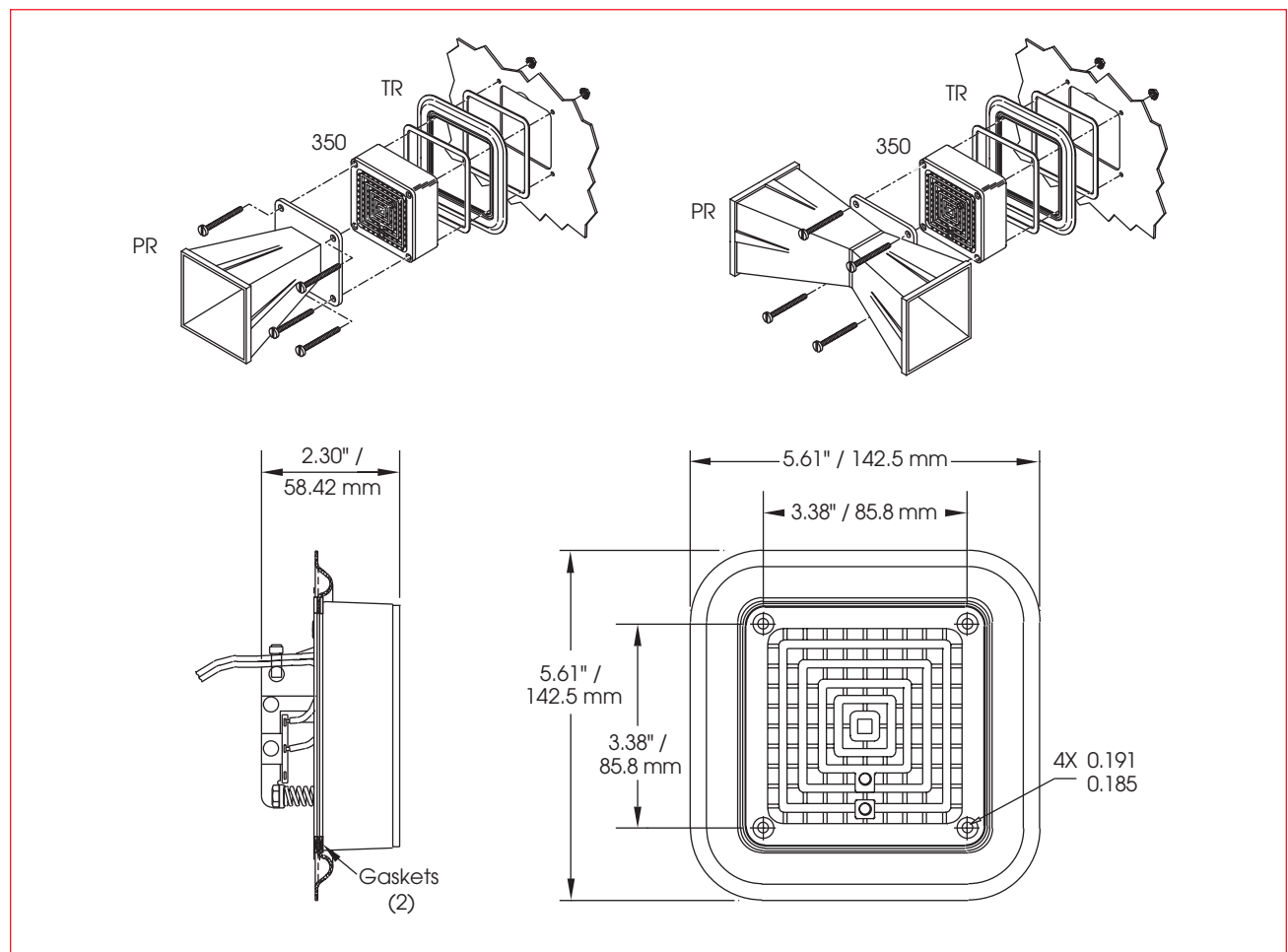
Compact size, loud output and heavy-duty construction make the VibraTone horns ideal for industrial and institutional signaling applications.



Model	Voltage	Operating Current	Decibels @	
			10'	1m
350TR-024	24VAC 50/60Hz	0.90 amps	100	110
350TR-120	120VAC 50/60Hz	0.18 amps	100	110
450TR-024	24VDC	0.25 amps	99	109



## VIBRATONE® HORNS (350TR/450TR)



### SPECIFICATIONS

Operating Temperature:	-65°F to 150°F	-54°C to 66°C
Net Weight:	1.7 lbs.	0.77 kg
Shipping Weight:	1.8 lbs.	0.81 kg
Height:	5.6"	142.2 mm
Width:	5.6"	142.2 mm
Depth:	2.5"	64.0 mm

### ACCESSORIES

<b>PR</b>	Projector which concentrates sound into a basic area when attached to the basic model 350/450 units; 4" H x 4" W x 6" D; shipping weight 1 lb. (0.45 kg)
<b>PR2</b>	Double projector directs sounds to both sides when attached to the basic model 350/450 units; ideal for use in hallways; 4" H x 11½" W x 4" D; shipping weight 2 lbs. (0.91 kg)
<b>TR</b>	Gasketed trim ring allowing surface mount installations of 350/450 units while maintaining Type12 and Type4X rating of enclosure.

### HOW TO ORDER

- Specify model and voltage
- Specify accessories from list
- Please refer to Model Number Index 350TR/450TR beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Coil (120VAC only)	KFC1516C
Volume Control Kit	K8435663B





# Vibratone® Horns

## Model 350WB

### DESIGNED FOR ROUTINE SIGNALING USES

- Available in 120VAC and 240VAC
- Effective range 200 feet
- Coded or sustained tones
- Wall mount
- Produces 100dBa @ 10' (110dBa @ 1m)
- Type 4X, IP65 enclosure
- UL and cUL Listed, CSA Certified and FM Approved

The Model 350WB (AC current) Vibratone® horn produces sound by the electro-mechanical vibration of a stainless steel diaphragm. The horn mechanism with diaphragm is attached to the grille. Indoor or outdoor use is made possible by the water- and dust-tight backbox.

The 350WB is available in 120 or 240VAC for 50/60Hz. The sound output level is 100dBa nominal at ten feet (110dBa @ 1m).

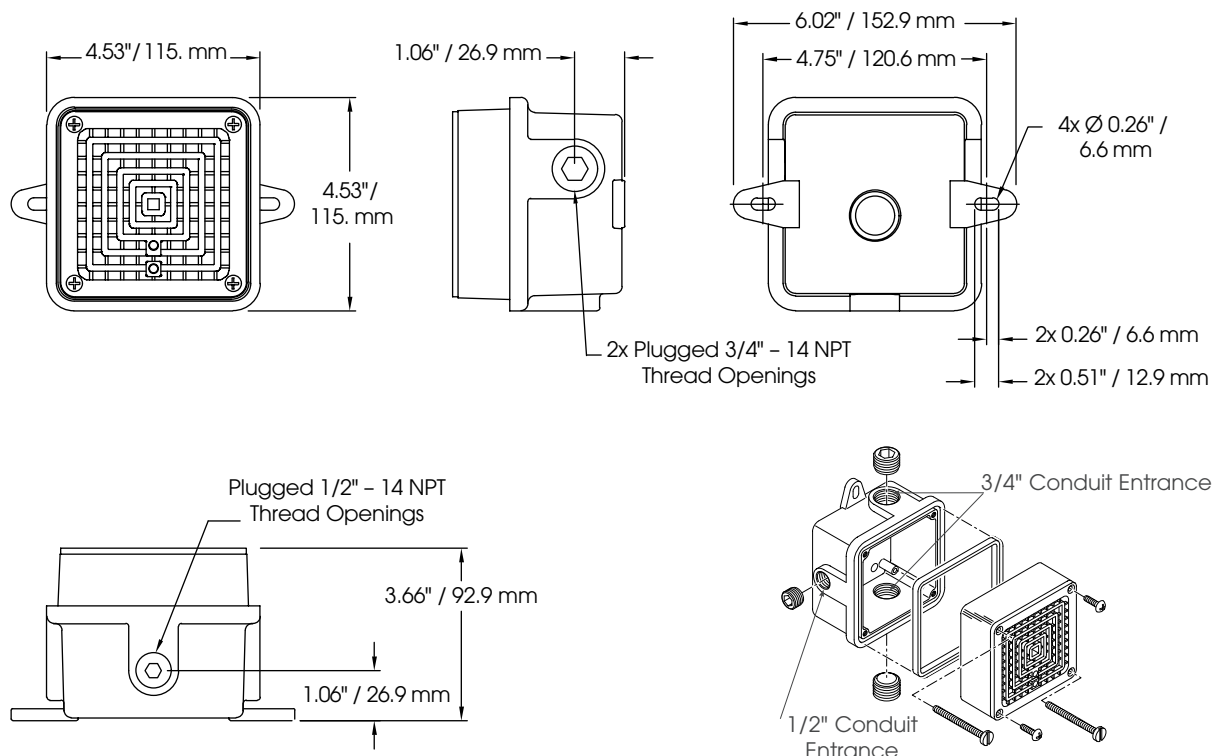
Model 350WB features a die-cast aluminum rear housing sealed with a gray enamel finish. The rugged outer housing resists vandalism without reducing sound output. Model 350WB is fused and utilizes a terminal block connection. The horn and backbox combination is UL and cUL Listed, CSA Certified and FM Approved.

Capable of reproducing coded blasts or sustained tones, Federal Signal's Vibratone horns are excellent for general alarm, start/dismissal, coded paging and process control signaling in areas where their sound output exceeds ambient noise levels. Compact size and various installation options make them ideal for institutional use.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
350WB-120	120VAC 50/60Hz	0.18 amps	100	110
350WB-240	240VAC 50/60Hz	0.09 amps	100	110



## VIBRATONE® HORN (350WB)



### SPECIFICATIONS

Operating Temperature:	-65°F to 150°F	-54°C to 66°C
Net Weight:	2.7 lbs.	1.2 kg
Shipping Weight:	2.8 lbs.	1.2 kg
Height:	5.3"	134.6 mm
Width:	5.3"	134.6 mm
Depth:	3.66"	92.9 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 350WB beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Coil (120VAC only)	KFC1516C
Volume Control Kit	K8435663B



# Vibratone® Hazardous Location Horn

Model 350WBX

## DIVISION 2 VIBRATING HORN

- Available in 120VAC and 240VAC
- Effective range of 200 feet
- Rated for Class I, Division 2; Class II, Division 2; Class III
- For coded or sustained tones
- Produces 100dBa @ 10' (110dBa @ 1m)
- Type 4X enclosure
- UL and cUL Listed and CSA Certified

Model 350WBX (AC current) Vibratone® horn produces sound by the electro-mechanical vibration of a stainless steel diaphragm. The horn mechanism with diaphragm is attached to the grille. The water- and dust-tight backbox is ideal for indoor or outdoor use.

The Model 350WBX is available in 120 or 240VAC for 50/60Hz. Its sound output level is 100dBa nominal at ten feet (110dBa @ 1 meter).

This hazardous location horn accommodates surface, flush or semi-flush mounting on walls, panels, and in cabinets.

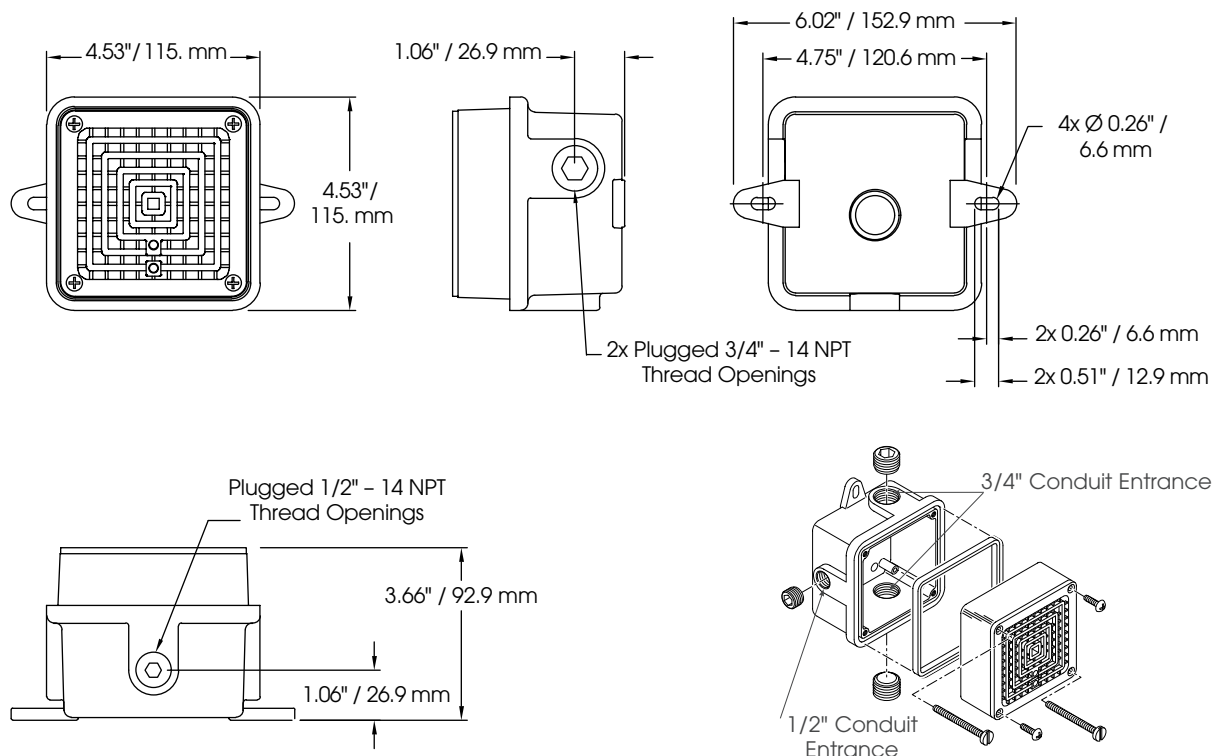
The Model 350WBX features a die-cast zinc housing with a corrosion-resistant polyurethane finish. The rugged outer grille resists vandalism without reducing sound output. The 350WBX is fused and utilizes a terminal block connection. The 350WBX is approved for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III.

Capable of producing coded blasts or sustained tones, Federal Signal's Vibratone horns are excellent for general alarm, start/dismissal, coded paging and process control signaling in areas where their sound output exceeds ambient noise levels. Compact size and a variety of installation options make them ideal for institutional use.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
350WBX-120	120VAC 50/60Hz	0.18 amps	100	110
350WBX-240	240VAC 50/60Hz	0.09 amps	100	110



## VIBRATONE® HORN (350WBX)



### SPECIFICATIONS

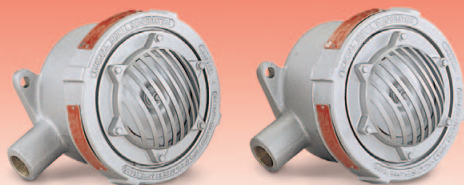
Operating Temperature:	-65°F to 150°F	-54°C to 66°C
Net Weight:	2.7 lbs.	1.2 kg
Shipping Weight:	2.8 lbs.	1.2 kg
Height:	4.53"	115.0 mm
Width:	6.02"	152.0 mm
Depth:	3.66"	92.9 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 350WBX beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Coil (120VAC only)	KFC1516C
Volume Control Kit	K8435663B
Fuse, 1 amp, 250V	K148A155A-01



# Explosion-Proof Vibrating Horns

Models 31X and 41X

## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Corrosion-resistant cast aluminum housings
- Produces 100dBa @ 10' (110dBa @ 1m)
- UL and cUL Listed and CSA Certified

These Federal Signal explosion-proof vibrating horns are constructed for safe use in hazardous environments. They are enclosed in heavy-duty copper-free cast aluminum housings tapped for  $\frac{3}{4}$ -inch conduit.

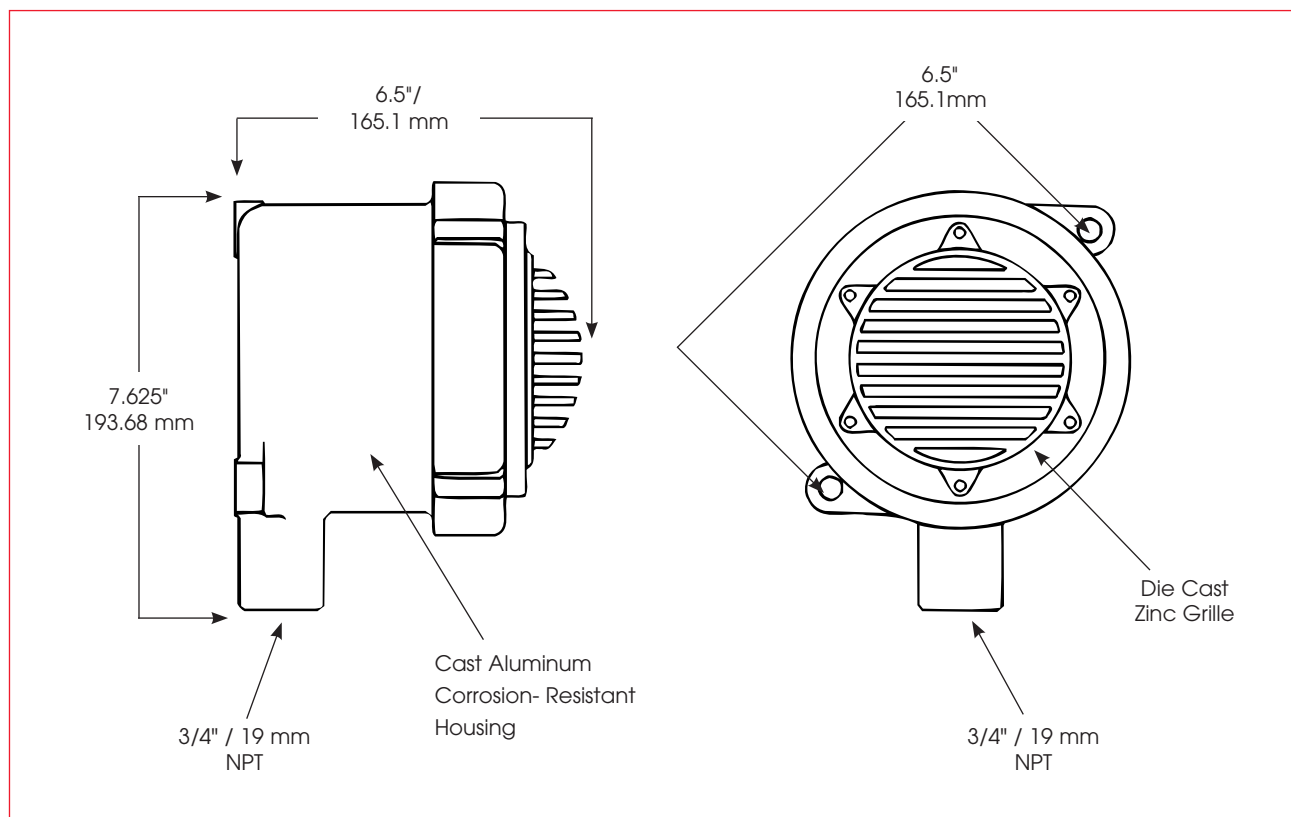
Federal Signal Models 31X and 41X are corrosion-resistant vibrating horns with stainless steel diaphragms. Model 41X is available in 24VDC. The Model 31X is available in 120VAC and 240VAC and features an internal volume control.

The 31X and 41X models are UL and cUL Listed for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F, and G; and Class III. Both are CSA (Canadian Standards Association) Certified. A five minute duty cycle applies to both models.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
<b>31X-120-3</b>	120VAC 50/60Hz	0.20 amps	99	110
<b>31X-240</b>	240VAC 50/60Hz	0.10 amps	99	110
<b>41X-024-1</b>	24VDC	1.20 amps	99	110



## EXPLOSION-PROOF HORNS (31X/41X)



### SPECIFICATIONS

Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:		
31X	7.5 lbs.	3.4 kg
41X	9.0 lbs.	4.1 kg
Shipping Weight:		
31X	8.1 lbs.	3.7 kg
41X	10.3 lbs.	4.7 kg
Height:		
31X	7.625"	193.68 mm
41X	7.625"	193.68 mm
Depth:		
31X	6.5"	165.1 mm
41X	6.5"	165.1 mm
Diameter:		
31X	6.5"	165.1 mm
41X	6.5"	165.1 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 31X/41X beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Grill, Cover	KH6962J
Coil 3lx, 120VAC	KFC1516C
Coil 3lx, 240VAC	KFC1506C
Coil 4lx, 24VDC	KFC1463





# Resonating Horns

## Models 55 and 56

### DESIGNED FOR HIGH AMBIENT NOISE AREAS

- Resonated column of air generates sound
- Model 55 produces 105dBa @ 10' (115dBa @ 1m)
- Model 56 produces 106dBa @ 10' (116dBa @ 1m)
- Indoor/outdoor use
- Models 55 and 56 are FM Approved
- Model 55 (120VAC) is UL Listed and CSA Certified

The Federal Signal Models 55 and 56 are electric horns that produce sound by means of a diaphragm, which resonates a column of air. Because the output is greater than that of a vibrating horn resonating horns can be used wherever a louder, more powerful signal is required.

Both models feature corrosion-resistant cast aluminum housings with a brass projector. These projectors are designed to match the frequency of the vibrating diaphragm to produce a smooth musical tone. The housings are tapped for 1/2" conduit (swivel bracket included).

Models 55 and 56 are finished in gray enamel and equipped with a straight projector. These weatherproof horns are water and dust-tight when installed with conduit.

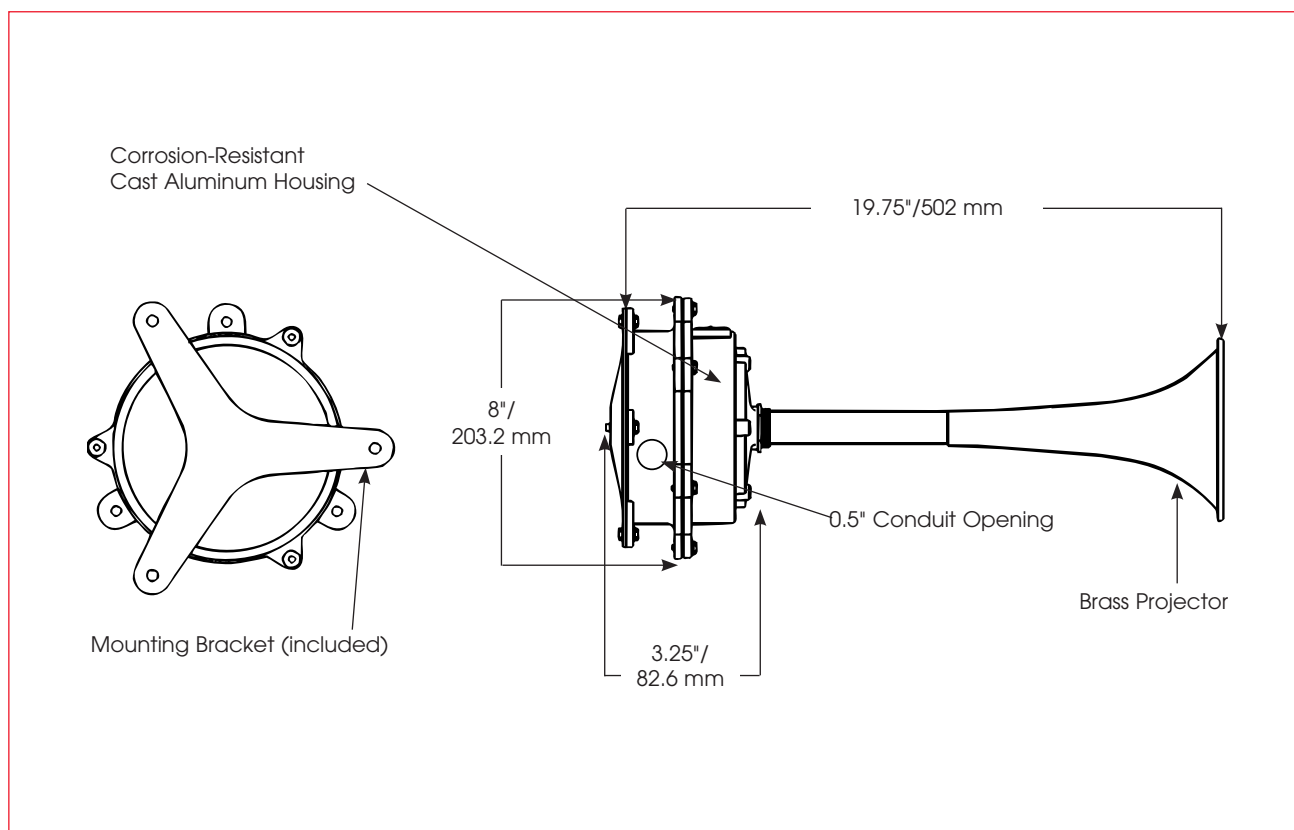
Model 55 is also UL Listed for indoor/outdoor use. Both models are FM Approved. Models 55 and 56 have a duty cycle of five minutes on, five minutes off.

Models 55 and 56 are ideal for both indoor and outdoor use. They require minimum maintenance; their rugged designs seal out corrosive dust and vapors. Both models have sufficient output to penetrate through high ambient noise levels.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
55-024-1	24VAC 60Hz	3.00 amps	105	115
55-120-1	120VAC 60Hz	0.75 amps	105	115
56-024-1	24VDC	3.00 amps	106	116
56-125-1	125VDC	0.25 amps	106	116
56-250-1	250VDC	0.25 amps	106	116



## RESONATING HORNS (55/56)



### SPECIFICATIONS

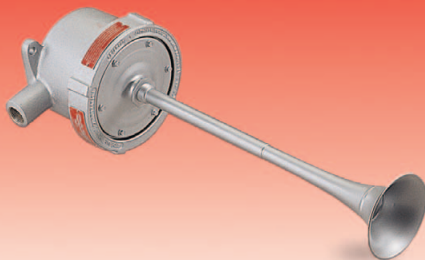
Operating Temperature:	-35°F to 150°F	-37°C to 66°C
Net Weight:	5.0 lbs.	2.3 kg
Shipping Weight:	6.2 lbs.	2.8 kg
Height:	8.0"	203.2 mm
Width:	8.0"	203.0 mm
Length:	19.75"	502.0 mm
Duty Cycle:	5 minutes ON/5 minutes OFF	

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 55/56 beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Projector	K8283C071-0G
Mounting Bracket Accessory Kit	K8233A046-0G
Mounting Kit, Bulk Head	K8233A036
Coil, 120VAC	KFC456



# Explosion-Proof Resonating Horn

## Model 55X

### DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Corrosion-resistant cast aluminum housings
- Produces 105dBa @ 10' (115dBa @ 1m)
- Type 4X, IP66 enclosure
- UL and cUL Listed and CSA Certified

This Federal Signal explosion-proof resonating horn is constructed for safe use in hazardous environments. It is enclosed in heavy-duty die-cast aluminum housing which is tapped for  $\frac{3}{4}$ -inch conduit.

Federal Signal Model 55X is a resonating electric horn which produce sound by means of a diaphragm which resonates a column of air. The Model 55X is available in 120VAC.

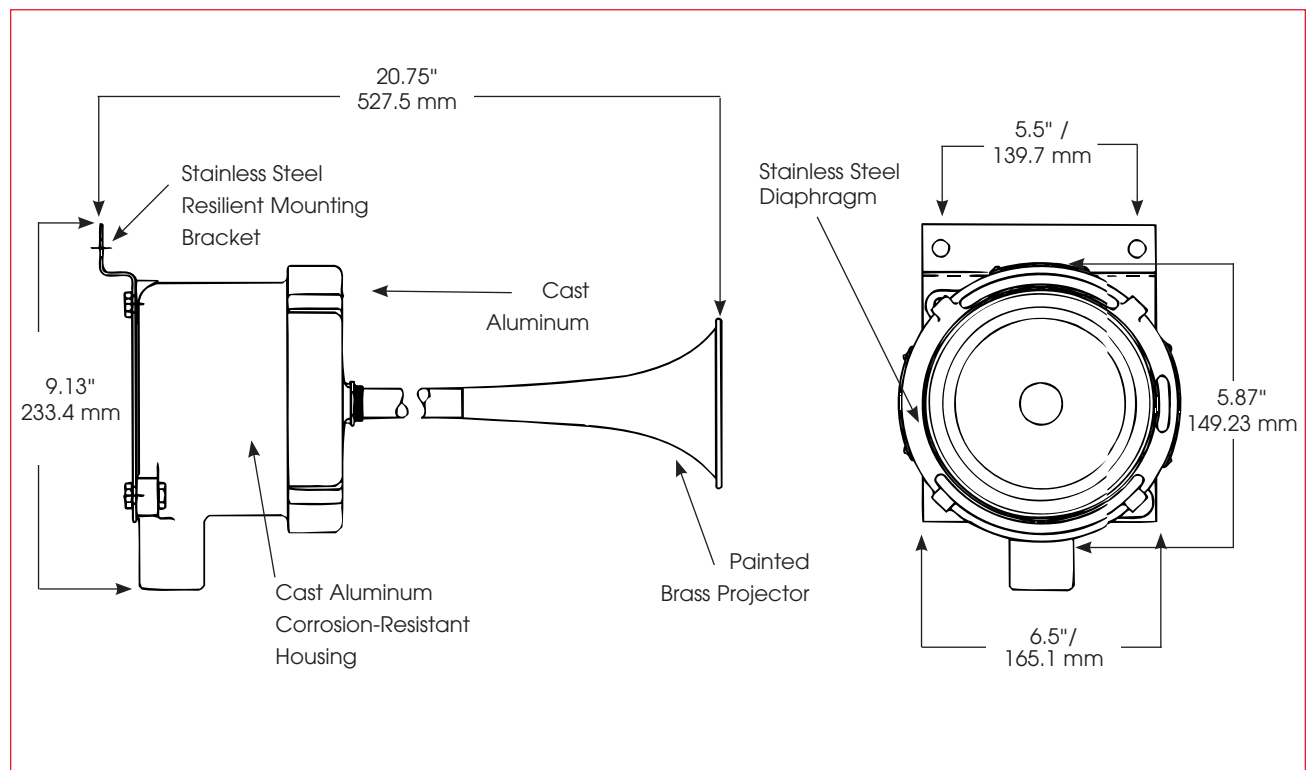
The 55X is UL Listed for Class I, Division 1, Groups C & D; Class I, Division 2, Groups C & D; Class II, Division 1, Groups E, F & G; and Class III. A five minute duty cycle applies.

This resonating explosion-proof horn is designed for locations where the danger of explosion or fire exists, such as refineries, laboratories, mines and grain elevators.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
55X-120-1	120VAC 60Hz	0.65 amps	105	115



## EXPLOSION-PROOF HORNS (55X)



### SPECIFICATIONS

Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	10.5 lbs.	4.8 kg
Shipping Weight:	12.5 lbs.	5.7 kg
Height:	5.87"	149.35 mm
Width:	6.5"	165.1 mm
Length:	20.75"	527.5 mm

### HOW TO ORDER

- Specify model
- Please refer to Model Number Index 55X beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Straight Projector	K8283C071-0G
Mounting Bracket	K8233A046-0G



# Air Horns

## Models 3H and 6H

### DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 120VAC
- Wide variety of tones and sizes
- For indoor/outdoor use
- Type 4X enclosure

Federal Signal offers a line of air horns in a variety of tones and sizes for the industrial marketplace. High, medium and low tones are available which provides a wide range of frequencies and high sound output.

Federal Signal air horns feature a one-piece, cast aluminum alloy housing which has been treated to provide corrosion resistance. The horns include specialized long-lasting stainless steel diaphragms. These precisely machined horns will yield peak performance at proper working air pressures and are virtually indestructible. The 3-inch horn (Model 3H) has a threaded female pipe connection. The Model 6H features flanges for additional support.

Federal Signal air horns operate with 20 to 150 p.s.i., (pounds per square inch) but they are tuned for 80 to 90 p.s.i. operation. The horn frequency (pitch) depends on both the diameter and length of the projector. Decibel output at 10 feet is 122dBa (132dBa @ 1m).

The horns require a 120VAC Federal Signal air valve (air valve sold separately). Use Model EVS with the 3H and Model EVL with the 6H.

Air horns can be used indoors, outdoors, or anywhere compressed air can be provided.

Federal Signal Air Horns are the loudest audible signals offered for indoor applications.

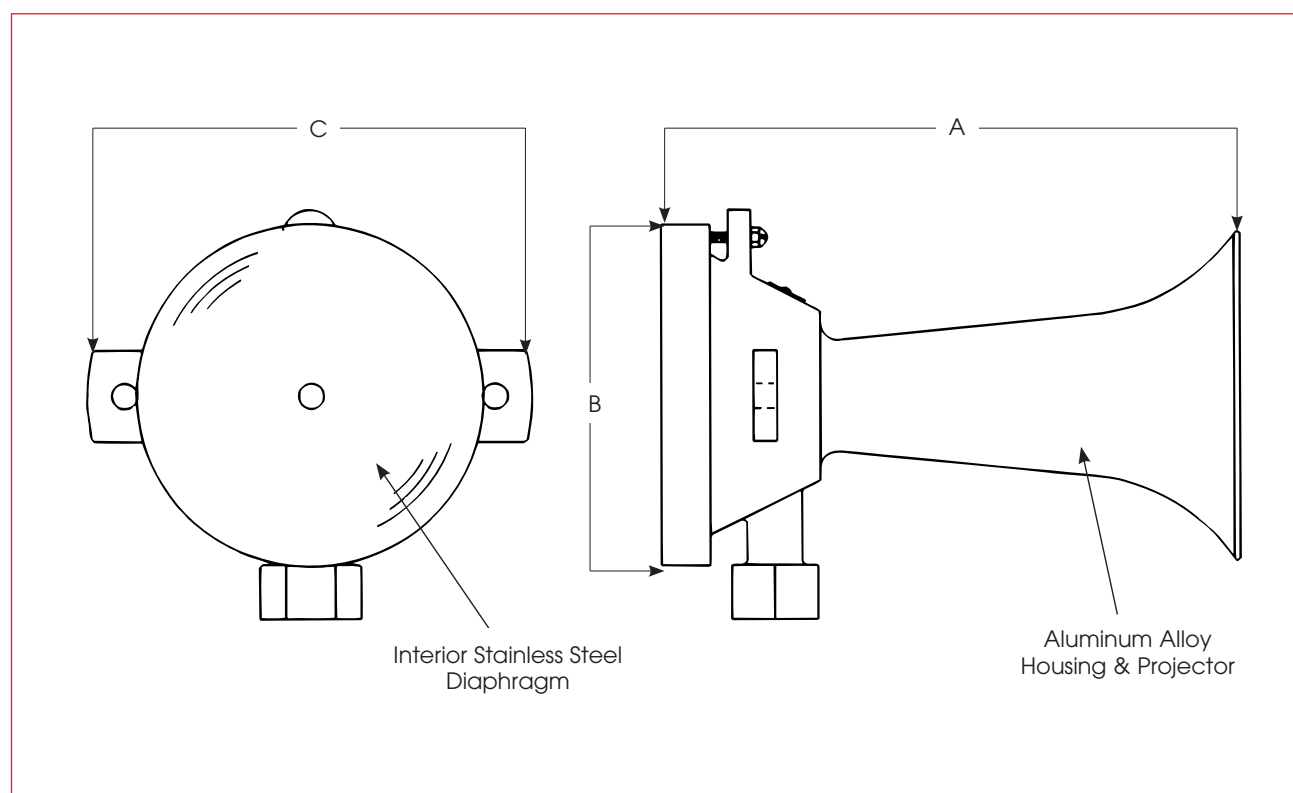
They are not subject to sparking and are ideal for hazardous locations (the valves need to be located in a non-hazardous location).

Model	Air Consumption Cubic Ft./Sec.	Valve Model*	Frequency	Decibels @	
				10'	1m
<b>3H</b>	0.20	<b>EVS-120</b>	750Hz	112	122
<b>6H</b>	0.45	<b>EVL-120</b>	295Hz	122	132

\* 120VAC valves sold separately



## AIR HORNS (3H/6H)



## SPECIFICATIONS

<i>Model</i>	<i>Net Weight</i>	<i>Shipping Weight</i>	<i>Dimensions (in./mm)</i>			<i>Diaphragm Dia. (in./mm)</i>	<i>Pipe Size</i>
			<i>A</i>	<i>B</i>	<i>C</i>		
3H	1.6 lbs. 0.73 kg	2.1 lbs. 0.95 kg	4.88" 124.0 mm	4.75" 121 mm	3.63" 92.0 mm	3.0" 76.0 mm	0.38" 9.5 mm
6H	9.7 lbs. 4.4kg	11.4 lbs. 5.17 kg	12.38" 314.0 mm	9.5" 241.0 mm	6.5" 165.0 mm	5.0" 152.0 mm	0.75" 19.0 mm

## REPLACEMENT PARTS

### Description

3H Diaphragm

6H Diaphragm

### Part Number

K8271A020

K8271A077

## HOW TO ORDER

- Specify air horn model
- Specify valve model (sold separately)
- Please refer to Model Number Index 3H/6H beginning on page 374





# Resonating Horn

## Model 52

### DESIGNED FOR OFF-ROAD VEHICLES

- Available in 24VDC
- Withstands extreme outdoor conditions
- Produces 114dBa @ 10' (124dBa @ 1m)
- Surface mount with flanges
- Type 4X enclosure

The Federal Signal Model 52 resonating horn produces 114dBa @ 10 feet (124dBa @ 1m) with a 1,000 foot range. It is capable of penetrating high ambient noise levels. Being electrically-activated, the Model 52 does not require an air compressor for operation. The Model 52 is able to withstand the shocks, vibrations, dust and atmospheric conditions encountered in off-road use. The operating temperature range is -40°F to 185°F (-40°C to 85°C).

Rubber gaskets and a power connector make the Model 52 completely watertight. The projector and internal parts are made of zinc-coated steel or stainless steel to resist corrosion; the exterior is sealed with gray enamel paint. The housing is die-cast aluminum. Tied and adhesive-bonded internal wiring helps prevent electrical shorts, wire breakage, and loose connections. The Model 52 is available in 24VDC. It's 18-32V operating range allows for voltage inconsistencies. The Model 52 has a duty cycle of five minutes on and five minutes off.

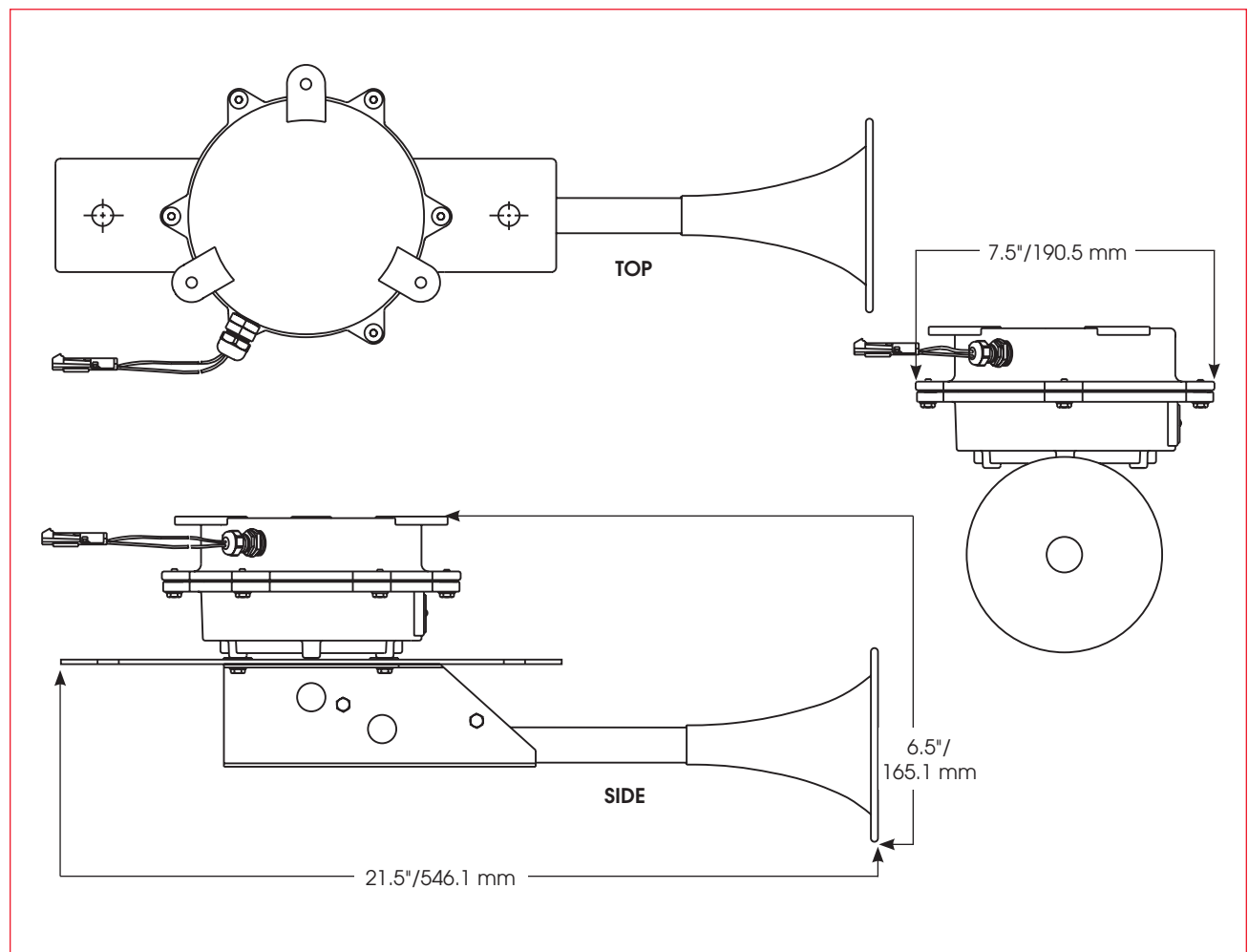
Federal Signal's Model 52 resonating horn is specifically designed for off-road vehicles. It provides the very loud sound for which an air-horn is usually required, but without the need for an expensive compressor.

Used by major manufacturers of construction equipment, Model 52 resonating horns suit the warning needs of any off-road vehicle working in a high noise environment, including excavators, backhoes, compactors (steamrollers), loaders, tractors, bulldozers, trenchers, and scrapers.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
52-024-1	24VDC	4.0 amps	114	124



## RESONATING HORN (52)



### SPECIFICATIONS

Operating Temperature:	-40°F to 185°F	-40°C to 85°C
Net Weight:	9.0 lbs.	4.08 kg
Shipping Weight:	10.0 lbs.	4.54 kg
Height:	6.5"	165.1 mm
Width:	7.5"	190.5 mm
Depth:	21.5"	546.1 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 52 beginning on page 374

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Projector, Straight	K8233C081B-02



## DESIGNED FOR GENERAL ALARM OR PAGING

- Vibrating mechanism
- Three gong sizes – four, six, or ten-inch
- A range of output available – 98-102dBa @ 10' (108-112dBa @ 1m)
- Optional weatherproof backbox provides Type 3R enclosure
- UL and cUL Listed, CSA Certified and FM Approved

# Vibratone® Bells

Models A4, A6 and A10  
Models 500 and 600

Federal Signal's Vibratone® heavy duty bell product line utilizes a modular approach to combine gongs and mechanisms allowing for greater flexibility and selection. Three gong sizes are available: the Model A4 is four inches in diameter, the Model A6 is six inches in diameter, and the Model A10 is ten inches in diameter. Each larger gong produces a different tone and a higher dBa output.

Vibrating bells produce a continuous ringing sound when voltage is applied. The Models 500 and 600 vibrating mechanisms are designed for AC and DC operation, respectively.

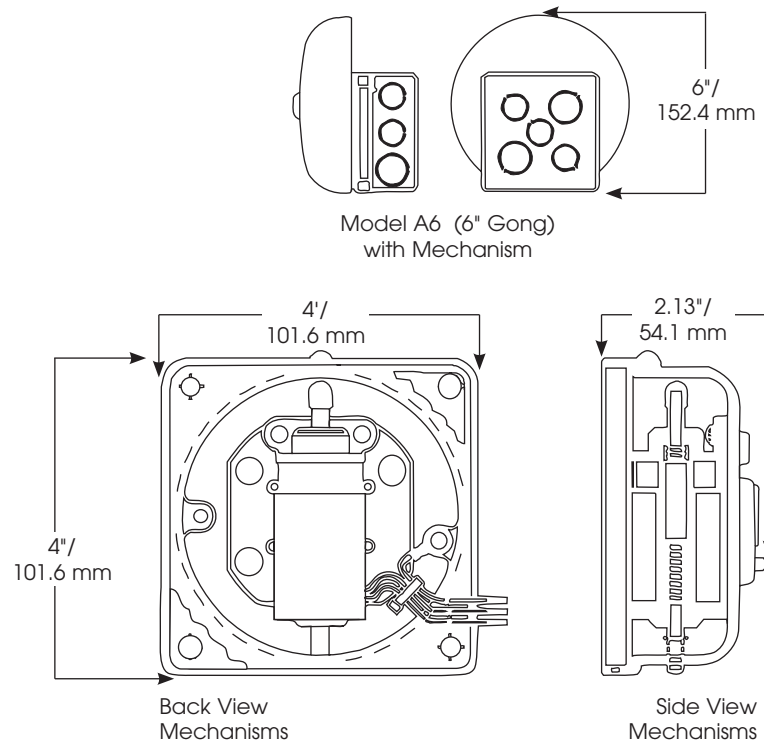
The Models 500 and 600 are UL and cUL Listed, CSA Certified and FM Approved.

Federal Signal's Vibratone bells can be used in any industrial application, whether to signal danger or for start and dismissal. A variety of mounting accessories will accommodate almost any environment.

Model	Voltage	Operating Current	Decibels @ 10'	Decibels @ 1m
<b>BELLS</b>				
<b>A4</b>	–	–	98	108
<b>A6</b>	–	–	100	110
<b>A10</b>	–	–	102	112
<b>VIBRATING MECHANISMS</b>				
<b>500-024-1</b>	24VAC	0.4 amps	–	–
<b>500-120-1</b>	120VAC	0.08 amps	–	–
<b>500-240-1</b>	240VAC	0.04 amps	–	–
<b>600-012-1</b>	12VDC	0.8 amps	–	–
<b>600-024-1</b>	24VDC	0.4 amps	–	–
<b>600-125-1</b>	125VDC	0.08 amps	–	–
<b>600-250-1</b>	250VDC	0.03 amps	–	–



## VIBRATONE® BELLS (A4/A6/A10/500/600)



### SPECIFICATIONS

Model	Net Weight	Shipping Weight	Height	Width	Depth
500	1.0 lb. 0.45 kg	1.1 lb. 0.4 kg	4.0" 101.6 mm	4.0" 101.6 mm	2.125" 54.0 mm
600	1.0 lb. 0.45 kg	1.1 lb. 0.4 kg	4.0" 101.6 mm	4.0" 101.6 mm	2.125" 54.0 mm
A4	0.5 lb. 0.23 kg	0.7 lb. 0.32 kg	4.0" 101.6 mm	4.0" 101.6 mm	1.25" 31.8 mm
A6	1.0 lb. 0.45 kg	1.2 lb. 0.54 kg	6.0" 152.4 mm	6.0" 152.4 mm	1.75" 44.5 mm
A10	3.5 lbs. 1.59 kg	4.0 lbs. 1.8 kg	10.0" 254.0 mm	10.0" 254.0 mm	2.25" 57.2 mm

### HOW TO ORDER

- Specify mechanism model and voltage, and gong model\*
- Specify accessories from list
- Please refer to Model Number Index A4/A6/A10/500/600 beginning on page 374

\* Each gong sold separately

### ACCESSORIES

<b>FB</b>	Deep back box for flush mounting A4 gong with any mechanism
<b>FBL</b>	Extra deep back box for flush mounting A4 gong with any mechanism
<b>FG</b>	Grille for flush mounting A4 gong and any mechanism in FB back box
<b>SF</b>	Surface mounting plate for plastered-in 4" boxes
<b>WB</b>	Weatherproof back box



# Vibratone® Bell Assemblies

Models 504WB and 506WB

## GONG, MECHANISM, AND BACK BOX IN ONE ASSEMBLY

- Available in 120VAC
- Four-inch or six-inch gong
- Four-inch gong produces 98dBa @ 10' (107dBa @ 1m)
- Six-inch gong produces 100dBa @ 10' (109dBa @ 1m)
- Type 3R enclosure
- UL and cUL Listed, CSA Certified and FM Approved

Federal Signal's Vibratone® Bells Models 504WB and 506WB are completely assembled and include the gong, vibrating AC mechanism, and the gasketed back box. These assemblies feature heavy duty, industrial grade housings and powder-coat paint treatments for added durability and performance.

These bells are offered in a 120VAC version.

The four inch, heavy duty gong, produces 98dBa @ 10' (107dBa @ 1m). The six inch heavy duty gong produces 100dBa @ 10' (109dBa @ 1m). Vibratone gongs are tempered to give them superior output and long lasting durability.

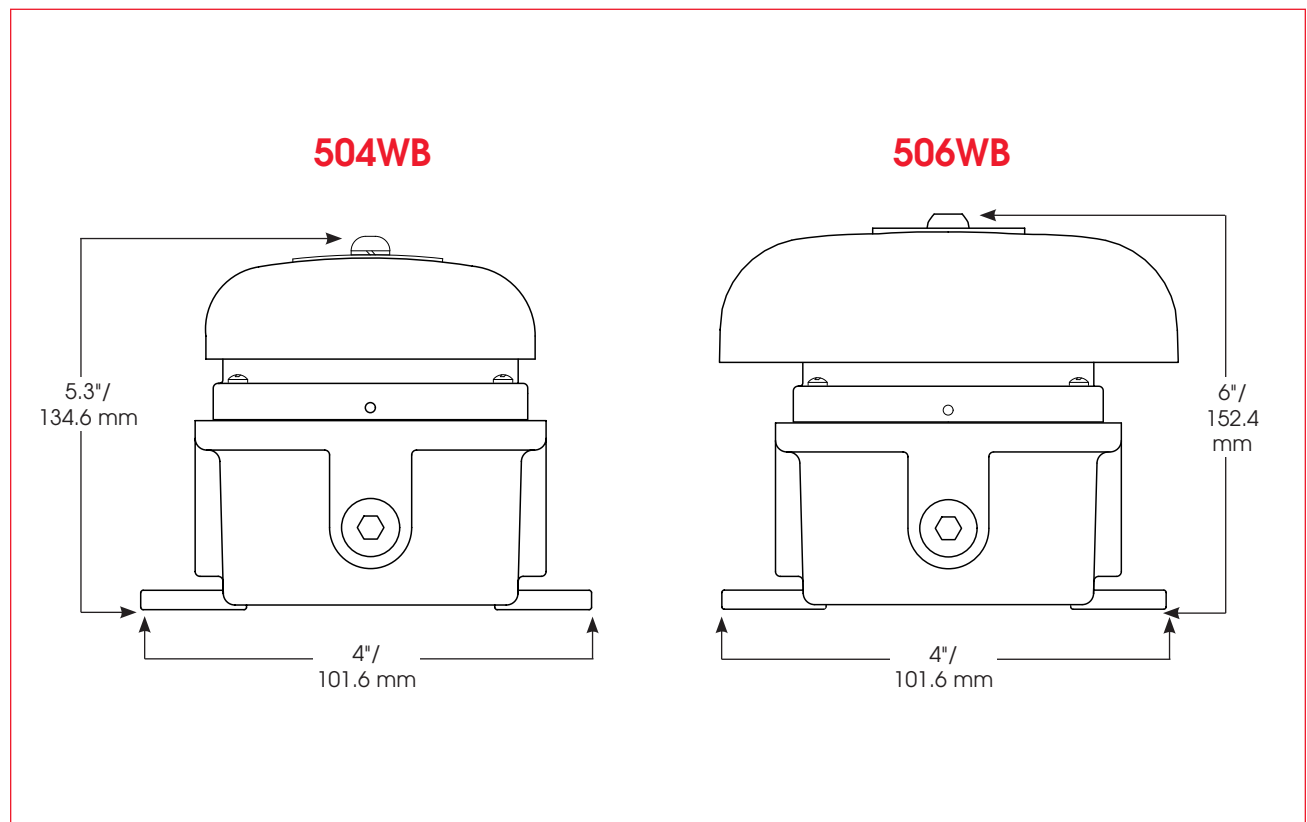
The Models 504WB and 506WB both contain internal terminal blocks which simplifies installation. This method also allows for an uninterrupted, single run of wiring.

These bells are UL and cUL Listed, CSA Certified and FM Approved. The entire assembly is rated for Type 3R.

Model	Operating Voltage	Current	Decibels @	
			10'	1m
504WB-120	120VAC	0.08 amps	98	107
506WB-120	120VAC	0.08 amps	100	109



## VIBRATONE® BELL ASSEMBLIES (504WB/506WB)



### SPECIFICATIONS

Operating Temperature: -31°F to 150°F -35°C to 66°C

#### Net Weight:

Model 504	1.05 lbs.	0.48 kg
Model 506	2.5 lbs.	1.13 kg

#### Shipping Weight:

Model 504	1.65 lbs.	0.75 kg
Model 506	3.0 lbs.	1.36 kg

#### Height:

Model 504	5.3"	134.6 mm
Model 506	6.0"	152.4 mm

#### Width:

Model 504	5.3"	134.6 mm
Model 506	6.0"	152.4 mm

#### Depth:

Model 504	4.0"	101.6 mm
Model 506	4.0"	101.6 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index 504WB/506WB beginning on page 375





# Explosion-Proof General Alarm Siren

## Model AX

### DESIGNED FOR USE IN EXPLOSION PROOF ATMOSPHERES

- Available with 120VAC/125VDC universal motor
- Produces 105dBa @ 10' (115dBa @ 1m)
- Wall mount
- Maintenance free
- Type 3R enclosure
- UL and cUL Listed and CSA Certified

The Federal Signal Model AX siren was introduced in 1937 and received UL listing in 1938. This high pitched siren features a unique rotor and stator design that produces a distinctive tonal quality.

The universal motor operates on 120VAC or 125VDC. This siren features oversized ball bearings which are lubricated for the life of the siren, eliminating periodic maintenance.

The Model AX is UL listed for use in Class I, Division 1, Groups C and D; Class II, Division 2, Groups E, F, & G; and Class III locations. This siren is cUL Listed and CSA Certified.

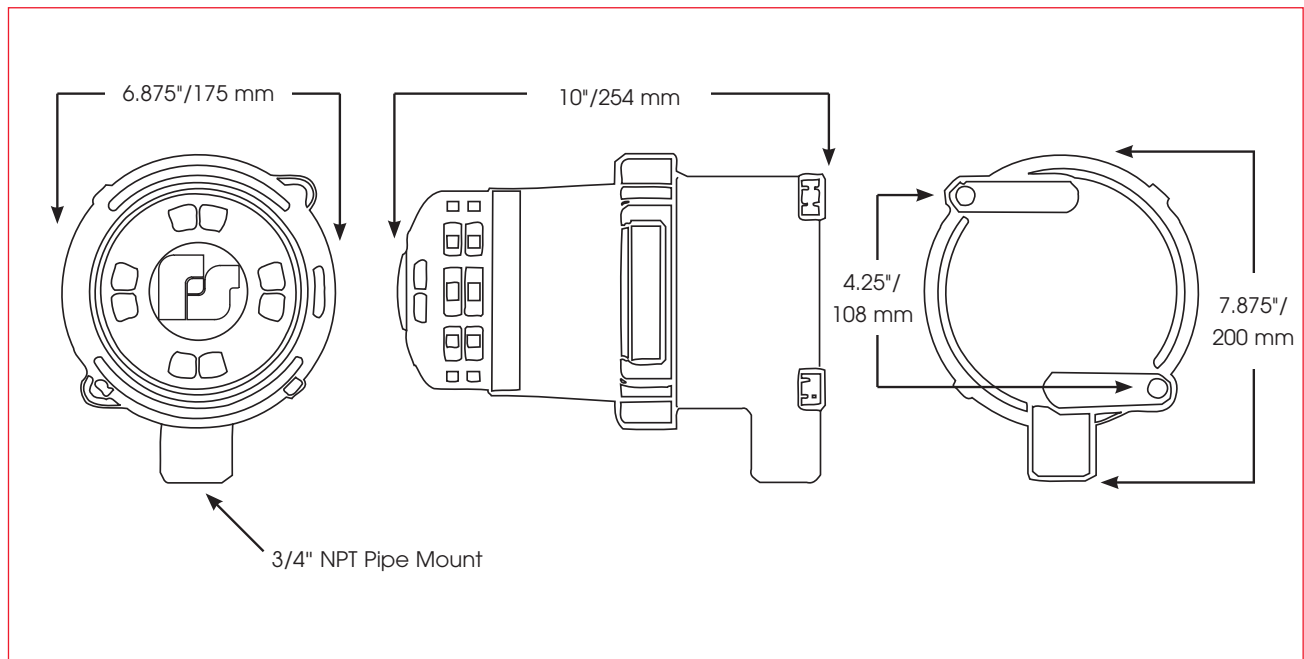
Model	Voltage	Operating Current	Decibels @ 10'	1m	Frequency
AX-120SB	120VAC/VDC	1.9 amps	105	115	1830Hz

### Hazardous Location Rating:

T-Code at Maximum Ambient Temperature, °C		
Hazardous Location	40°C	66°C
Class I, Groups C & D	T4A/120°	T4/135°
Class II and Class III	T4/135°	T3C/160°



## EXPLOSION PROOF ALARM SIREN (AX)



### SPECIFICATIONS

Operating Temperature:	-13°F to 150°F	-25°C to 65°C
Motor:	Universal	Universal
Net Weight:	10.0 lbs	4.5 kg
Shipping Weight:	13.4 lbs	6.1 kg
Height:	7.875"	200.0 mm
Width:	6.875"	175.0 mm
Depth:	10.0"	254.0 mm

### HOW TO ORDER

- Specify model
- Please refer to Model Number Index AX beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Motor	K8242C074B



# General Alarm Siren

## Model A

### ELECTROMECHANICAL SIREN

- Available with 120VAC/VDC universal motor
- Rugged, durable and corrosion resistant
- Maintenance-free
- Produces 103dBa @ 10' (113dBa @ 1m)
- Type 3R enclosure
- UL and cUL Listed and FM Approved

The Federal Signal Model A is a general-purpose electro-mechanical siren that produces a distinctive sound and tonal quality for industrial applications. It has a high maximum pitch which provides excellent contrast to industrial ambient noise. Introduced in 1918, the Model A is still used today in many rugged and extreme environments and applications.

The Model A features a universal motor and operates with 120VAC or 125VDC. The fractional horsepower motor drives a ported aluminum rotor within the specially designed stator to produce a unique sound. A small internal fan cools the motor during operation. The recommended duty cycle is five minutes on/five minutes off. This siren produces an attention-getting 103dBa @ 10' (113dBa @ 1m) and 1060Hz at full R.P.M.

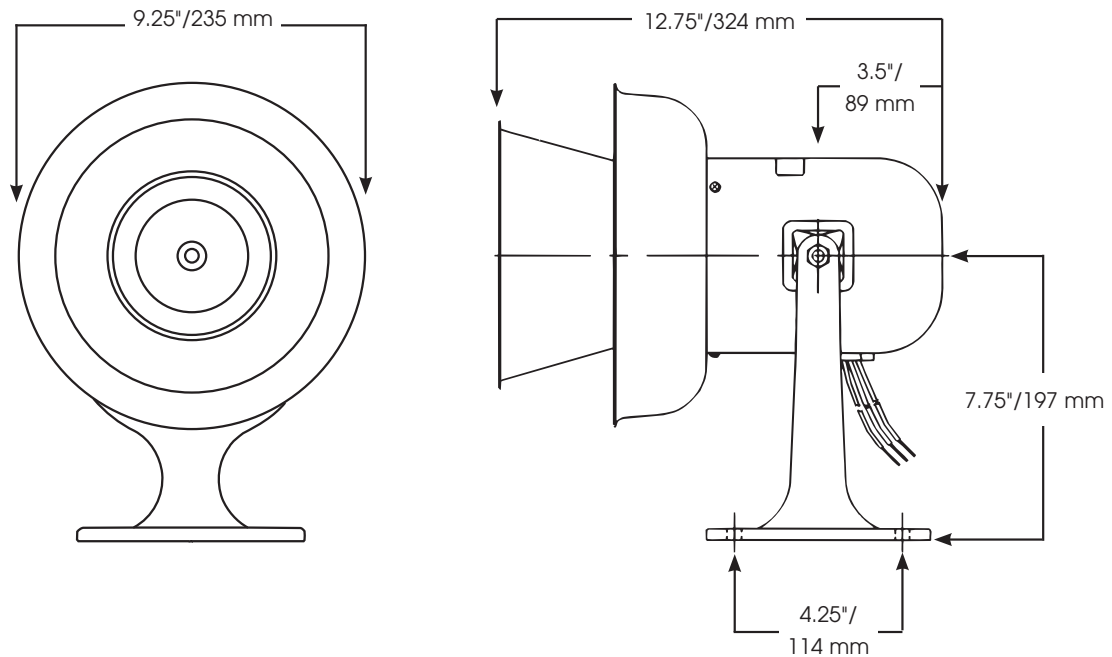
The Model A's metal housing is sealed with red powder coat for an attractive appearance and superior corrosion resistance. The swivel mount bracket accommodates wall and surface mount installations.

The Model A is UL and cUL Listed and FM Approved.

Model	Voltage	Operating Current	Decibels @		Frequency
			10'	1m	
A-120	120VAC/VDC	1.9 amps	103	113	1060Hz



## GENERAL ALARM SIREN (A)



### SPECIFICATIONS

Voltages:	120VAC/VDC	120VAC/VDC
Motor:	Universal	Universal
Net Weight:	9.0 lbs.	4.1 kg
Shipping Weight:	11.6 lbs.	5.3 kg
Width:	9.25"	235.0 mm
Length:	12.75"	324.0 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index A beginning on page 375

### REPLACEMENT PARTS

<b><u>Description</u></b>	<b><u>Part Number</u></b>
Rotor Assembly	K8179A046-03
Motor	K8118052A



# General Alarm Siren

## Model L

### ELECTROMECHANICAL SIREN

- Available with 120VAC/VDC and 240VAC/VDC universal motor
- Rugged, durable and corrosion resistant
- Produces 112dBa @ 10' (122dBa @ 1m)
- Maintenance-free
- Type 3R enclosure
- CSA Certified

The Federal Signal Model L is a general-purpose electro-mechanical siren that produces a distinctive sound and tonal quality for industrial applications. It has a low maximum pitch which provides excellent contrast to industrial ambient noise. Introduced in 1946, the Model L is still used today in many rugged and extreme environments and applications.

The Model L features a universal motor and operates with 120VAC/ 125VDC. The Model L is also available for 240VAC/ 250VDC operation. The fractional horsepower motor drives a ported aluminum rotor within the specially designed stator to produce a unique sound. The recommended duty cycle is five minutes on/five minutes off. This siren produces an attention-getting 112dBa @ 10 feet (122dBa @ 1m).

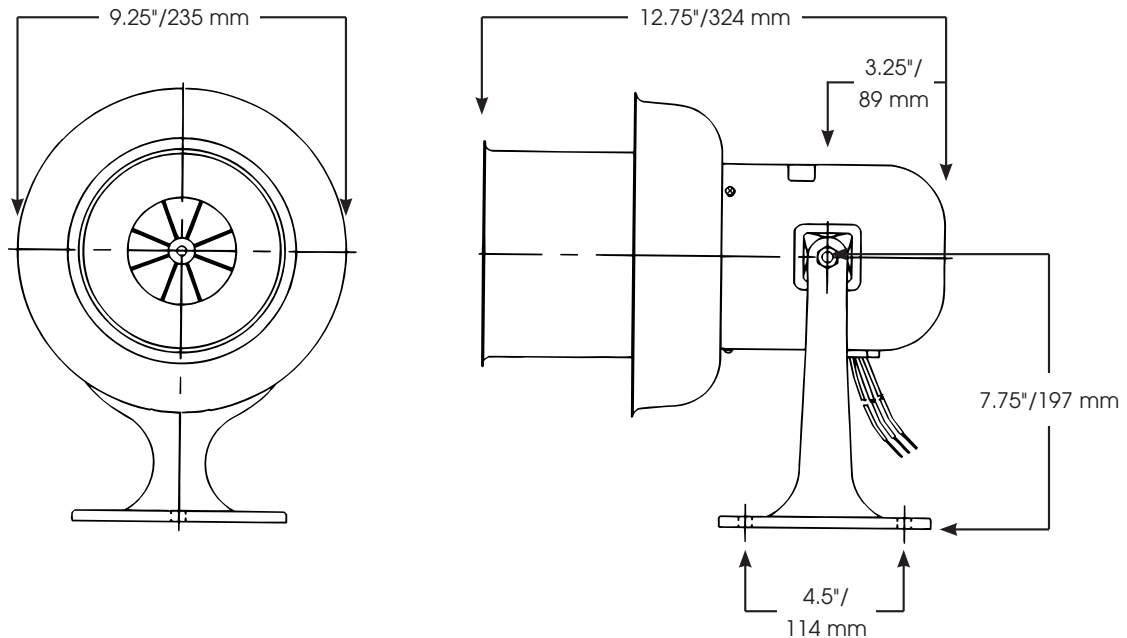
The Model L's metal housing is sealed with red powder coat for an attractive appearance and superior corrosion resistance. The swivel mount bracket accommodates wall and surface mount installations.

The Model L is CSA Certified.

Model	Voltage	Operating Current	Decibels @		Frequency
			10'	1m	
L-120	120VAC/VDC	1.95 amps	112	122	700Hz
L-240	240VAC/VDC	1.0 amps	112	122	700Hz



## GENERAL ALARM SIREN (L)



### SPECIFICATIONS

Voltages:	120VAC/VDC or 240VAC/VDC	
Motor:	Universal	Universal
Net Weight:	12.0 lbs	5.4 kg
Shipping Weight:	14.2 lbs	6.4 kg
Width:	9.25"	235.0 mm
Length:	12.75"	324.0 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index L beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Rotor Assembly	K8170B204A
Motor – 120VAC /120VDC	K82831051A
Motor – 240VAC /250VDC	K8283A700





## PERFECT SIZE MEETS SUPERIOR PERFORMANCE!

- Operates on 9–28VDC
- Choice of 28 tones
- Produces 82–100dBa @ 10' (92–110dBa @ 1m)
- Compact size – 3" tall x 3.66" wide
- Panel or wall mount
- PLC compatible
- CE Compliant
- Type 4X, IP54 (IP65 with optional deep base)

# StreamLine® Low Profile Mini Sounder

## Model LP4

Federal Signal introduces the Model LP4 low profile, electronic piezo sounder. The LP4 is a compact multi-tone sounder ideal for OEM and general alarm applications.

The low voltage LP4 provides the user with the choice of 28 different tones, switch selectable during installation. Each electrical connection has two terminals for looping in and out, eliminating the need for a separate terminal block and therefore, making installation easier. A second tone is available if a third wire is installed and connected to the second tone terminals.

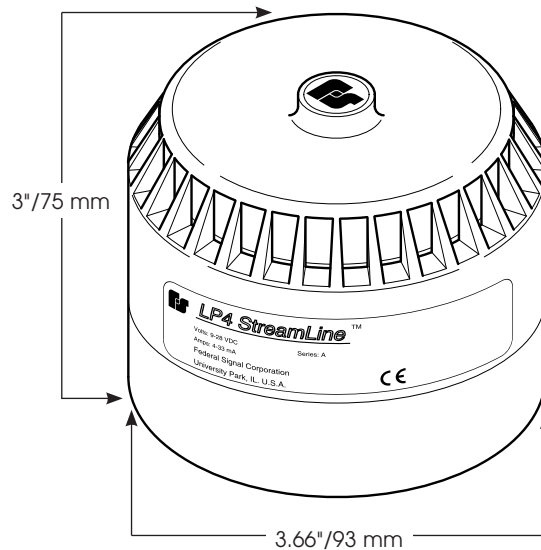
The LP4 sounder operates on a voltage range of 9–28VDC without the need for adjustment. The dB output ranges from 82–100dBa at 10 feet (92–110dBa @ 1m) depending on the tone selected. The volume control provides for 20dBa of adjustment. Due to its low current consumption, the LP4 is PLC compatible.

The rugged White ABS casing provides a high degree of strength and protection from the elements. The operating temperature range of -13°F to 158°F (-25°C to 70°C) allows for use in a wide range of environments. The shallow base provides for flush mount wiring, and features a unique twist assembly for easy installation. A deep base with knockouts is available as an option.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
LP4-09-028	9-28VDC	3-33mA	82-100	92-110



## STREAMLINE® LOW PROFILE MINI SOUNDER (LP4)



### SPECIFICATIONS

Operating Temperature:	-13°F to 158°F	-25°C to 70°C
Net Weight:	10.0 oz.	0.283 Kg
Shipping Weight:	10.3 oz.	0.29 Kg
Height (from bottom):	3.0"	75.0 mm
Diameter:	3.66"	93.0 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index LP4 beginning on page 375

### ACCESSORIES

<u>Description</u>	<u>Part Number</u>
Deep Base, White (1.88" D x 3.63" W)	DBLP



# StreamLine® Low Profile Micro Sounder

## Model LP5

### PERFECT SIZE MEETS SUPERIOR PERFORMANCE!

- Available in 9–30VDC
- Choice of 4 tones
- Indoor use
- Cost effective, two-wire micro unit
- Produces 76–87dBa @ 10' (86–97dBa @ 1m)
- Panel or wall mount
- CE Compliant

Federal Signal's Model LP5 low-profile sounder is an economical two-wire micro unit that produces an effective audible signal for indoor applications.

Model LP5 operates on 9–30VDC power, and is capable of producing one of four tones: "Continuous", "Two-Tone", "Pulsed" and "Sweeping". Tone selection is made by wiring the leads to the 2.5mm screw terminal block. Each tone can function at a high or low dB level, depending upon DIP switch selection (low of 3mA to a high of 15mA). Output ranges from 76 to 87dBa @ 10' (86 to 97dBa @ 1m).

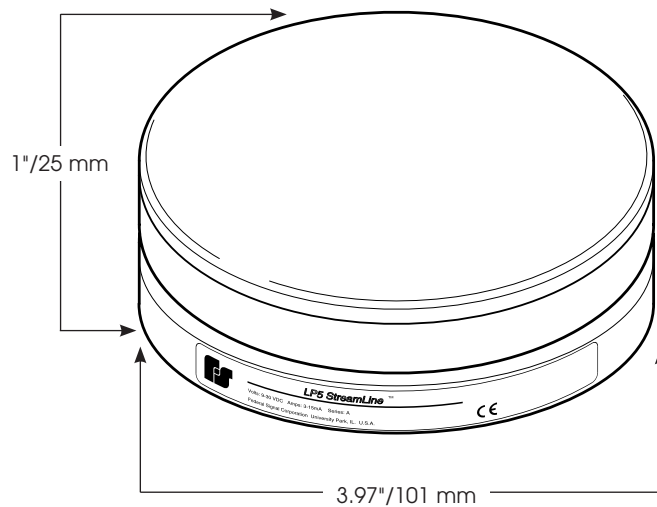
The White ABS plastic cover is removed for easy access to dip switches and the wiring terminal block. Circuitry meets with CE approval. The operating temperature range is -13°F to 185°F (-25°C to 85°C) allowing for a wide range of applications.

This device works well in panel or wall mount installations due to its unobtrusive low profile. With current consumption as low as 3mA, the unit is compatible with PLC and low voltage controls.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
LP5-09-030	9-30VDC	3-15mA	76-87	86-97



## STREAMLINE® LOW PROFILE SOUNDER (LP5)



### SPECIFICATIONS

Operating Temperature:	-13°F to 185°F	-25°C to 85°C
Net Weight:	0.33 lb.	0.155 kg
Shipping Weight:	0.4 lb.	0.2 kg
Diameter:	3.97"	101.0 mm
Depth:	1.0"	25.0 mm

### HOW TO ORDER

- Specify model and voltage
- Please refer to Model Number Index LP5 beginning on page 375



# Electronic Siren

## Model SST-MV

### ELECTRONIC SIREN WITH FOUR SELECTABLE TONES

- Multi-voltage design accepts 24VDC and 120/240VAC
- Produces one of four tones – wail, yelp, horn and temporal slow whoop
- Produces 109.5-111dBa @ 10'
- Omni-directional swivel mount
- Type 3R enclosure (with WB backbox)
- UL and cUL Listed

Federal Signal's SST-MV is an electronic siren capable of producing one of four high decibel tone outputs from the same unit.

The Model SST-MV features internal amplification and the tone circuitry to produce four different tones. The user selects from the wail, yelp, horn or temporal slow whoop tone by reconfiguring internal jumpers.

The SST-MV operates on 24VDC, 120VAC or 240VAC. The TYPE 3R housing is molded from impact-resistant ASA (acrylic-styrene-acrylonitrile) plastic, making it resistant to ultra-violet light and ideal for indoor or outdoor use.

The omni-directional swivel mount system allows the output to be pointed anywhere within a 360° half-sphere.

This electronic siren is UL and cUL Listed.

The Model SST-MV can be used as a stand-alone, high output, audible warning device in any application where voice paging is not required.

Typical applications include emergency warning, start and dismissal, fire alarm, general alarm and evacuation.

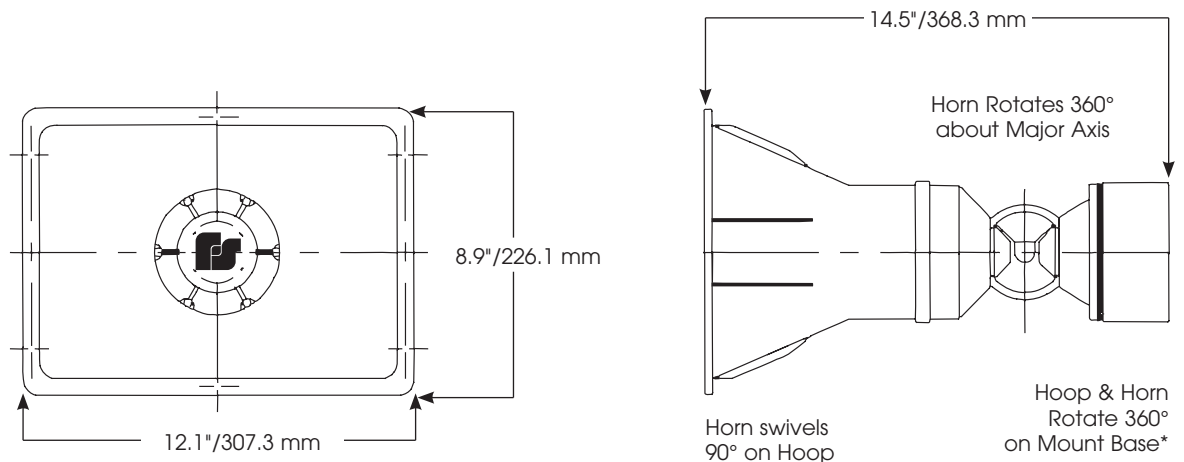
Federal Signal's Model SST-MV Electronic Siren is an economical multi-tone siren that is designed to hold up to the rigors of corrosive environments.

Model	Voltage	Operating Current
SST-MV	24VDC	600mA
SST-MV	120VAC	210mA
SST-MV	240VAC	120mA

Tone	Decibels @	
	10'	1m
Wail	109.5	119.5
Yelp	111.0	121.0
Horn	107.0	117.0
Temporal Slow Whoop	111.0	121.0



## ELECTRONIC SIREN (SST-MV)



\*Mounts on Any Standard Electrical Box

### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Shipping Weight:	5.2 lbs.	2.4 kg
Net Weight:	4.4 lbs.	2.0 kg
Height:	14.5"	368.3 mm
Width:	12.1"	307.3 mm
Depth:	8.9"	226.1 mm

### HOW TO ORDER

- Specify model
- Specify Accessories:  
Weatherproof Backbox (WB)
- Please refer to Model Number Index  
SST-MV beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2001177D-01
Connector, 4-Position	K140340B
Adapter (Beige)	K8476121A
Adapter (Grey)	K8476121A-04
Gasket	K8476122A
Speaker Assembly	K8504002A





# Remotely Selectable Electronic Siren

## Model SST3-MV

### ELECTRONIC SIREN WITH THREE REMOTELY SELECTABLE TONES

- Multi-voltage design accepts 24VDC and 120/240VAC
- Produces three tones – wail, yelp and horn
- Produces 109.5-111dBa @ 10'
- Omni-directional swivel mount
- Type 3R enclosure (with WB back box)
- UL and cUL Listed

Federal Signal's SST3-MV is an electronic siren capable of producing three different high decibel tones from the same unit.

The Model SST3-MV features internal amplification and the circuitry required to produce three different tones. The user activates each tone (wail, yelp or horn) with dry contacts from a remote point.

The SST3-MV operates on 24VDC, 120VAC or 240VAC. The NEMA 3R housing is molded from impact resistant ASA (acrylic-styrene-acrylonitrile) plastic, making it resistant to ultra-violet light and ideal for indoor or outdoor use.

The omni-directional swivel mount system allows the output to be pointed anywhere within a 360° half-sphere.

This electronic siren is UL and cUL Listed.

The Model SST3-MV can be used as a stand-alone, high-output, audible warning device in any application where multiple tones are needed but voice paging is not required.

Typical applications include emergency warning, start and dismissal, fire alarm, general alarm and evacuation.

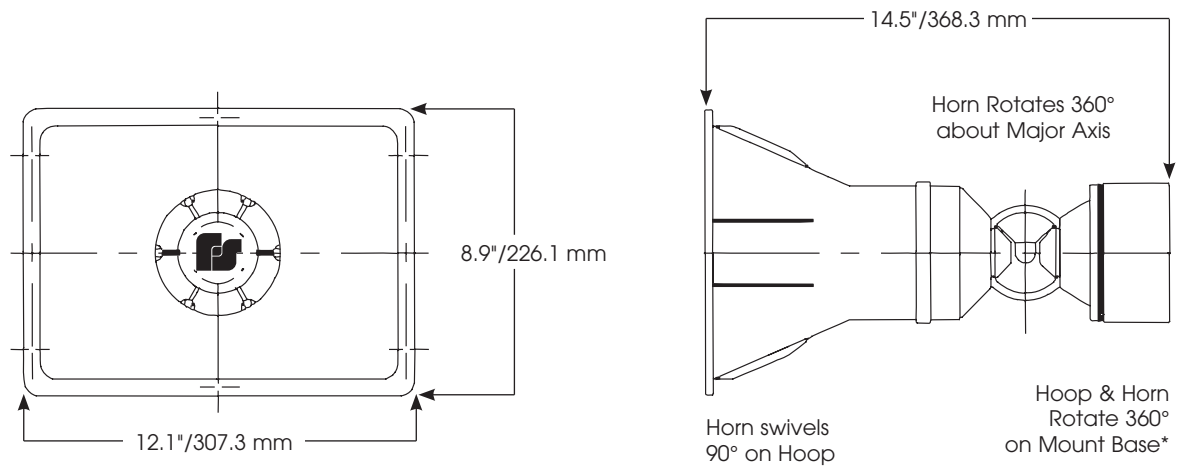
Federal Signal's Model SST3-MV Electronic Siren is an economical multi-tone siren designed to hold up in the rigors of corrosive environments.

Model	Voltage	Operating Current
SST3-MV	24VDC	600mA
SST3-MV	120VAC	210mA
SST3-MV	240VAC	120mA

Tone	Decibels @	
	10'	1m
Wail	109.5	119.5
Yelp	111.0	121.0
Horn	107.0	117.0



## ELECTRONIC SIREN (SST3-MV)



\*Mounts on Any Standard Electrical Box

### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	4.4 lbs.	2.0 kg
Shipping Weight:	5.2 lbs.	2.4 kg
Height:	14.5"	368.3 mm
Width:	12.1"	307.3 mm
Depth:	8.9"	226.1 mm
Maximum Contact Resistance	1000 ohms	1000 ohms

### HOW TO ORDER

- Specify model
- Specify Accessories:  
Weatherproof Backbox (WB)
- Please refer to Model Number Index  
SST3-MV beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2005110A
Connector, 4-Position	K140340B
Adapter (Beige)	K8476121A
Adapter (Grey)	K8476121A-04
Gasket	K8476122A
Speaker Assembly	K8504002A



## DESIGNED FOR USE IN EXPLOSION-PROOF ENVIRONMENTS

- Multi-voltage design – accepts 24VDC, 120VAC or 240VAC
- Produces one of four tones – wail, yelp, horn and temporal slow whoop
- Produces 101-108dBa @ 10'
- NEMA 4X, IP66 Approved
- UL and cUL Listed

# Explosion-Proof Electronic Siren

## Model SSTX-MV

Federal Signal's SSTX-MV is an explosion-proof electronic siren capable of producing one of four high decibel tones from the same unit. The circuitry is contained in a rugged die-cast aluminum amplifier housing. The unique threaded rear access cover eliminates traditional time consuming bolting patterns. The access cover is also equipped with a braided cable lanyard securing it to the housing whenever the cover is open for installation or maintenance.

The Model SSTX-MV features internal amplification and tone circuitry capable of reproducing one of four different tones. The user selects from the wail, yelp, horn or temporal slow whoop tone by reconfiguring the internal jumpers.

This unit operates on 24VDC, 120VAC or 240VAC. It is capable of producing up to 108dBa @ 10 feet (118dBa @ 1m).

This electronic siren is UL and cUL Listed for Class I, Division 1, Groups B, C & D.

The Model SSTX-MV can be used as a stand-alone, full output, audible warning device in any explosion-proof environment where voice paging is not required.

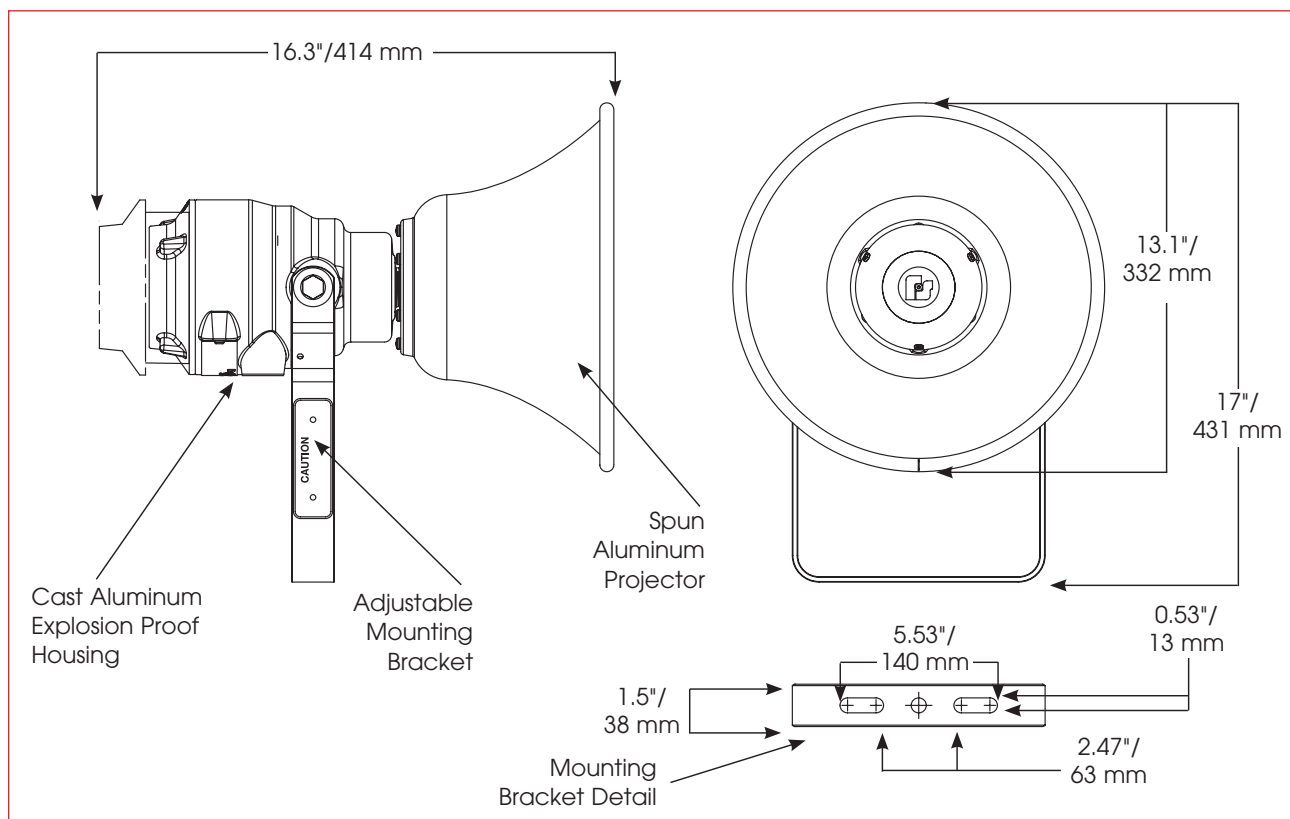
Typical uses include emergency warning, start and dismissal, general alarm and evacuation.

Federal Signal's Model SSTX-MV Explosion-Proof Electronic Siren is an economical multi-tone siren that is designed to hold up to the rigors of explosive and corrosive environments.

Model	Voltage	Operating Current	Decibels @	
			Tone	10' 1m
SSTX-MV	24VDC	0.60 amps	Wail	108 118
SSTX-MV	120VAC	0.21 amps	Yelp	108 118
SSTX-MV	240VAC	0.12 amps	Horn	101 111
SSTX-MV	240VAC	0.12 amps	Temporal Slow Whoop	102 112



## EXPLOSION-PROOF ELECTRONIC SIREN (SSTX-MV)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	15.4 lbs.	7.0 kg
Shipping Weight:	22.8 lbs.	10.4 kg
Height:	17.0"	431.80 mm
Width:	13.1"	332.73 mm
Depth:	16.3"	414.02 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index SSTX-MV beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCB Assembly	K2001177D-01
Connector, 4-Position	K140340B
Projector Assembly	K8593100A
Driver Assembly	K8593097A



## DESIGNED FOR USE IN EXPLOSION-PROOF ENVIRONMENTS

- Multi-voltage design – accepts 24VDC, 120VAC or 240VAC
- Produces three tones – wail, yelp and horn
- Produces 101-108dBa @ 10'
- NEMA 4X, IP66 Approved
- UL Listed and cUL Listed

# Explosion-Proof Remotely Selectable Electronic Siren

## Model SSTX3-MV

Federal Signal's SSTX3-MV is an explosion-proof electronic siren capable of producing three high decibel tones from the same unit. The integrated circuitry is contained in a rugged die cast aluminum housing. The unique threaded rear access cover eliminates traditional time consuming bolting patterns. The access cover is also equipped with a braided cable lanyard securing it to the housing whenever the cover is open for installation or maintenance.

The Model SSTX3-MV features internal amplification and tone circuitry capable of reproducing three tones. The user activates each tone (wail, yelp or horn) with dry contacts from a remote point.

This unit operates on 24VDC, 120VAC or 240VAC. It is capable of producing 108dBa @ 10 feet (118dBa @ 1m).

This electronic siren is UL and cUL Listed for Class I, Division 1, Groups B, C & D.

The Model SSTX3-MV can be used as a stand-alone, full output, audible warning device in any explosion-proof environment where multiple tones are needed but voice paging is not required.

Typical uses include emergency warning, start and dismissal, general alarm and evacuation.

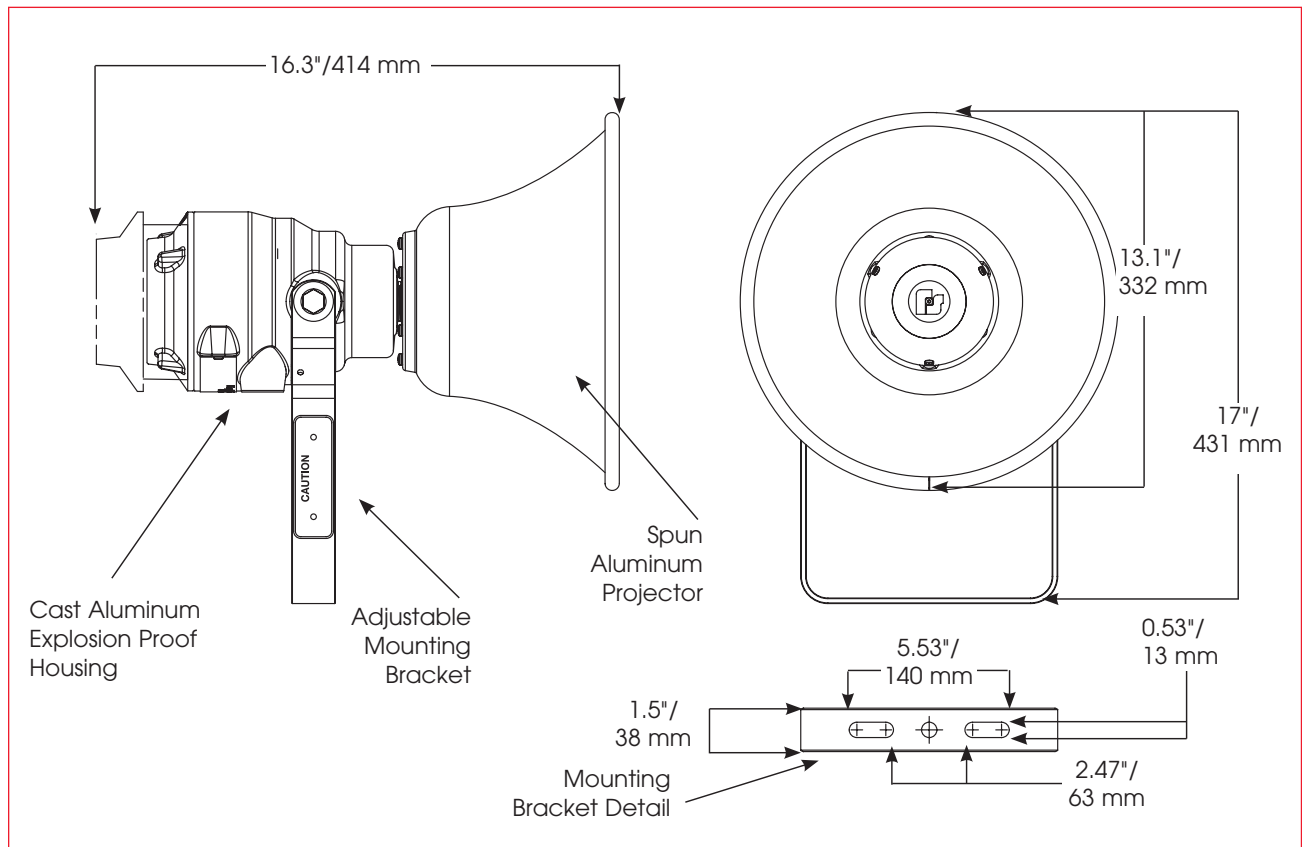
Federal Signal's Model SSTX3-MV Explosion-Proof Electronic Siren is an economical multi-tone siren that is designed to hold up to the rigors of explosive and corrosive environments.

Model	Voltage	Operating Current
SSTX3-MV	24VDC	600mA
SSTX3-MV	120VAC	210mA
SSTX3-MV	240VAC	120mA

Tone	Decibels @ 10'	Decibels @ 1m
Wail	108	118
Yelp	108	118
Horn	101	111



## EXPLOSION-PROOF ELECTRONIC SIREN (SSTX3-MV)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	15.4 lbs.	7.0 kg
Shipping Weight:	22.8 lbs.	7.4 kg
Height:	17.0"	431.80 mm
Width:	13.1"	332.73 mm
Depth:	16.3"	414.02 mm
Maximum contact resistance	1000 ohms	1000 ohms

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index SSTX3-MV beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCB Assembly	K2005110A
Connector, 4-Position	K140340B
Projector Assembly	K8593100A
Driver Assembly	K8593097A





# SelecTone® Plant Wide Warning and PA Systems

## STAND ALONE SIGNALING, PLANT WIDE SIGNALING AND PUBLIC ADDRESS

- Available in 24VDC, 24VAC, 120VAC and 240VAC
- Command Units, Speaker/Amplifiers, Tone Cards and Connector Kits
- Indoor, outdoor and hazardous location models
- UL and cUL Listed and CSA Certified

SelecTone® systems cover the full range of industrial communication applications; start and dismissal, emergency evacuations, process control signaling, voice messages and public address. The SelecTone product family includes all the equipment necessary for a comprehensive industrial signaling and communications system; dependable, high-quality Command Units, weatherproof, dust- and watertight, hazardous location and explosion proof Speaker/Amplifiers, Tone Modules with pre-recorded digital voice messages, tones or melodies, and the Connector Kits that make it all work together. Every model is designed with the greatest care for long life in harsh, industrial environments.

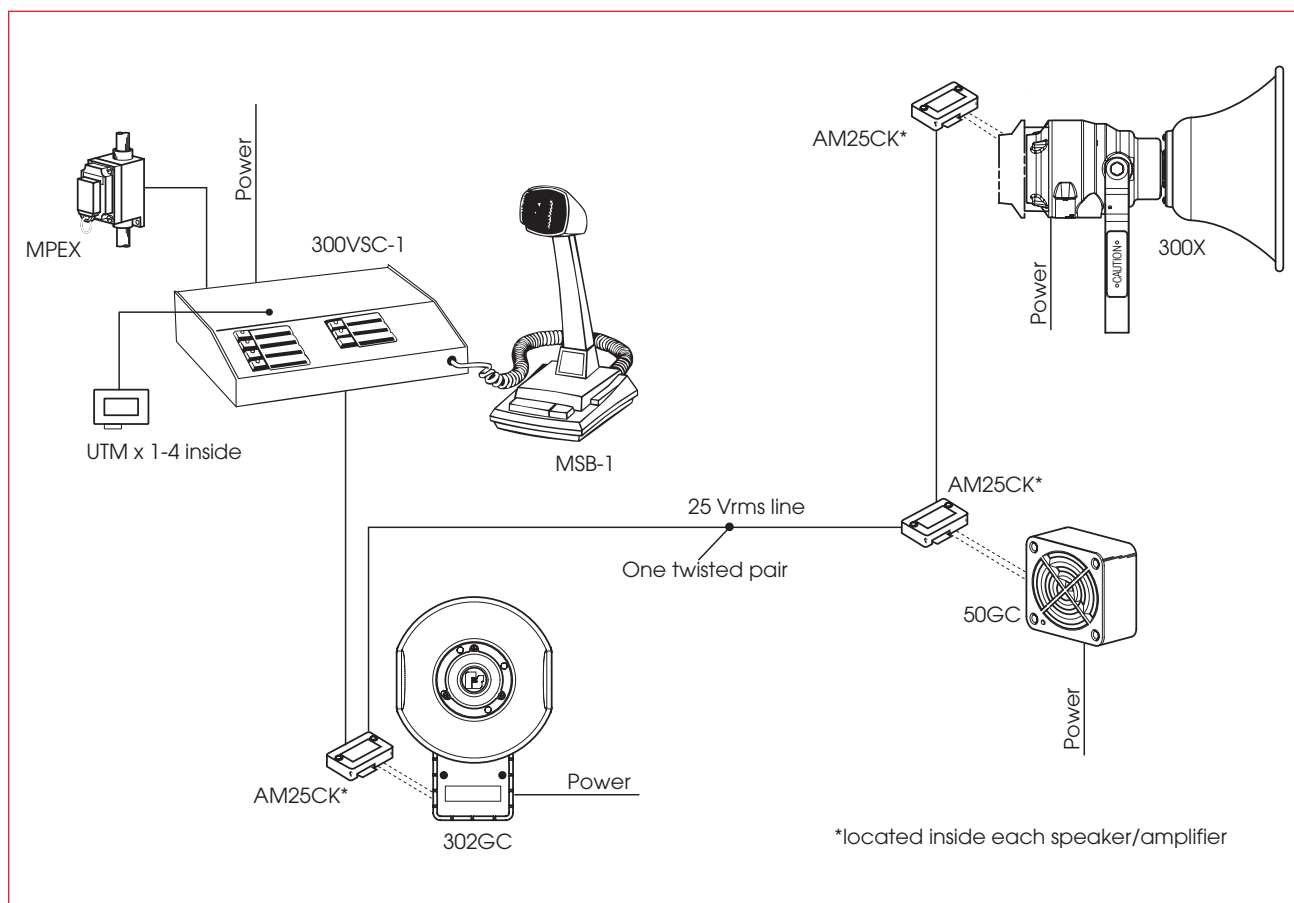
SelecTone Speaker/Amplifiers are self-amplified speakers designed to broadcast pre-recorded tones, voice messages, melodies and live public address. Because the communication signal is amplified by each device, rather than by costly central amplifiers, the expense of running high-powered audio lines in conduit is eliminated. Each Speaker/Amplifier is designed for long life in harsh industrial environments. Systems provide limitless expansion for future growth. A range of models with outputs from 88dBa to 114dBa are available to overcome industrial noise levels. Each has an integrated volume control. SelecTone Speaker/Amplifiers can be used to expand existing public address systems without adding central amps. Systems are fault tolerant – if one device fails, the others continue to operate. Each Speaker/Amplifier can also be used for stand-alone signaling applications.

SelecTone Command Units are the centerpiece of a total plant communication strategy. Each Command unit provides central control of four tones and public address. Each is equipped with local and remote microphone access and tone initiation. Auxiliary audio inputs support background music. Communication is prioritized with local microphone as highest, followed by tones 1 through 4, remote microphone, then auxiliary audio. An on-board amp supports a local speaker. Rack mount, wall mount and desktop models are available.

Connector Cards tie the SelecTone® system together. Installed in each Speaker/Amplifier, Connector Cards provide communication with the SelecTone Command Unit. They can also be used to add SelecTone Speaker/Amplifiers to existing centrally amplified public



## PLANT WIDE WARNING AND PA SYSTEMS



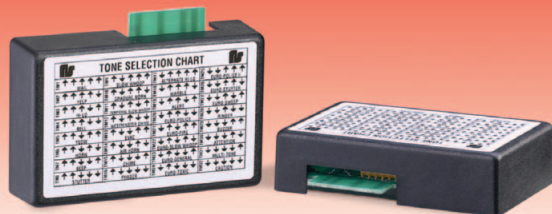
address systems. Each Connector Card is designed to create a balanced line audio system for superior noise suppression and clear communication.

Tone Modules offer tones, messages and melodies for every application, location and event. The Universal Tone Module (UTM) provides a selection of 32 distinct tones for use in plant-wide communication systems with a SelecTone Command Unit and a limitless number of Speaker/Amplifiers or for use in stand alone applications with a

single Speaker/Amplifier. Tones are easily selected via DIP switches and the modules are designed for quick plug-in installation. When a custom voice message, tone or melody is the solution, Federal Signal offers the TM33 Custom Tone Module. Users can select from a library of thousands of messages and melodies or they can provide a tape, script or digital sound file for professional recording in any language.

### SELECTONE® PRODUCTS

<i><b>Product</b></i>	<i><b>Page</b></i>
Universal Tone Module	166
Custom Tone Module	168
Connector Kits	170
Speaker/Amplifiers	174-190
Command Units	192-198
Relay Activation	200



# SelecTone® Universal Tone Module

Model UTM

## A TONE FOR EVERY SIGNALING NEED

- 32 switchable tones
- Compatible with all SelecTone® equipment
- Plug-in installation
- RFI and EMI shielded
- UL and cUL Listed, CSA Certified and CSFM Approved

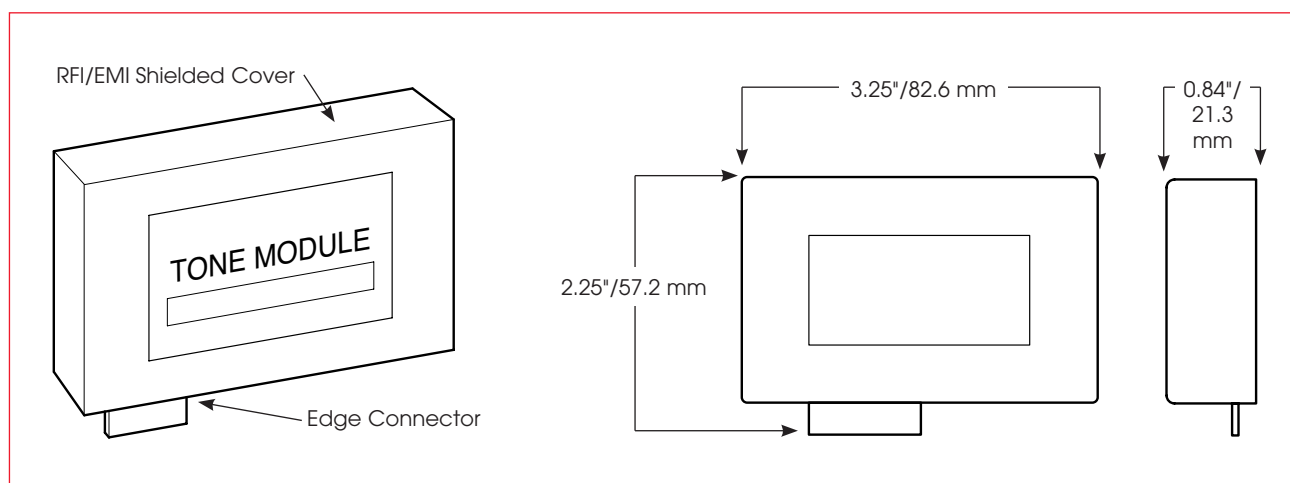
Federal Signal's Universal Tone Module (UTM) is a microcontroller-based tone generator capable of producing 32 different tones. The UTM is the key component of a SelecTone® System or a single SelecTone device. Tone selection is made by setting five DIP switches.

Housed in a plastic cover impregnated with stainless steel fibers, the circuitry is shielded from RFI (radio frequency interference) and EMI (electro-magnetic interference). The edge connector allows for quick and simple installation.

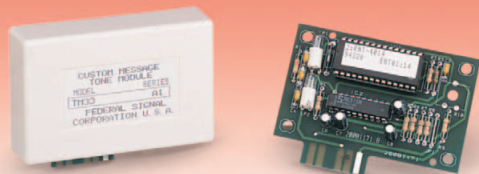
In addition to working with the entire SelecTone® line of speaker/amplifier products, the Model UTM is compatible with the EM3 Extension Module, 300VSC-1 Command Unit, 300VSC-1044SB Command Unit and 300SCW-1 Command Unit. Federal Signal's UTM provides crisp, clear digital signals easily distinguished from the ambient noise of commercial, institutional and industrial environments.



## UNIVERSAL TONE MODULE (UTM)



DIP Switch	Tone	Sound	Frequency	Repetition Rate	
1 2 3 4 5					
↑ ↑ ↑ ↑ ↑	Wail	TM1	Conventional Siren	560-1055Hz	11 cycles/minute
↑ ↑ ↑ ↑ ↓	Yelp	TM2	Rapid Siren	560-1055Hz	3.3 cycles/second
↑ ↑ ↑ ↓ ↑	Hi-Low	TM3	Alternating Hi and Low	561Hz and 760Hz	50 cycles/minute
↑ ↑ ↑ ↓ ↓	Bell	TM4	Bell, Struck Rapidly	801Hz	50 cycles/minute
↑ ↑ ↓ ↑ ↑	Yeow	TM5	Descending High to Low, Repeated	545Hz and 1296Hz	36 cycles/minute
↑ ↑ ↓ ↑ ↓	Horn	TM6	Steady Horn	470Hz	Continuous
↑ ↑ ↓ ↓ ↑	Beep	TM7	Slow Intermittent Horn	470Hz	50 cycles/minute
↑ ↑ ↓ ↓ ↓	Stutter	TM8	Rapid Intermittent Horn	470Hz	5 cycles/minute
↑ ↓ ↑ ↑ ↑	Slow Whoop	TM9	Slow Ascending Low to High, Repeated	424Hz and 1163Hz	15 cycles/minute
↑ ↓ ↑ ↑ ↓	Gradual Horn	TM10	Steady Horn, Gradually Increasing in Volume	514Hz	Continuous
↑ ↓ ↑ ↓ ↑	Temporal Slow Whoop	TM11	NFPA Coded Slow Whoop	424Hz and 774Hz	15 cycles/minute
↑ ↓ ↑ ↓ ↓	Westminster Chime	TM12	Westminster Chime	Musical Tone	1 cycle/8 tones
↑ ↓ ↓ ↑ ↑	Evac	TM13	Amplitude Modulated Siren	479Hz	4.3 cycles/second
↑ ↓ ↓ ↑ ↓	Air Horn	TM14	Steady Horn	400Hz and 800Hz	Continuous
↑ ↓ ↓ ↓ ↑	Chime	TM15	Single Strike Chime	Musical Tone	49 cycles/minute
↑ ↓ ↓ ↓ ↓	Phaser	TM16	Rapid Siren	600-1200Hz	15 cycles/second
↓ ↑ ↑ ↑ ↑	Alternating Hi/Low	TM17	Alternating High-to-Low	363Hz and 518Hz	60 cycles/minute
↓ ↑ ↑ ↑ ↓	Warble	TM18	Extremely Rapid Siren	560-1055Hz	6.3 cycles/second
↓ ↑ ↑ ↓ ↑	Alert	TM19	Slow Sweep Tone	400-1560Hz	Ascending
↓ ↑ ↑ ↓ ↓	Euro-Police	TM20	Alternating Hi and Low	969Hz and 800Hz	30 cycles/minute
↓ ↑ ↓ ↑ ↑	Euro-Fire	TM21	Sweep Tone	900-800Hz	Continuous
↓ ↑ ↓ ↑ ↓	Euro-Slow Whoop	TM22	Slow Sweep Tone	650-1290Hz	17 cycles/minute
↓ ↑ ↓ ↓ ↑	Euro-General	TM23	Intermittent Horn	969Hz	60 cycles/minute
↓ ↑ ↓ ↓ ↓	Euro-Toxic	TM24	Steady Horn	969Hz	Continuous
↓ ↓ ↑ ↑ ↑	Euro-Police II	TM25	Slow Alternating Hi and Low	554Hz and 440Hz	Alternating Slow
↓ ↓ ↑ ↑ ↓	Euro-Stutter	TM26	Intermittent Beep	2840Hz	252 ms/cycles
↓ ↓ ↑ ↓ ↑	Euro-Sweep	TM27	Sweep Tone	1163 - 397Hz	Descending
↓ ↓ ↑ ↓ ↓	Ringer	TM28	Continuous Ringing Tone	560Hz and 326Hz	Fast Alternating
↓ ↓ ↓ ↑ ↑	Buzzer	TM29	Buzzer Tone	1318Hz and 760Hz	Continuously Alternating
↓ ↓ ↓ ↑ ↓	Attention	TM30	Extremely Rapid Siren	Multiple Frequency	1 cycle, 8 tones
↓ ↓ ↓ ↓ ↑	Multi-Tone	TM31	Extremely Rapid Siren	Multiple Frequency	1 cycle, 8 tones
↓ ↓ ↓ ↓ ↓	Caution	TM32	Extremely Rapid Siren	Multiple Frequency	1 cycle, 8 tones



# SelecTone® Custom Tone Module

## Model TM33

### CUSTOM PRE-RECORDED DIGITAL MESSAGE

- Non-volatile memory
- Compatible with any SelecTone® unit
- Plug-in installation
- UL and cUL Listed

Federal Signal's Model TM33 Digital Tone Module provides audio input for any SelecTone® speaker/amplifier. The tone module holds a single pre-recorded voice message, tone or melody.

The user selects from a library of standard pre-recorded messages, tones or melodies, or creates a customized recording.

Each tone module contains the latest microprocessor based digital messaging system. This new PCBA module is capable of a 30 second playback of any custom tone or voice message. The tone or message can be reprogrammed at any time with the use of the 300FP field programmer, see separate catalog page for details. The model TM33 can either be set to play through once and stop or loop continuously.

This solid state digital device will work with Federal Signal speaker/amplifiers (including 50GC, 50GCB, 300GC, 300GCX, 302GC, 302GCX, 300X, 302X, 304GC, 314GC, 304GCX, 314GCX, 304X, and 314X) and the 300VSC-1, 300SCW-1, 300VSC-1044SB SelecTone Command Panels\*.

The TM33's digital messaging capabilities are ideal for emergency evacuation announcements. Clear, concise, pre-determined instructions or custom tones can be broadcast.

Manufacturing facilities often require an audible signal to indicate status (i.e. standby, shut down, operational, etc.). Simple pre-recorded melodies can indicate these situations, while voice messages can warn operators.

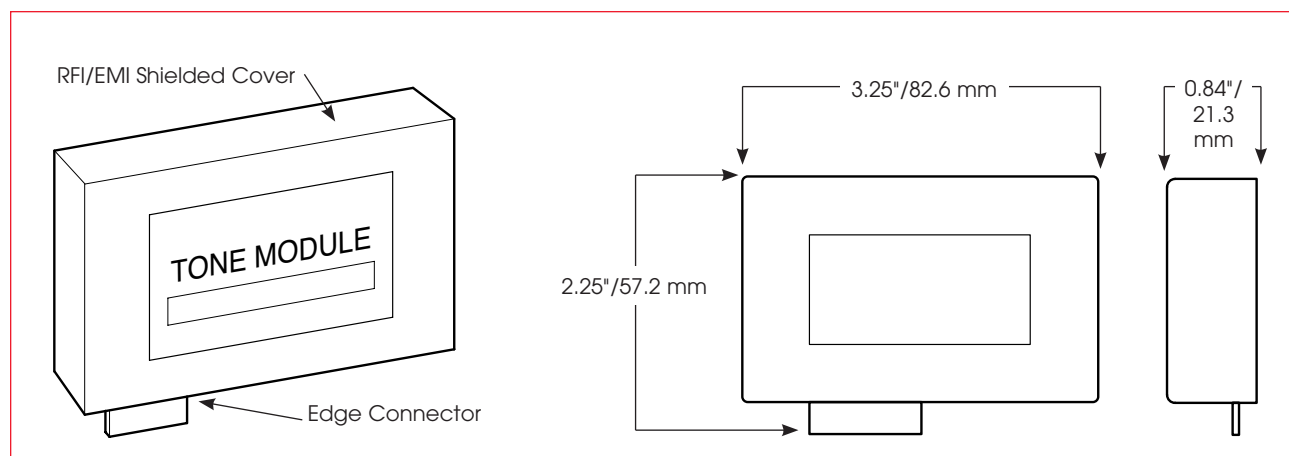
Many industrial facilities utilize public address systems to broadcast repetitive pre-recorded information. The Model TM33 provides high-quality audio output in these applications.

Federal Signal's TM33 Custom Tone Module provides the user with the option of producing a completely customized digital message, in any language.

\* Not compatible with the EM3 Extension Module



## CUSTOM TONE MODULE (TM33)



## STANDARD LIBRARY FOR TM33 AND COMMCENTER® CHIPS

### VOICE MESSAGES

"An automatic guided vehicle is approaching. Please step aside."  
 "System is now in auto shutdown mode."  
 "Lockout has been removed; system is coming on line."  
 "Check status light for current system condition."  
 "Auto shut down has begun. Raw materials must be replenished and system reset."  
 "You have entered a restricted area."  
 "The automatic doors are closing. Please stand clear."  
 "The overhead door is closing. Please stand clear."  
 "Safety glasses must be worn in this area at all times."  
 "This is a hard hat area."  
 "A forklift is approaching. Please stand clear."  
 "Attention! We will be testing the fire alarm system shortly. This is only a test."  
 "Attention! For the next thirty seconds a test will be conducted of the emergency evacuation system. This is only a test."  
 "Please evacuate the building. This is not a test."  
 "Warning, this machine is about to start up. Please stand clear."  
 TM3 followed by "Please take shelter immediately. This is a severe weather alert."  
 TM11 followed by "Please evacuate the building. This is not a test."  
 TM5 followed by "Tornado alert. Report to your designated area."  
 TM12 followed by "All clear. Return to work area."

### NOVELTY MELODIES

Camp Town Races	Saints Come Marching In
Doggie in the Window	La Cucaracha
Maple Leaf Rag	Merrily We Roll Along
The Entertainer	The Mulberry Bush
Worms Crawl In	

### CLASSICAL MELODIES

Bach	Fugue in "D" Minor
Bach	Fugue in "A" Minor
Beethoven	5th Symphony
Beethoven	Sonata Theme
Chopin	Minuet Waltz
Chopin	Polonaise in "A" Minor
Greig	Dance Caprice
Greig	Concerto in "A" Minor
Rackoczy	March
Strauss	Blue Danube
Tchaikovsky	Concerto in "B" Flat Minor
Rossini	William Tell Overture

### FOLK MELODIES

Coventry Carol	Cradle Song
Dance Macabre	Dixie Land
Lightly Row	London Bridge
Go Tell Aunt Rhody	Greensleeves
Henry Martin	Home on the Range
Love's Complaint	Morning Song
Oh Suzannah	Oh Wondrous Enchantment
Prince Igor	Suwanee River
Watchman's Song	

### ETHNIC MELODIES

Irish Jig	J'ai Du Bon Taboc
My Bonnie	Norwegian Dance
The Horn Pipe	

### PATRIOTIC MELODIES

Battle Hymn of the Republic  
 My Country 'tis of Thee  
 Taps

### TONES AND SIGNALS

See page 167 for a list of tones or [www.federalsignal-indust.com](http://www.federalsignal-indust.com)

## REPLACEMENT PARTS

Blank Message Module	RMB9999SD
Pre-recorded Message Module (Please specify message)	RM1SD

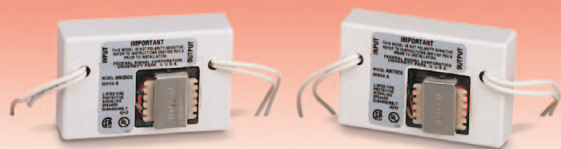
## HOW TO ORDER

- Specify Model, see Model Number Index TM33 on page 371
- Choose Message Source
  - Select from Standard Library Above
  - Send script to Federal Signal to be recorded in studio (additional charge incurred)
  - Send field-recorded electronic file in .wav or .mps format to Federal Signal to be transferred to chip (additional charge incurred)



# SelecTone® Connector Kits

Models AM25CK and AM70CK



## EXPANDS PUBLIC ADDRESS SYSTEM CAPACITY

- Interfaces SelecTone® speaker/amplifiers with an existing paging system
- Works in 25 or 70 Vrms systems
- Creates a “balanced line” SelecTone® System
- UL and cUL Listed, CSA Certified and CSFM Approved

The Models AM25CK and AM70CK are connector kits which allow the use of SelecTone® speaker/amplifiers (1 Vrms devices) to be used in any public address system (25 or 70 Vrms).

Using these connectors and the 25 Vrms output from the 300VSC-1, 300VSC-1044SB, 300SCW-1 or 300MB SelecTone Command Center creates a true “balanced line” system which will filter all extraneous noise from the audio lines.

Expanding a centrally amplified public address system often requires the addition of another control amplifier. With the appropriate connector kits and SelecTone speaker/amplifiers, the system can easily be expanded, without the costly addition of a central amplifier.

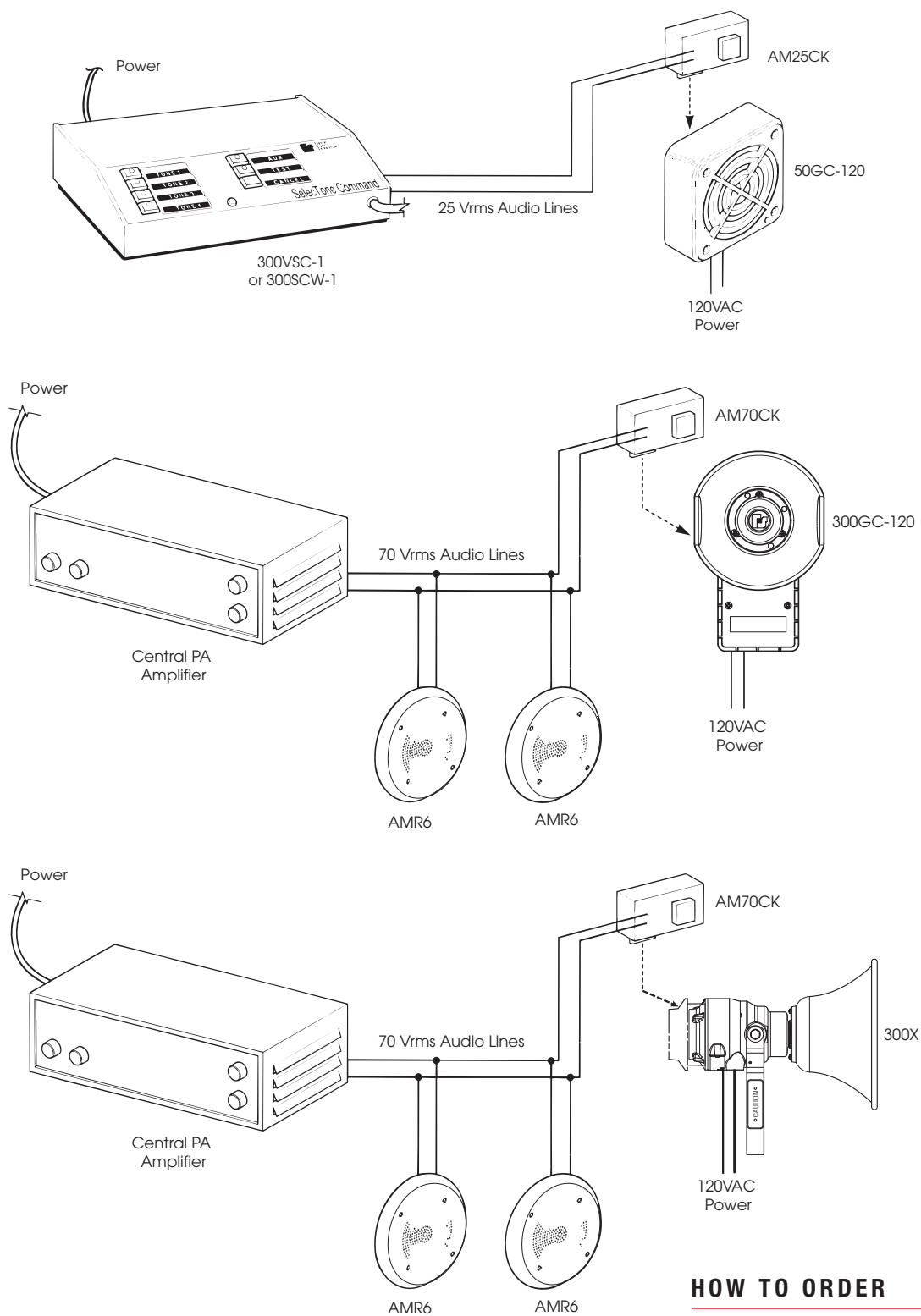
Public address equipment manufacturers do not offer a wide selection of explosion-proof products. Now adding a Class I, Division 1, or Class I, Division 2 device to an existing central PA system is simple; select either a 300X, 300GCX, or 302GCX speaker/amplifier and the appropriate connector kit.

SelecTone typically require a minimum of 18-gauge twisted pair, isolated from the AC line. With an AM series connector kit and the 25 Vrms output of the SelecTone control, a balanced line is created which filters induced line noise. This also allows the installer to use smaller gauge wire without the risk of poor intelligibility.

Federal Signal’s SelecTone Connector Kits allow existing public address systems to be expanded with SelecTone speaker/amplifiers — no additional central amplifier is required.



## SELECTONE® CONNECTOR KITS (AM25CK/AM70CK)



### HOW TO ORDER

- Please refer to Model Number Index AM25CK/AM70CK beginning on page 375



# **SelectTone® Extension Module**

## **Model EM3**

### **DESIGNED FOR ADDING ADDITIONAL SIGNAL TONES**

- Reliable solid-state circuitry
- Indoor/outdoor use
- No separate power supply required
- Produces three tones with the same speaker/amplifier
- Type 3R enclosure
- UL and cUL Listed

The Federal Signal Model EM3 SelectTone® Extension Module is designed to add multi-tone capability to an individual SelectTone unit and can be used with Models 300, 300GC, and 302GC.

The die-cast aluminum alloy housing has the same dimensions as the main amplifier housing of the above mentioned models and is sealed with gray enamel paint. The EM3's internal components are protected from the elements by dust- and moisture-proof seals.

The EM3 Extension Module requires no power supply of its own. Its internal components are a wiring terminal strip, edge connector slots for three Model UTM tone modules and an interface to connect to a SelectTone 300, 300GC, or 302GC signaling device. The EM3 is not compatible with the TM33 Tone Module.

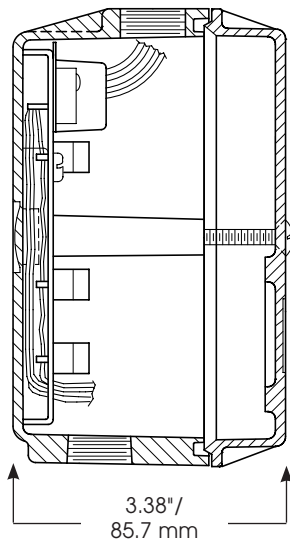
With the EM3, three functions can be simultaneously monitored rather than one. Tone activation and selection is accomplished by user-supplied, normally-open dry contacts.

Where voice communication is not necessary and the application requirements dictate up to three tone signals, the EM3 Extension Module allows a single SelectTone audible signal to fill those needs.

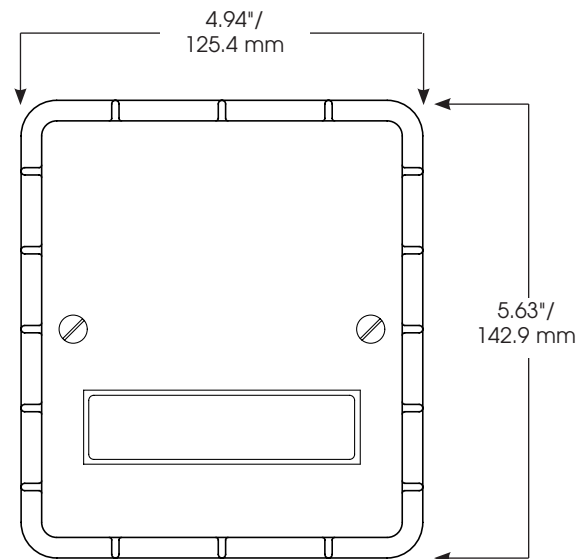
Adding Federal Signal's Model EM3 to a SelectTone speaker/ amplifier allows a single unit to produce up to three distinct tones.



## SELECTONE® EXTENSION MODULE (EM3)



Accepts up  
to 3 Tone  
Modules  
(purchased  
separately)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	1.0 lbs.	0.45 kg
Shipping Weight:	2.2 lbs.	1.0 kg
Height:	5.63"	142.9 mm
Width:	4.94"	125.4 mm
Depth:	3.38"	85.7 mm

### HOW TO ORDER

- Specify model number
- Specify number of Universal Tone Modules (UTM), up to three (Reference page 167 for a complete list of tones)
- Please refer to Model Number Index EM3 beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCBA, Series B	K200A481C
PCBA, Series C	K2001914B
PCBA Edge Connector	K124P011-S



# **SelectTone® Audible Signaling Device**

## **Model 50GC**

### **DESIGNED FOR INDOOR AND OUTDOOR USE**

- Available in 24VAC/24VDC, and 120VAC
- Solid-state circuitry
- Built-in gain control
- Produces 64dBa to 88dBa @ 10' (74dBa to 98dBa @ 1m)
- Flush or surface mount
- Type 3R enclosure
- UL and cUL Listed, and CSFM Approved

Federal Signal's Model 50GC SelectTone® Speaker Amplifier is designed to produce crisp, clear tones, digital voice messages and live public address.

In the Model 50GC a short, folded re-entrant horn is interposed between the diaphragm and surrounding air space. This design provides optimal dB output and very good frequency response.

The 50GC is UL Listed. It has been designed, tested and approved for use in Type 3R applications. When installed with the Model WB Weatherproof Backbox, the 50GC is suitable for use outdoors.

Internal gain control allows output adjustment from 64dBa to a maximum of 88dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

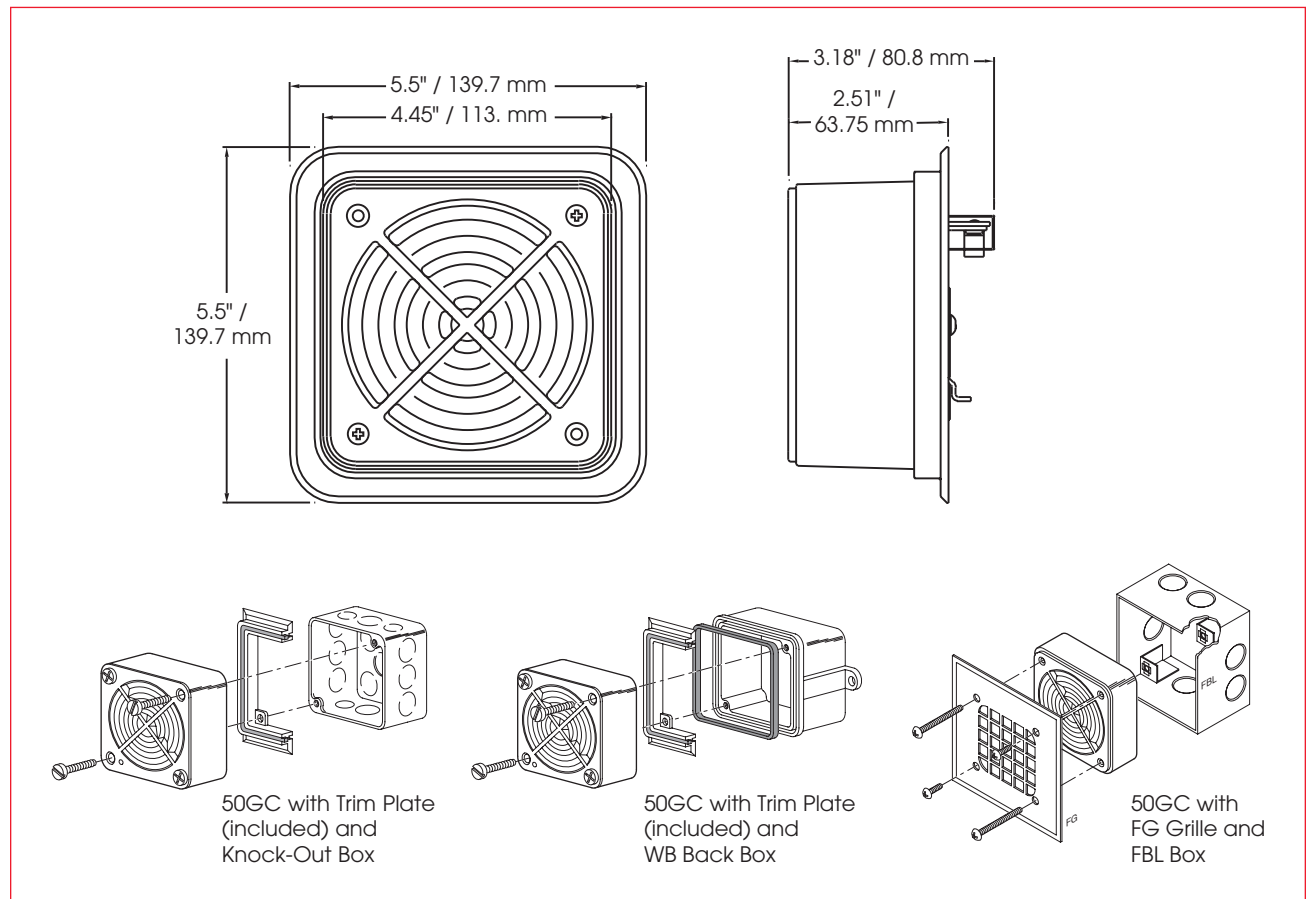
For plant-wide signaling, a Connector Kit is installed into each SelectTone Speaker Amplifier and wired to a central controller. SelectTone Command Units and CommCenter® Digital Message Centers broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

The compact size and attractive appearance of the Model 50GC make it ideal for use in offices, hallways, reception, and plant areas where ambient noise levels are not exceedingly high, and even sound dispersal is desired. Emergency signaling and paging are common applications.

Model	Voltage	Operating Current	Standby Current	Decibels @	
				10'	1m
50GC-024BG	24VDC	0.09 amps	0.025 amps	88	98
50GC-024BG	24VAC 50/60Hz	0.29 amps	0.095 amps	88	98
50GC-120BG	120VAC 50/60Hz	0.04 amps	0.027 amps	88	98



## SELECTONE® AUDIBLE SIGNALING DEVICE (50GC)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	1.7 lbs.	0.8 kg
Shipping Weight:	2.2 lbs.	1.0 kg
Height:	4.5"	114.0 mm
Width:	4.5"	114.0 mm
Depth:	3.18"	80.8 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Accessories Kit (Trim Ring and Gasket)	K8476123A

### HOW TO ORDER

- Specify model and voltage
- Specify Tone Module for stand alone operation (sold separately)  
Universal Tone Module (UTM)  
Custom Tone Module (TM33)
- Specify Connector Kit (sold separately) for use in systems (Call factory for system design assistance)  
25 Vrms Connector Kit (AM25CK)  
70 Vrms Connector Kit (AM70CK)
- Specify Accessories:  
Weatherproof Back Box (WB)  
Grille (FG)  
Flush Mount Back Box (FBL)
- Please refer to Model Number Index 50GC beginning on page 375





# **SelectTone® Audible Signaling Device**

Model 50GCB

## **CEILING MOUNT 4" SPEAKER/AMPLIFIER**

- Available in 24VAC/24VDC and 120VAC
- Attractive round ceiling grille
- Appropriate for office environments
- Built in gain control
- Produces 64dBa to 88dBa @ 10' (74dBa to 98dBa @ 1m)
- Type 1, IP41 enclosure
- UL and cUL Listed, and CSFM Approved

Federal Signal's Model 50GCB SelectTone® Speaker Amplifier is designed to produce crisp, clear tones, digital voice messages and live public address. Designed to mount in ceilings, the 50GCB features a seven-inch white grille over a 4" speaker amplifier.

Internal gain control allows output adjustment from 64dBa to a maximum of 88dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

For plant-wide signaling, a Connector Kit is installed into each SelectTone Speaker Amplifier and wired to a central controller, a SelectTone Command Unit or a CommCenter® Digital Message Center. SelectTone Command Units and CommCenter Digital Message Centers can broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

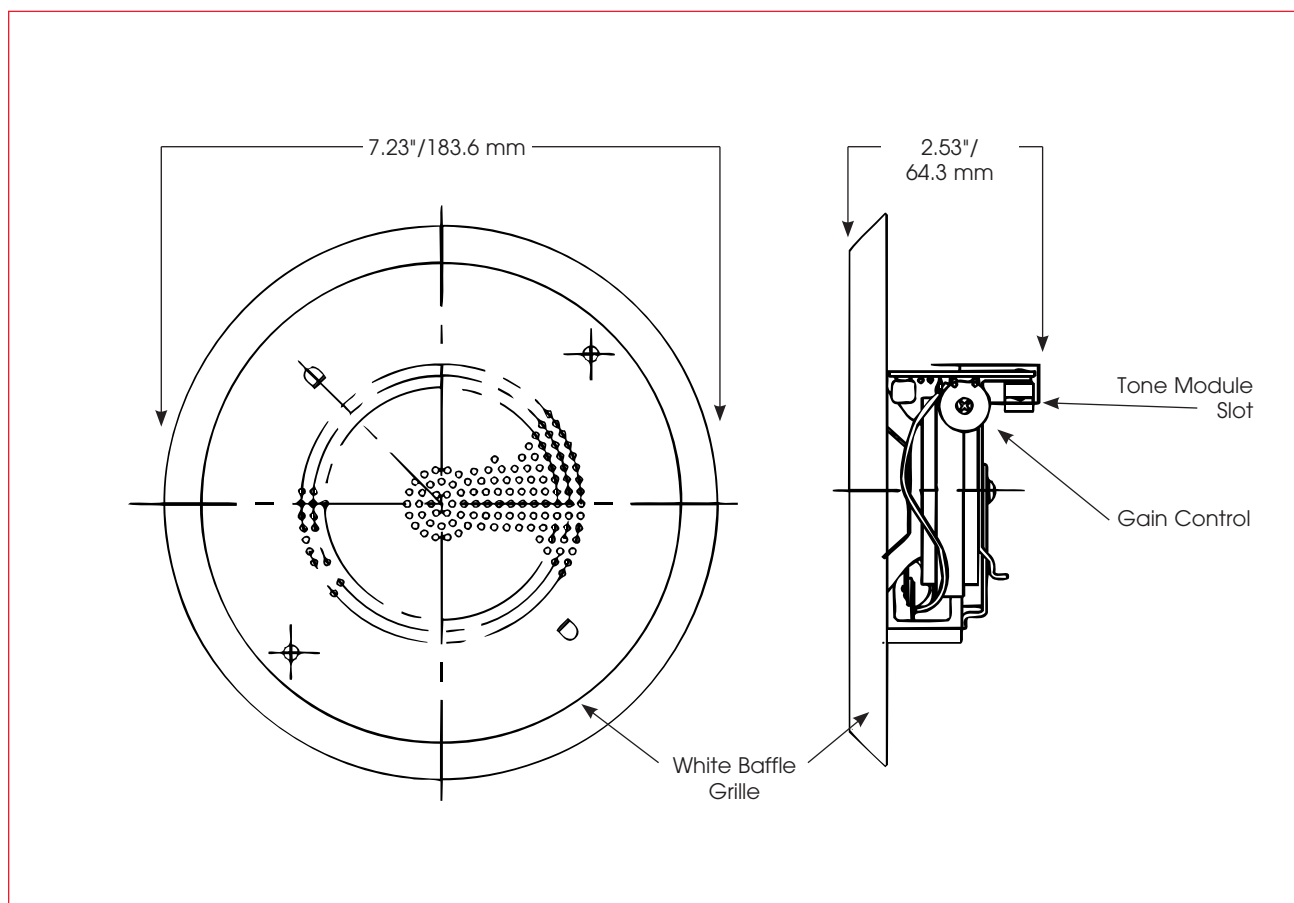
The 50GCB is designed for areas without high ambient noise levels, such as offices, hallways and receptions areas. The baffle allows the four-inch speaker to be installed easily in any suspended ceiling plenum with a Model R4NB backbox. The white grill of the 50GCB is attractive in most decors.

Emergency signaling or paging are common applications for SelectTone.

Model	Voltage	Operating Current	Standby Current	Decibels @	
				10'	1m
50GCB-024	24VDC	0.09 amps	0.025 amps	88	98
50GCB-024	24VAC 50/60Hz	0.29 amps	0.095 amps	88	98
50GCB-120	120VAC 50/60Hz	0.04 amps	0.027 amps	88	98



## SELECTONE® AUDIBLE SIGNALING DEVICE (50GCB)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	1.6 lbs.	0.73 kg
Shipping Weight:	2.3 lbs.	1.04 kg
Depth:	2.53"	64.3 mm
Diameter:	7.23"	183.6 mm

### HOW TO ORDER

- Specify model and voltage  
Accessories (sold separately)
- Specify Tone Module for stand alone operation  
Universal Tone Module (UTM)  
Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call factory for system design assistance)  
25 Vrms Connector Kit (AM25CK)  
70 Vrms Connector Kit (AM70CK)
- Specify Accessories:  
Back Box (R4NB)
- Please refer to Model Number Index 50GCB beginning on page 375



# **SelectTone® Audible Signaling Device**

Model 300, Series A1

## **DC STAND-ALONE TONE SIGNALING WITH DC OPERATING VOLTAGE**

- Available in 12VDC and 250VDC
- Compatible with Federal Signal UTM Tone Module
- Produces 110dBa @ 10' (120dBa @ 1m)
- Type 3R enclosure
- Indoor/outdoor use
- UL and cUL Listed

The Federal Signal SelectTone® Model 300 is a lightweight and compact, solid-state audible signaling device designed to amplify a pre-selected tone over existing ambient noises. The speaker cone and projector are made of spun aluminum. The internal amplifier circuitry and tone module are contained in a housing of die-cast aluminum. Dust- and moisture-proof gasketing provides protection from the elements. All external components are sealed with gray enamel paint.

The Model 300 is designed for applications which have 12, or 250VDC power supplies. The 250VDC version is UL and cUL Listed and CSA Certified. All models are rated Type 3R for indoor/outdoor use.

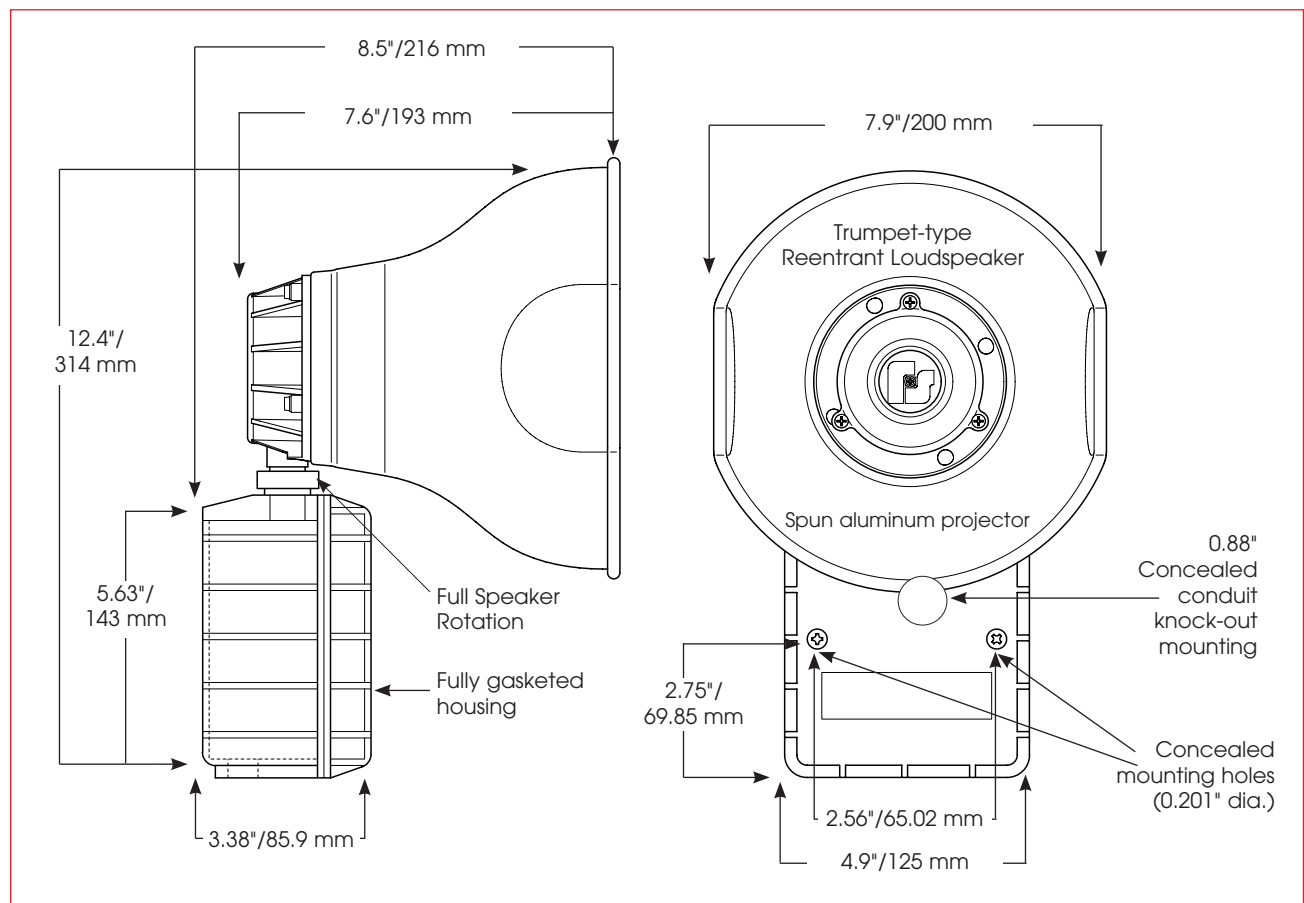
The Model UTM (Universal Tone Module) is used with this device to generate one of 32 tones. The Model 300 is designed to be used as a stand-alone, full output unit and cannot be used with a SelectTone Command Unit (public address is not possible).

Model 300 speaker/amplifiers are ideally suited for full output tone signaling where voice paging is not a requirement. Typical applications include emergency warning, start and dismissal, general alarm, smelters and cranes.

Model	Voltage	Operating Current	Standby Current	Decibels @	
				10'	1m
300-012	12VDC	1.25 amps	N/A	110	120
300-250	250VDC	0.72 amps	N/A	110	120



## SELECTONE® AUDIBLE SIGNALING DEVICE (300)



### SPECIFICATIONS

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	5.0 lbs.	2.3 kg
Shipping Weight:	6.1 lbs.	2.8 kg
Height:	12.4"	314.0 mm
Width:	7.9"	200.0 mm
Depth:	8.5"	216.0 mm

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module (sold separately) Universal Tone Module (UTM)
- Please refer to Model Number Index 300 beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier, 12VDC	K200B467
Amplifier, 250VDC	K2001903B
Voice Coil	K8593035A
Speaker Assembly	K8593082A



# **SelecTone® Audible Signaling Device**

**Model 300GC**

## **PLANT-WIDE WARNING AND VOICE COMMUNICATION**

- Available in 24VAC/DC, 120VAC and 240VAC
- Built-in gain control
- Produces 0dBa to 110dBa @ 10' (0dBa to 120dBa @ 1m)
- Type 3R, IP54 enclosure
- Digital signal amplification
- Fused input & output
- UL 1480 and CSFM Approved
- UL and cUL Listed

Federal Signal's Model 300GC SelecTone® Speaker Amplifier is designed to produce crisp, clear tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The internal circuitry, tone module, and gain control are contained in a housing constructed of die-cast aluminum. All surfaces are sealed with powder-coat paint. Dust- and moisture-proof gaskets provide protection from the elements.

The 300GC is UL Listed for indoor and outdoor use. It has been designed, tested and approved for use in Type 3R applications.

Internal gain control allows output adjustment from 0dBa to a maximum of 110dBa at 10 feet.

SelecTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelecTone Speaker Amplifier for stand-alone use or into a SelecTone Command Unit for plant-wide signaling.

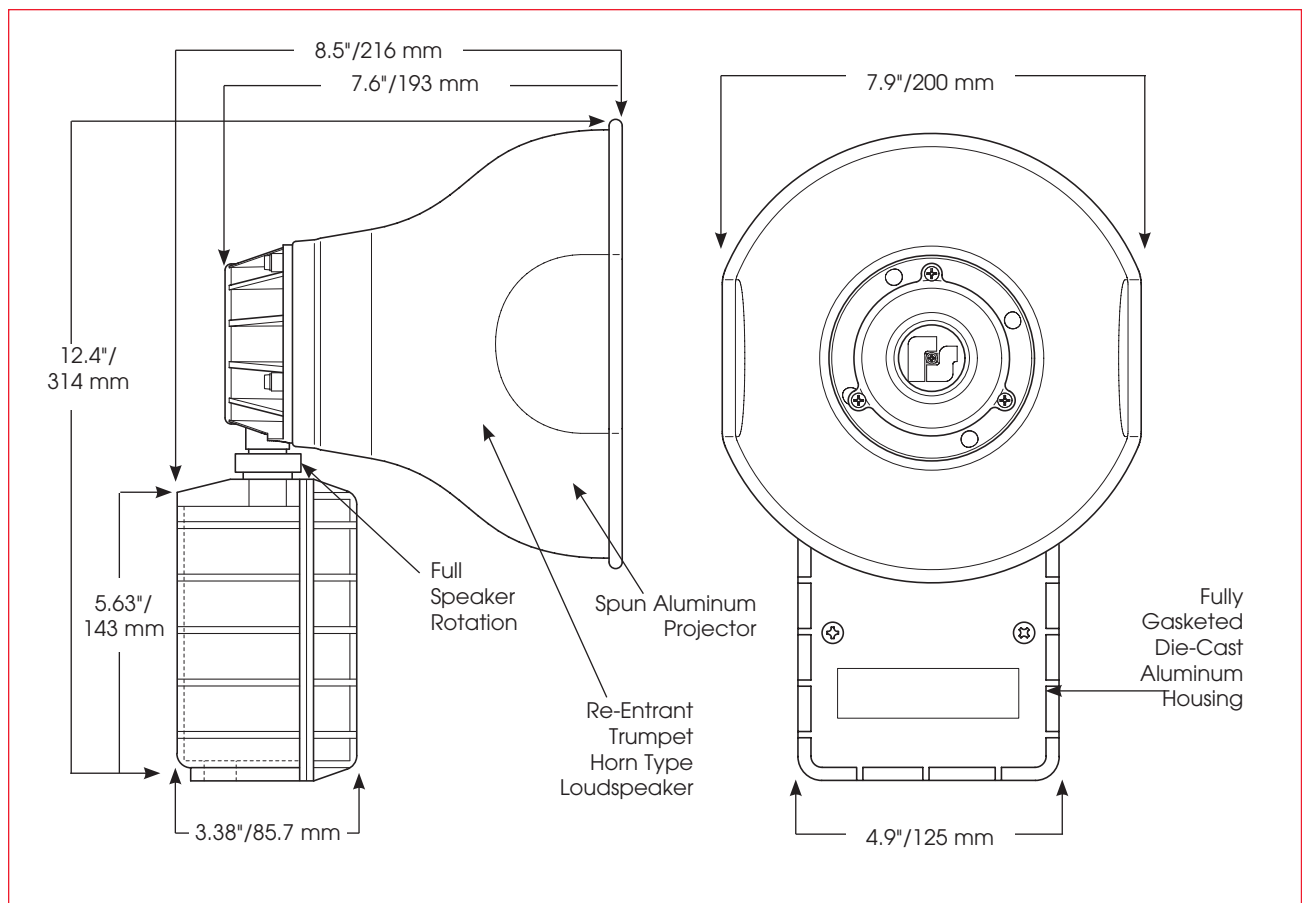
For plant-wide signaling, a Connector Kit is installed into each SelecTone Speaker Amplifier and wired to a central controller. SelecTone Command Units and CommCenter® Digital Message Centers broadcast tones, voice messages, melodies and live public address to an unlimited number of SelecTone Speaker Amplifiers.

Typical applications for SelecTone include emergency warning, plant evacuation, start and dismissal, public address, and process control signaling.

Model	Voltage	Operating Current	Standby Current	Decibels @	
				10'	1m
<b>300GC-024</b>	024VDC	0.67 amps	50mA	110	120
<b>300GC-024</b>	024VAC 50/60Hz	0.90 amps	100mA	110	120
<b>300GC-120</b>	120VAC 50/60Hz	0.20 amps	30mA	110	120
<b>300GC-240</b>	240VAC 50/60Hz	0.10 amps	15mA	110	120



## SELECTONE® AUDIBLE SIGNALING DEVICE (300GC)



### SPECIFICATIONS

Operating Temperature:	-67°F to 150°F	-55°C to 66°C
Net Weight:		
120/240VAC	5.5 lbs.	2.5 kg
Shipping Weight:		
120/240VAC	6.7 lbs.	3.0 kg
Height:	12.4"	314.0 mm
Width:	7.9"	200.0 mm
Depth:	8.5"	216.0 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier Assembly, 24VAC/DC	K2005502A-04
Amplifier Assembly, 120/240VAC	K2005502A-04
Transformer, 120VAC	K120857A
Transformer, 240VAC	K120858A
Speaker Assembly	K8593082A
Voice Coil,	K8593035A

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation
  - Universal Tone Module (UTM)
  - Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call Factory for system design assistance)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 300GC beginning on page 375





# SelectTone® Hazardous Location Audible Signaling Device

## Model 300GCX

### DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 24VAC/DC, 120VAC and 240VAC
- Reliable, solid-state circuitry
- Digital signal amplification
- Built-in gain control
- Fused input and output
- Produces 0dBa to 110dBa @ 10' (0dBa to 120dBa @ 1m)
- Type 4X enclosure
- External mounting tabs
- Indoor/outdoor use
- UL 1480 and CSFM Approved
- UL and cUL Listed

Federal Signal's Model 300GCX SelectTone® Speaker Amplifier is designed to produce tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The amplification circuitry, tone module, and gain control are contained in a housing constructed of die-cast aluminum. All surfaces are sealed with powder-coat paint. Dust- and moisture-proof gaskets provide protection from the elements.

The 300GCX is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F & G, and Class III. It has been tested and approved for use in Type 4X applications.

Internal gain control allows output adjustment from 0dBa to a maximum of 110dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

For plant-wide signaling, a Connector Kit is installed into each SelectTone Speaker Amplifier and wired to a central controller, SelectTone Command Unit or CommCenter® Digital Message Center. Command Units and CommCenters broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

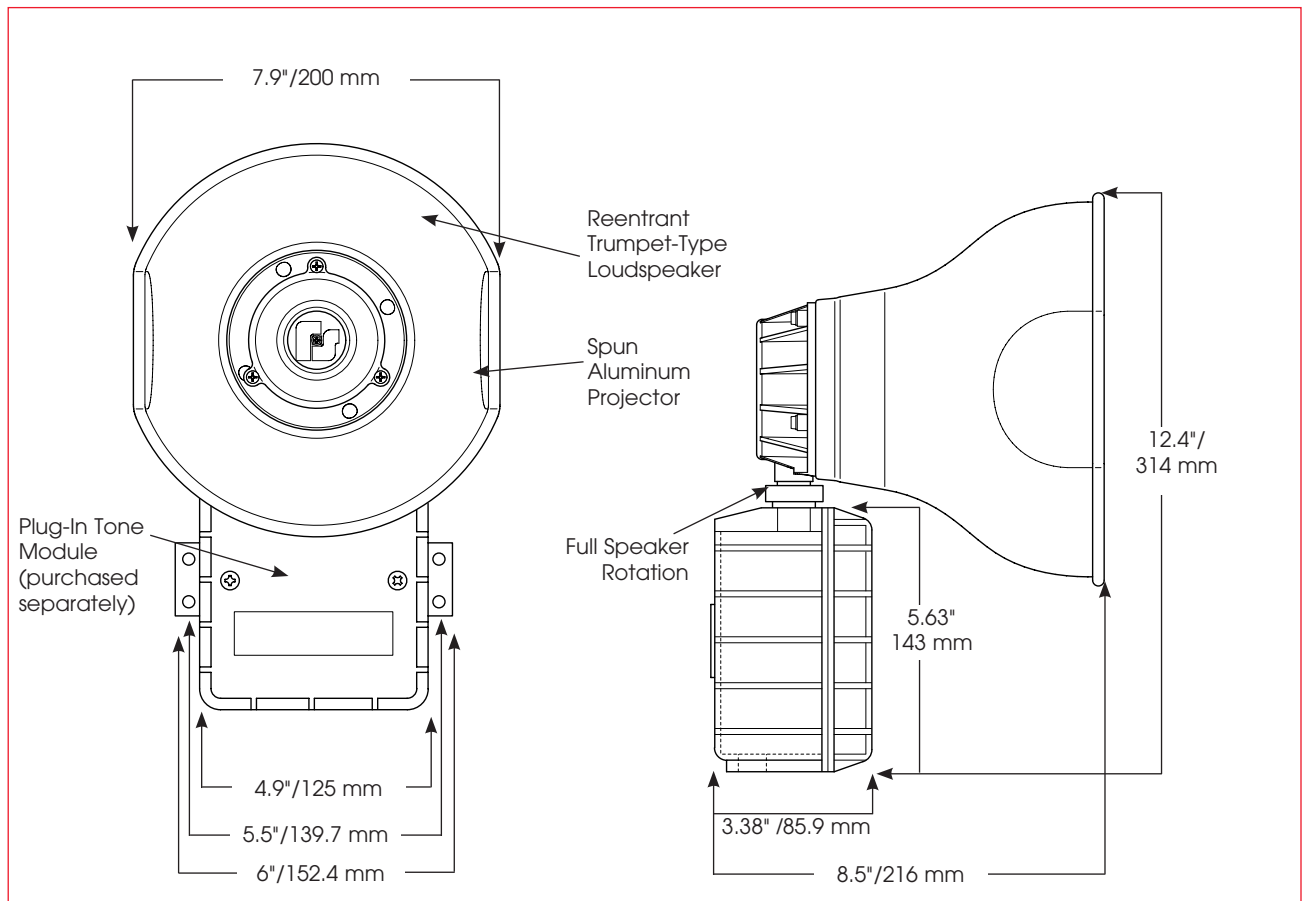
Applications for SelectTone include emergency warning, evacuation, start/dismissal, public address, and process control signaling.

Model	Voltage	Operating Current	Standby Current	Decibels @		T-Code <sup>1</sup>
				10'	1m	
300GCX-024	24VDC	0.67 amps	50mA	110	120	T2B
300GCX-024	24VAC 50/60Hz	0.90 amps	100mA	110	120	T2B
300GCX-120	120VAC 50/60Hz	0.20 amps	30mA	110	120	T2B
300GCX-240	240VAC 50/60Hz	0.10 amps	15mA	110	120	T2B

<sup>1</sup> T-Code in Class 1 Division 2 A,B,C,D



## HAZARDOUS LOCATION AUDIBLE SIGNALING DEVICE (300GCX)



### SPECIFICATIONS

Operating Temperature:	-67°F to 150°F	-55°C to 66°C
Net Weight:		
24VDC	4.9 lbs.	2.20 kg
120/240VAC	5.9 lbs.	2.70 kg
Shipping Weight:		
24VDC	6.1 lbs.	2.8 kg
120/240VAC	7.1 lbs.	3.2 kg
Height:	12.4"	314.0 mm
Width:	7.9"	200.0 mm
Depth:	8.5"	216.0 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier Assembly, 24VAC/DC	K2005502A-04
Amplifier Assembly, 120/240VAC	K2005502A-04
Voice Coil	K8593035A
Transformer, 120VAC	K120857A
Transformer, 240VAC	K120858A
Speaker Assembly	K8593082A

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation
  - Universal Tone Module (UTM)
  - Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call factory for system design assistance)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 300GCX beginning on page 375



## DESIGNED FOR EXPLOSION-PROOF ENVIRONMENTS

- Available in 24VAC/DC and 120/240VAC
- Digital Signal Amplification
- Fused input and output
- Built-in gain control
- Produces 0dBa to 110dBa @ 10' (0dBa to 120dBa @ 1m)
- Type 4X, IP66 enclosure
- UL 1480 and CSFM Approved
- UL and cUL Listed

# SelectTone® Explosion-Proof Audible Signaling Device

## Model 300X

Federal Signal's Model 300X SelectTone® Speaker Amplifier is designed to meet UL 1480 intelligibility requirements producing crisp, clear tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The all new internal circuitry, tone module, and gain control are contained in a housing constructed of cast aluminum. All surfaces are sealed with powder-coat paint and assembled with stainless steel hardware. Dust- and moisture-proof gaskets provide protection from the elements. This housing incorporates a tool-less rear cover design, eliminating the need for torque specific hardware and solves the problem of missing or lost fasteners.

The 300X is UL Listed for Class 1, Division 1, Groups B, C & D.

Internal gain control allows output adjustment from 0dBa to a maximum of 110dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

For plant-wide signaling, a Connector Kit is required for each SelectTone Speaker Amplifier and wired to a central controller. SelectTone Command Units and CommCenter® Digital Message Centers broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

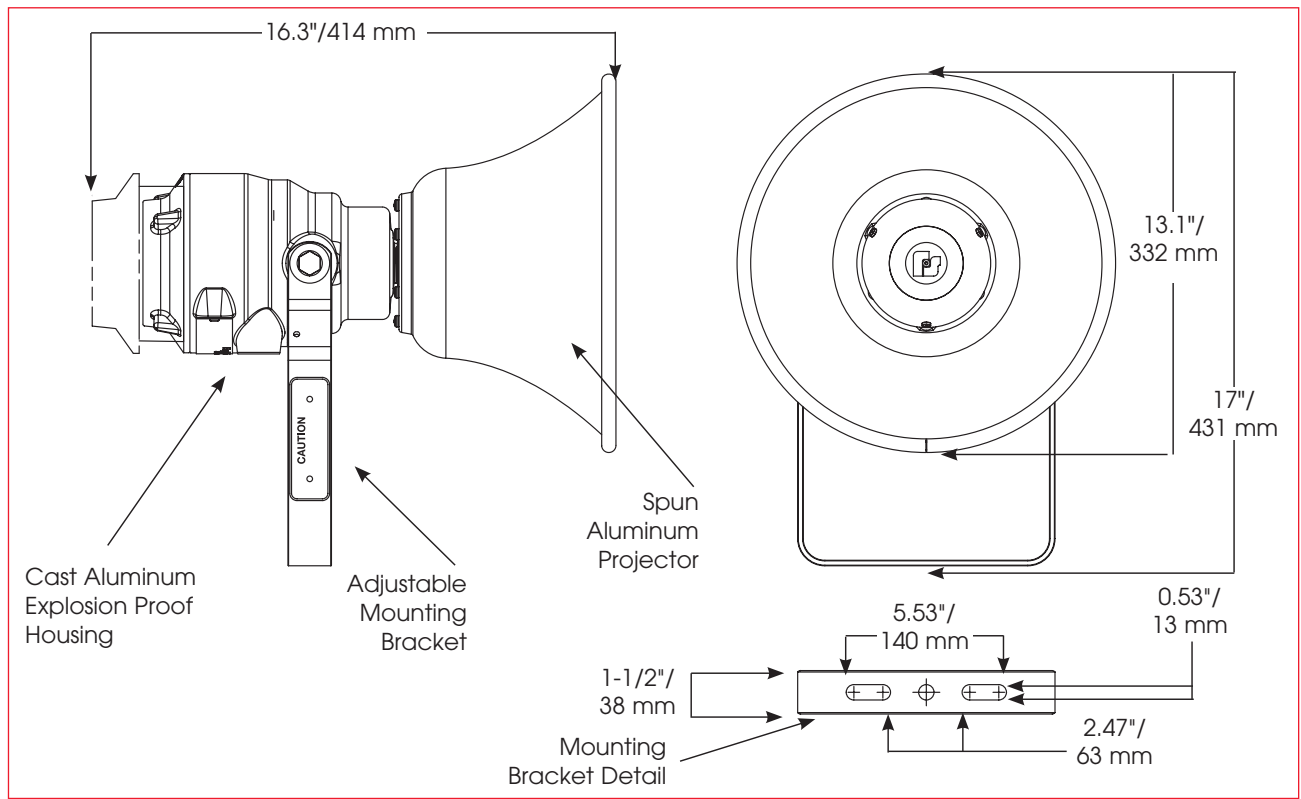
Applications for SelectTone include emergency warning, plant evacuation, start and dismissal, public address, and process control.

Model	Voltage	Operating Current	Standby Current	Decibels @		T-Code <sup>1</sup>
				10'	1m	
300X-024	24VDC	0.76 amps	.127mA	110	120	T6
300X-024	24VAC 50/60Hz	1.1 amps	305mA	110	120	T6
300X-120	120VAC 50/60Hz	0.22 amps	80mA	110	120	T6
300X-240	240VAC 50/60Hz	0.11 amps	40mA	110	120	T6

<sup>1</sup> T-Code in Class 1 Division 1 B, C, D @ 66°C Ambient



## EXPLOSION-PROOF AUDIBLE SIGNALING DEVICE (300X)



### SPECIFICATIONS

Operating Temperature:	-67°F to 151°F	-55°C to 66°C
Net Weight:		
24VAC	15.4 lbs.	7.0 kg
120/240VAC	16.3 lbs.	7.4 kg
Shipping Weight:		
24VAC	22.8 lbs.	10.4 kg
120/240VAC	23.8 lbs.	10.8 kg
Height:	17.0"	431.80 mm
Width:	13.1"	332.74 mm
Depth:	16.3"	414.02 mm
Ingress Protection:	IP65 and NEMA 4X Approved	

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation
  - Universal Tone Module (UTM)
  - Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call Factory for system design assistance)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 300X beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier Assembly, 24VAC/DC	K2005618A-03
Amplifier Assembly, 120/240VAC	K2005618A-05
Driver Assembly	K8593097A
Projector Assembly	K8593100A
Cover Assembly	K8593098A
Mounting Bracket Assembly	K8593071A



# **SelectTone® Audible Signaling Device**

Model 302GC

## **EXTRA OUTPUT POWER FOR PLANT EVACUATION**

- Available in 24VAC/DC, 120VAC and 240VAC
- Built-in gain control
- Produces 0dBa to 114dBa @ 10' (100dBa to 124dBa @ 1m)
- Type 3R, IP54 enclosure
- Digital signal amplification
- Fused input and output
- Indoor/outdoor use
- UL 1480 and CSFM Approved
- UL and cUL Listed

Federal Signal's Model 302GC SelectTone® Speaker Amplifier is designed to produce crisp, clear tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The internal circuitry, tone module, and gain control are contained in a housing constructed of die-cast aluminum. All surfaces are sealed with powder-coat paint. Dust- and moisture-proof gaskets provide protection from the elements.

The 302GC is UL Listed for indoor and outdoor use. It has been designed, tested and approved for use in Type 3R applications.

Internal gain control allows output adjustment from 0dBa to a maximum of 114dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

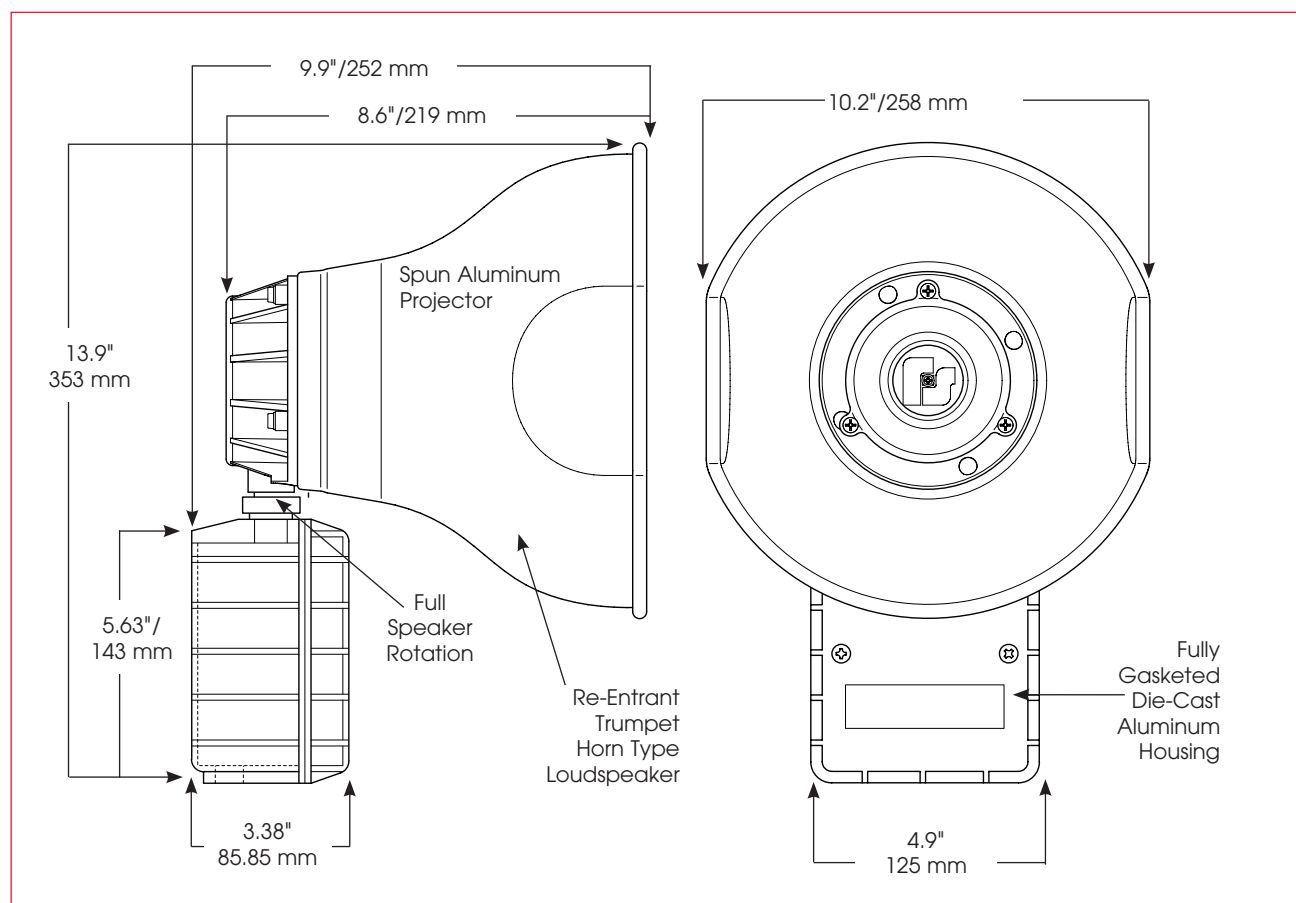
For plant-wide signaling, a Connector Kit is installed into each SelectTone Speaker Amplifier and wired to a central controller. SelectTone Command Units and CommCenter® Digital Message Centers broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

Typical applications for SelectTone include emergency warning, plant evacuation, start and dismissal, public address, and process control signaling.

Model	Voltage	Operating Current	Standby Current	Decibels @	
				10'	1m
302GC-024	24VDC	1.00 amps	50mA	114	124
302GC-024	24VAC 50/60Hz	1.40 amps	100mA	114	124
302GC-120	120VAC 50/60Hz	0.30 amps	50mA	114	124
302GC-240	240VAC 50/60Hz	0.15 amps	35mA	114	124



## SELECTONE® AUDIBLE SIGNALING DEVICE (302GC)



### SPECIFICATIONS

Operating Temperature:	-67°F to 150°F	-55°C to 66°C
Net Weight:		
120/240VAC	7.5 lbs.	3.4 kg
Shipping Weight:		
120/240VAC	8.9 lbs.	4.0 kg
Height:	13.9"	353.0 mm
Width:	10.2"	258.0 mm
Depth:	9.9"	252.0 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier Assembly, 24VAC/DC	K2005502A-02
Amplifier Assembly, 120/240VAC	K2005502A-02
Speaker Assembly	K8590246A
Transformer, 120VAC	K120846A
Transformer, 240VAC	K120856A
Voice Coil, Series C	K8590246A

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation
  - Universal Tone Module (UTM)
  - Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call Factory for system design assistance)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 302GC beginning on page 375





## DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 24VAC/DC, 120VAC and 240VAC
- Reliable, solid-state circuitry
- Digital signal amplification
- Built-in gain control
- Fused input and output
- Produces 0dBa to 114dBa @ 10' (0dBa to 124dBa @ 1m)
- Type 4X enclosure
- External mounting tabs
- Indoor/outdoor use
- UL 1480 and CSFM Approved
- UL and cUL Listed

# SelecTone® Hazardous Location Audible Signaling Device

## Model 302GCX

Federal Signal's Model 302GCX SelecTone® Speaker Amplifier is designed to produce tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The amplification circuitry, tone module, and gain control are contained in a housing constructed of die-cast aluminum. All surfaces are sealed with powder-coat paint. Dust- and moisture-proof gaskets provide protection from the elements.

The 302GCX is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F & G, and Class III. It has been tested and approved for use in Type 4X applications.

Internal gain control allows output adjustment from 0dBa to a maximum of 114dBa at 10 feet.

SelecTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelecTone Speaker Amplifier for stand-alone use or into a SelecTone Command Unit for plant-wide signaling.

For plant-wide signaling, a Connector Kit is installed into each SelecTone Speaker Amplifier and wired to a central controller, SelecTone Command Unit or CommCenter® Digital Message Center. Command Units and CommCenters broadcast tones, voice messages, melodies and live public address to an unlimited number of SelecTone Speaker Amplifiers.

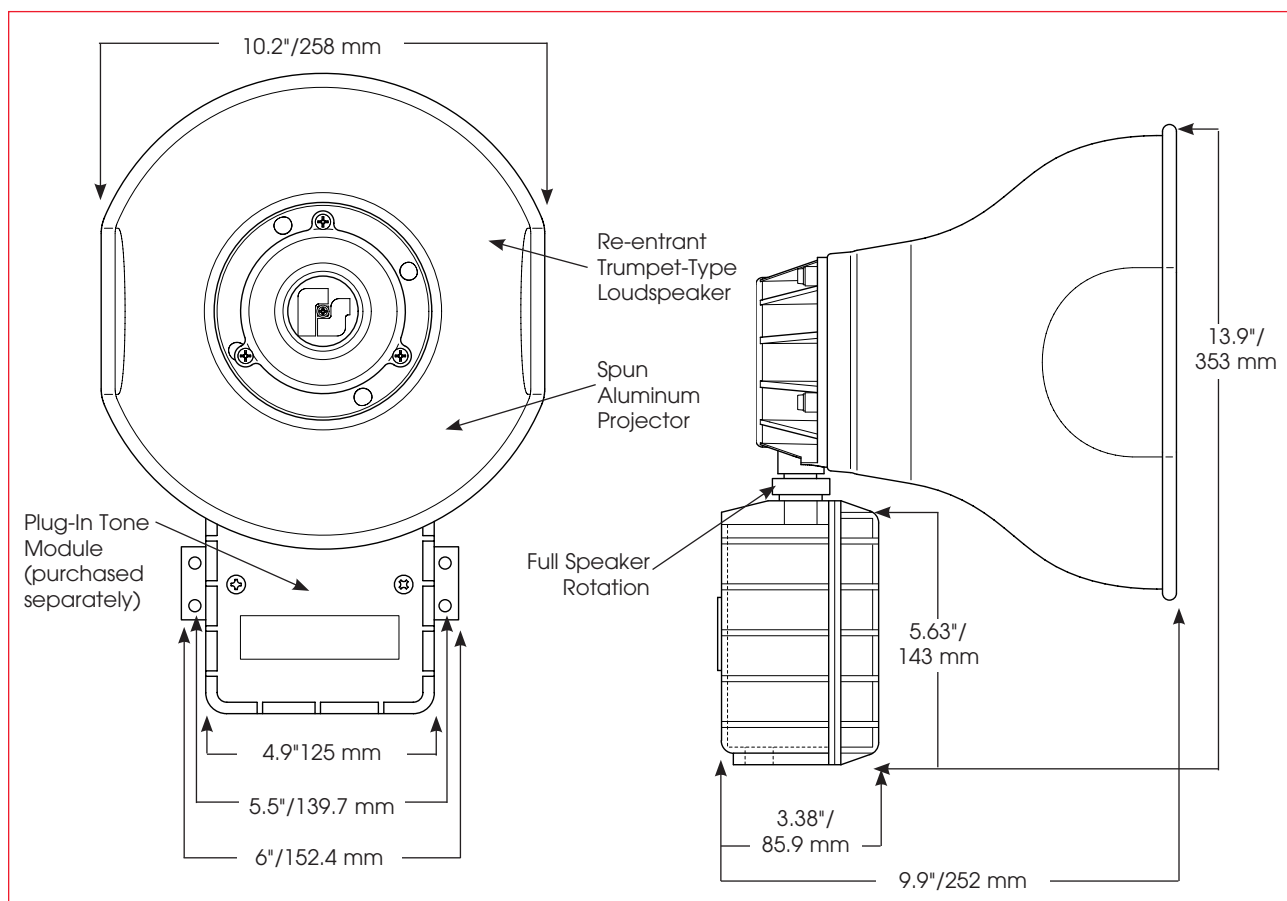
Applications for SelecTone include emergency warning, evacuation, start/dismissal, public address, and process control signaling.

Model	Voltage	Operating Current	Standby Current	Decibels @		T-Code <sup>1</sup>
				10'	1m	
302GCX-024	24VDC	1 amps	50mA	114	124	T6
302GCX-024	24VAC 50/60Hz	1.40 amps	100mA	114	124	T6
302GCX-120	120VAC 50/60Hz	0.30 amps	50mA	114	124	T6
302GCX-240	240VAC 50/60Hz	0.15 amps	35mA	114	124	T6

<sup>1</sup> T-Code in Class 1 Division 2 A,B,C,D



## HAZARDOUS LOCATION AUDIBLE SIGNALING DEVICE (302GCX)



### SPECIFICATIONS

Operating Temperature:	-67°F to 150°F	-55°C to 66°C
Net Weight:		
24VDC	6.5 lbs.	3.0 kg
120/240VAC	7.9 lbs.	3.6 kg
Shipping Weight:		
24VDC	7.9 lbs.	3.6 kg
120/240VAC	9.3 lbs.	4.2 kg
Height:	13.9"	353.0 mm
Width:	10.2"	258.0 mm
Depth:	9.9"	252.0 mm

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation  
    Universal Tone Module (UTM)  
    Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call factory for system design assistance)  
    25 Vrms Connector Kit (AM25CK)  
    70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 302GCX beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Amplifier Assembly, 24VAC/DC	K2005502A-02
Amplifier Assembly, 120/240VAC	K2005502A-02
Voice Coil	K8590246A
Speaker Assembly	K8593103A
Transformer, 120VAC	K120846A
Transformer, 240VAC	K120856A



# **SelectTone® Explosion-Proof Audible Signaling Device**

## **Model 302X**

### **DESIGNED FOR EXPLOSION- PROOF ENVIRONMENTS**

- Available in 24VAC/DC and 120/240VAC
- Digital Signal Amplification
- Fused input and output
- Built-in gain control
- Produces 0dBa to 114dBa @ 10' (0dBa to 124dBa @ 1m)
- Type 4X, IP66 enclosure
- UL 1480 and CSFM Approved
- UL and cUL Listed

Federal Signal's Model 302X SelectTone® Speaker Amplifier is designed to meet UL 1480 intelligibility requirements producing crisp, clear tones, digital voice messages and live public address in harsh environments with high ambient noise levels.

The rugged speaker cone and projector are constructed of spun aluminum. The all new internal circuitry, tone module, and gain control are contained in a housing constructed of cast aluminum. All surfaces are sealed with powder-coat paint and assembled with stainless steel hardware. Dust- and moisture-proof gaskets provide protection from the elements. This housing incorporates a tool-less rear cover design, eliminating the need for torque specific hardware and solves the problem of missing or lost fasteners.

The 302X is UL Listed for Class 1, Division 1, Groups B, C & D.

Internal gain control allows output adjustment from 0dBa to a maximum of 114dBa at 10 feet.

SelectTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones, or the TM33 Custom Tone Module is plugged into a single SelectTone Speaker Amplifier for stand-alone use or into a SelectTone Command Unit for plant-wide signaling.

For plant-wide signaling, a Connector Kit is required for each SelectTone Speaker Amplifier and wired to a central controller. SelectTone Command Units and CommCenter® Digital Message Centers broadcast tones, voice messages, melodies and live public address to an unlimited number of SelectTone Speaker Amplifiers.

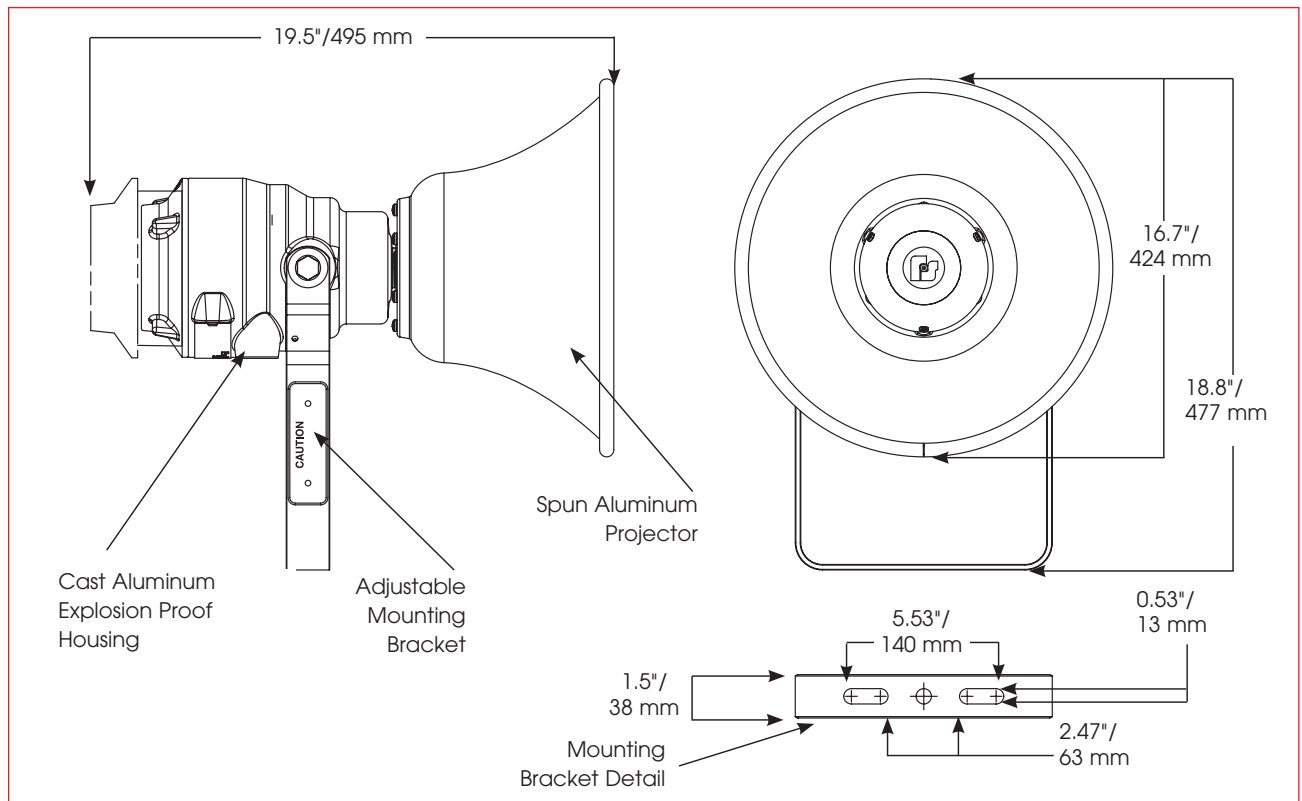
Applications for SelectTone include emergency warning, plant evacuation, start and dismissal, public address, and process control.

Model	Voltage	Operating Current	Standby Current	Decibels @		T-Code <sup>1</sup>
302X-024	24VDC	1.35 amps	0.13 amps	114	124	T6
302X-024	24VAC 50/60Hz	1.91 amps	0.31 amps	114	124	T6
302X-120	120VAC 50/60Hz	0.43 amps	0.26 amps	114	124	T6
302X-240	240VAC 50/60Hz	0.26 amps	0.13 amps	114	124	T6

<sup>1</sup> T-Code in Class 1 Division 1 B, C, D @ 66°C Ambient



## EXPLOSION-PROOF AUDIBLE SIGNALING DEVICE (302X)



### SPECIFICATIONS

Operating Temperature:	-67°F to 151°F	-55°C to 66°C
Net Weight:		
24VAC	16.4 lbs.	7.4 kg
120/240VAC	17.7 lbs.	8.0 kg
Shipping Weight:		
24VAC	32.4 lbs.	14.7 kg
120/240VAC	33.7 lbs.	15.3 kg
Height:	18.8"	477.52 mm
Width:	16.7"	424.17 mm
Depth:	19.5"	495.30 mm
Ingress Protection	IP65 and NEMA 4X Approved	

### HOW TO ORDER

- Specify model number and voltage
- Specify Tone Module for stand alone operation
  - Universal Tone Module (UTM)
  - Custom Tone Module (TM33)
- Specify Connector Kit for use in systems (Call Factory for system design assistance)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 302X beginning on page 375

### REPLACEMENT PARTS

<b>Description</b>	<b>Part Number</b>
Amplifier Assembly, 24VAC/VDC	K2005618A-04
Amplifier Assembly, 120/240VAC	K2005618A-06
Driver Assembly	K8593097A
Projector Assembly	K8593101A
Cover Assembly	K8593098A
Mounting Bracket Assembly	K8593071A



# **SelectTone® Command Unit**

**Model 300VSC-1**

## **DESIGNED FOR SELECTONE® SYSTEMS**

- Multi-voltage design accepts 24VDC, 120VAC or 240VAC
- Produces four prioritized tones and public address
- Remote microphone input
- Desktop design
- Type 1 enclosure
- UL Listed and CSA Certified

The Federal Signal Model 300VSC-1 SelectTone® Command Unit generates up to four tones or voice communications in a SelectTone System. Four tones, auxiliary, test and cancel are controlled via an illuminated keypad. Voice transmission is activated by keying the optional desktop or hand-held microphone.

The Model 300VSC-1 is UL Listed and CSA Certified.

Select up to four plug-in tone modules, including the UTM Universal Tone Module and the TM33 Custom Tone Module.

Public address can be accessed from the local microphone or via the remote microphone input. Audio input allows background music to be played from any 1 volt-peak-to-peak source system. Public address has the highest priority followed by tones 1-4, remote microphone and auxiliary audio.

“Test” plays tones or voice messages through the monitor speaker only. “Cancel” interrupts any tone.

External switches can be wired into the command unit for automatic remote operation of the signal system.

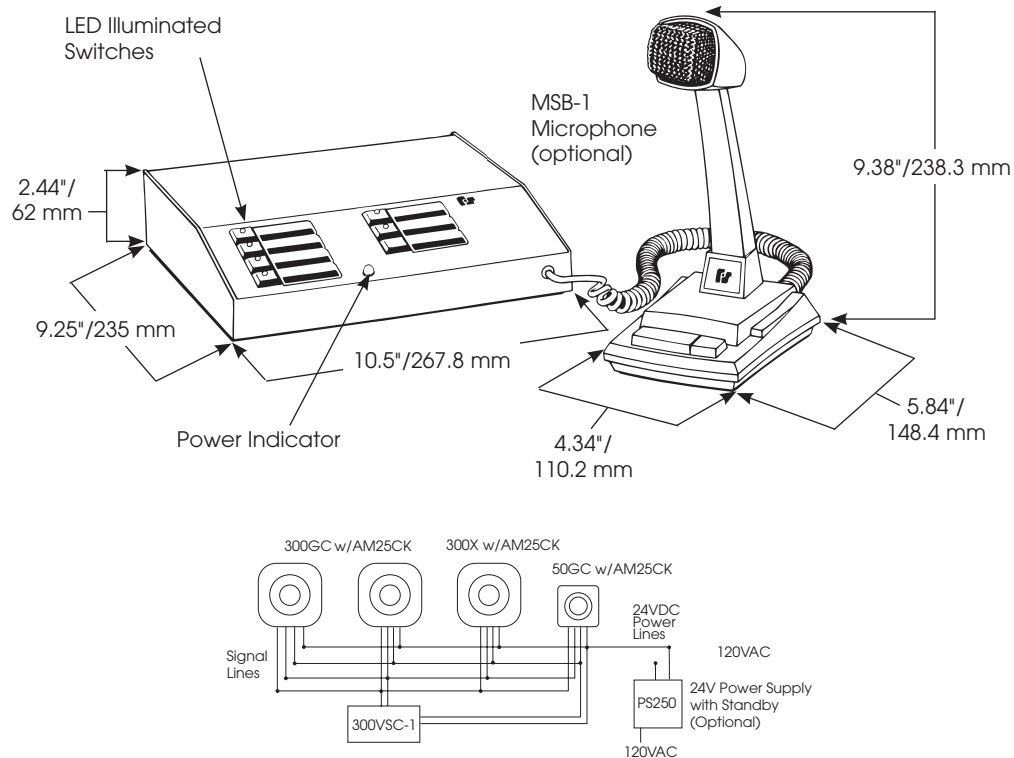
The 300VSC-1 SelectTone Command Unit is the basis for a simple, versatile general signaling system for weather warning, start and dismissal, general alarm, evacuation and paging.

Model	Voltage	Operating Current	Standby Current
300VSC-1	24VDC*	0.76 amps	0.09 amps
300VSC-1	120VAC	0.21 amps	0.03 amps
300VSC-1	240VAC	0.10 amps	0.02 amps

\* Allows emergency power back-up using PS250, PS600 or PS1000. See page 204.



## SELECTONE COMMAND UNIT (300VSC-1)



### SPECIFICATIONS

#### Tone Output Levels

Unbalanced Signal Line 10 Vrms (25 Ohm max.)

Balanced Signal Line (Recommended) 25 Vrms (40 Ohm max./15 Watt)

Signal to Noise Ratio (<1.5% THD) Chip Input 67dBa

Signal Frequency Response 250Hz to 4.5KHz (typical)

Net Weight: 3.1 lbs. 1.4 kg

Shipping Weight: 4.2 lbs. 1.9 kg

Height: 2.44" 62.0 mm

Width: 10.5" 266.7 mm

Depth: 9.25" 235.0 mm

### HOW TO ORDER

- Specify model
- Specify up to four Tone Modules:  
Universal Tone Module (UTM)  
Custom Tone Module (TM33)
- Specify Accessories:  
Handheld Microphone (MNC-1)  
Desktop Microphone (MSB-1)
- Please refer to Model Number Index  
300VSC-1 beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
<b>PC Board Assemblies</b>			
Mother Board	K2001154E	Connectors, 17 Position	K140A332A-17
Switch Board	K2001147A	Connectors, 16 Position	K140A332A-16
Tone Card Connector	K2001164A	Fuse 250V, 1 Amp	K148A155A-01
		Fuse 250V, 1/2 Amp	K148A155A





## DESIGNED FOR SELECTONE® SYSTEMS

- Multi-voltage design accepts 24VDC, 120VAC or 240VAC
- Produces four prioritized tones and public address
- Remote microphone input
- 19" rack mount
- Type 1 enclosure
- UL Listed and CSA Certified

# SelecTone® Rack-Mount Command Unit

Model 300VSC-1044SB

The Federal Signal Model 300VSC-1044SB SelecTone® Command Unit generates up to four tones or voice communications in a SelecTone system. The housing can be mounted in any standard 19" equipment rack. Four tones, auxiliary, test and cancel are controlled via an illuminated keypad. Voice transmission is activated by keying the optional desktop or hand-held microphone.

The Model 300VSC-1044SB is UL Listed and CSA Certified.

Select up to four plug-in tone modules, including the UTM Universal Tone Module or the TM33 Custom Tone Module.

Public address can be accessed from the optional local microphone or the remote microphone input. Audio input allows background music to be played from any 1 volt peak-to-peak audio source. Public address has the highest priority, followed by tones 1-4, remote microphone and audio.

"Test" plays tones or voice messages through the monitor speaker only. "Cancel" interrupts any tone.

External dry contact closures can be wired into the command unit for automatic remote operation of the signal system.

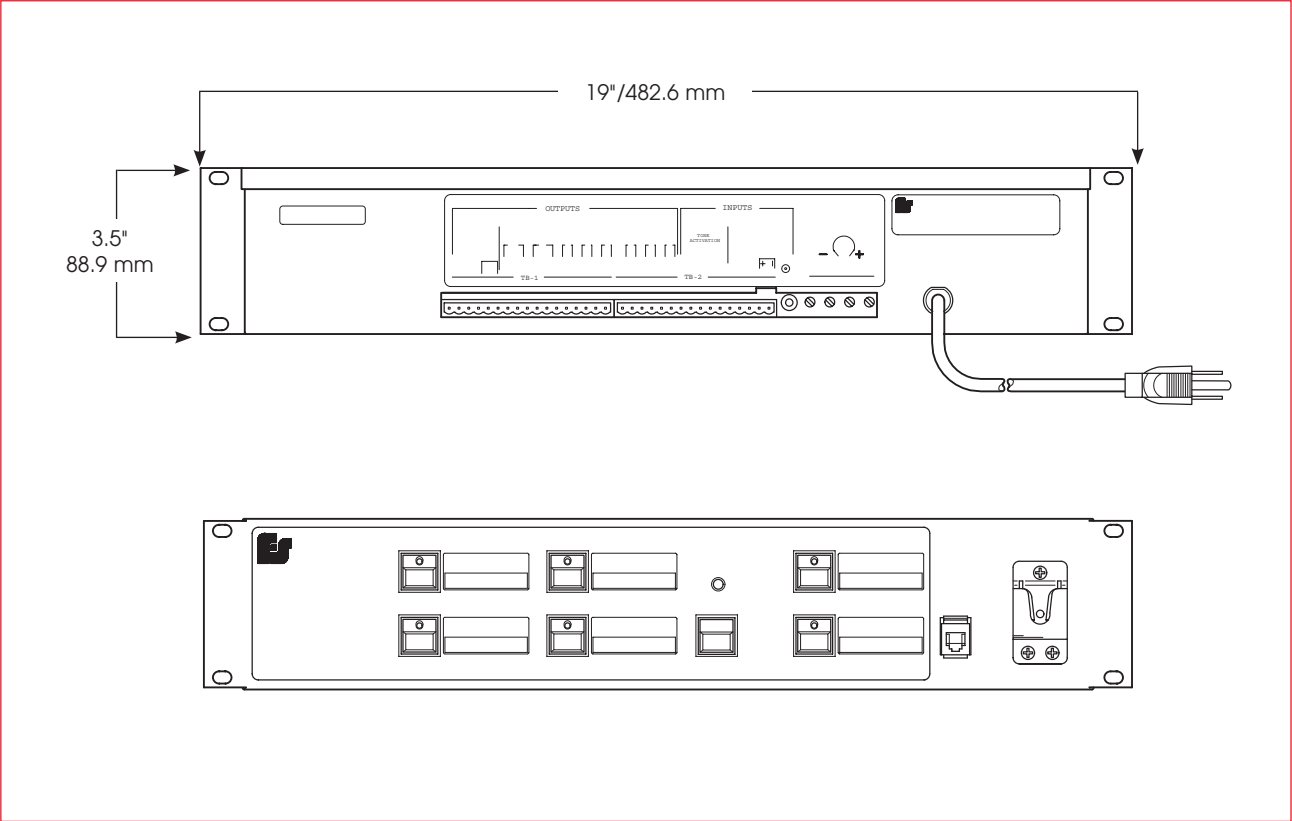
The 300VSC-1044SB SelecTone Command Unit is the basis for a simple, versatile general signaling system for weather warning, start and dismissal, general alarm, evacuation and paging.

Model	Voltage	Operating Current	Standby Current
300VSC-1044SB	24VDC*	0.76 amps	0.09 amps
300VSC-1044SB	120VAC 50/60Hz	0.2 amps	0.03 amps
300VSC-1044SB	240VAC	0.1 amps	0.02 amps

\* Allows emergency power back-up using PS250, PS600 or PS1000. See page 204.



SELECTONE® COMMAND UNIT (300VSC-1044SB)



SPECIFICATIONS

Tone Output Levels		
Unbalanced Signal Line		10 Vrms (25 Ohm max.)
Balanced Signal Line (Recommended)		25 Vrms (40 Ohm max./15 Watt)
Signal to Noise Ratio		(<1.5% THD) Chip Input 67dBa
Signal Frequency Response		250Hz to 4.5KHz (typical)
Net Weight:	4.3 lbs.	1.95 kg
Shipping Weight:	7.9 lbs.	3.58 kg
Height:	3.5"	88.9 mm
Width:	19.0"	482.6 mm
Depth:	10.0"	254.0 mm

HOW TO ORDER

- Specify model
- Specify up to four Tone Modules:  
Universal Tone Module (UTM)  
Custom Tone Module (TM33)
- Specify Accessories:  
Handheld Microphone (MNC-1)
- Please refer to Model Number Index  
300VSC-1044SB beginning on  
page 375

REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
<b>PC Board Assemblies</b>			
Mother Board	K2001154E	Connectors, 17 Position	K140A332A-17
Switch Board	K2001147A	Connectors, 16 Position	K140A332A-16
Tone Card Connector	K2001164A	Fuse 250V, 1 Amp	K148A155A-01
		Fuse 250V, 1/2 Amp	K148A155A



# **SelectTone® Wall Mounted Command Unit**

**Model 300SCW-1**

## **DESIGNED FOR SELECTONE® SYSTEMS**

- Multi-voltage design operates on 24VDC, 120VAC and 240VAC
- Produces four prioritized tone signals and public address
- Remote microphone input
- Wall mount
- Type 1 enclosure
- UL Listed and CSA Certified

The Federal Signal Model 300SCW-1 SelectTone® Command Unit generates up to four tones or voice communications through a SelectTone system.

Four tones, auxiliary, test and cancel are controlled via an illuminated keypad. Voice transmission is activated by keying the optional hand held microphone.

The Model 300SCW-1 is UL Listed and CSA Certified.

Choose four plug-in tone modules, including the UTM Universal Tone Module or the TM33 Custom Tone Module.

Public address can be accessed from the optional local microphone or via the remote microphone input. Public address has the highest priority, followed by tones 1-4, remote microphone and audio.

“Test” plays tones or voice messages through the monitor speaker only. “Cancel” interrupts any tone.

External dry contacts can be wired into the command unit for automatic remote operation of the signal system.

The Model 300SCW-1 SelectTone Command Unit is the basis for a simple, versatile general signaling system for weather warning, start and dismissal, general alarm, evacuation and paging.

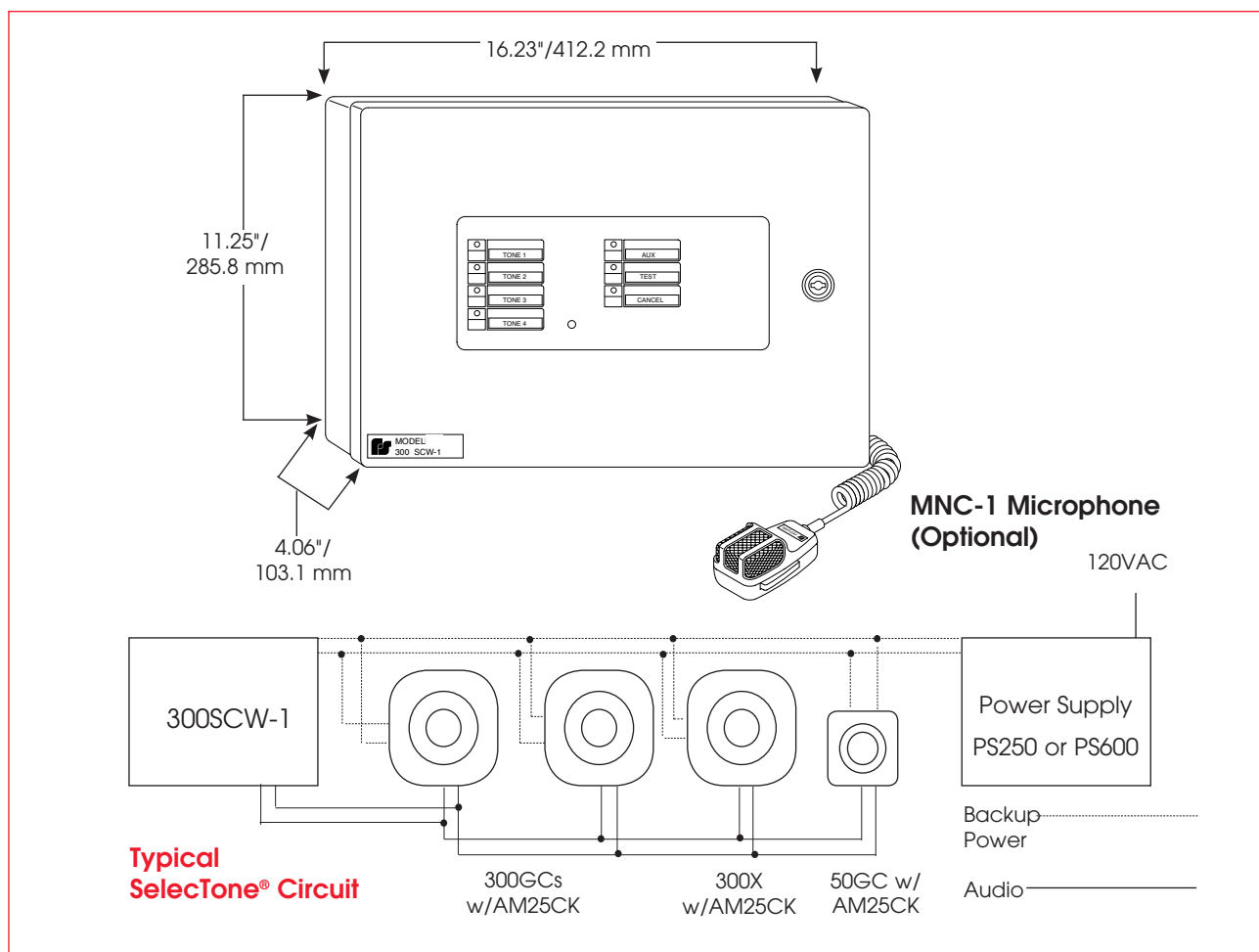
Federal Signal’s SelectTone Model 300SCW-1 Command Unit allows up to four tones and public address capability to be prioritized and broadcast through a SelectTone system.

Model	Voltage	Operating Current	Standby Current
<b>300SCW-1</b>	24VDC*	0.76 amps	0.09 amps
<b>300SCW-1</b>	120VAC 50/60Hz	0.2 amps	0.03 amps
<b>300SCW-1</b>	240VAC 50/60Hz	0.1 amps	0.02 amps

\* Allows emergency power back-up using PS250, PS600 or PS1000. See page 204.



## SELECTONE® COMMAND UNIT (300SCW-1)



### SPECIFICATIONS

Tone Output Levels		
Unbalanced Signal Line		10 Vrms (25 Ohm max.)
Balanced Signal Line		25 Vrms (40 Ohm max./15 Watt)
Signal to Noise Ratio		(<1.5% THD) Chip Input 67dBa
Signal Frequency Response		250Hz to 4.5KHz (typical)
Net Weight:	13.4 lbs.	6.1 kg
Shipping Weight:	15.0 lbs.	6.8 kg
Height:	11.25"	285.8 mm
Width:	16.23"	412.2 mm
Depth:	4.06"	103.1 mm

### REPLACEMENT PARTS

Description	Part Number
PC Board Assembly, Mother Board	K2001154E
PC Board Assembly, Switch Board	K2001147A
PC Board Assembly, Tone Card Connector	K2001164A
Connector, 17 Position	K140A332A-17
Connector, 16 Position	K140A332A-16
Fuse 250V, 1 Amp	K148A155A-01
Fuse 250V, 1/2 Amp	K148A155A

### HOW TO ORDER

- Specify model
- Specify up to four Tone Modules:  
Universal Tone Module (UTM)  
Custom Tone Module (TM33)
- Specify Accessories:  
Handheld Microphone (MNC-1)  
Desktop Microphone (MSB-1)
- Please refer to Model Number Index 300SCW-1 beginning on page 375



# SelectTone® Activated Relay

## Model 300TAR

### DETECTS AUDIO SIGNALS ON SPEAKER LINES FOR REMOTE CONTROL

- Available in 24VAC/VDC and 120/240VAC
- Detects tone signals and public address
- Eliminates the need for additional control wires
- Type 4X enclosure
- UL Listed

The Federal Signal Model 300TAR is activated by swept frequency tone signals from the SelectTone® Command Center. A relay switches power in order to control the operation of selected devices. The 300TAR can be used to activate such devices as emergency lights, lock and unlock doors and exhaust fans. Additional applications include the activation of other circuits such as automatic dialers, digital message centers or PLC inputs.

The tone activated relay is designed to detect emergency dedicated signals emitted by a SelectTone Command Center. Through a twin set of Form C contacts, each rated at 8 Amperes, the 300TAR can switch power to activate up to two devices, eliminating the need for dedicated control lines.

The 300TAR has two modes of operation. In one mode, the unit can be adjusted for specific audio frequencies. The other mode does not discriminate and activates upon any audio signal, including tones or voice.

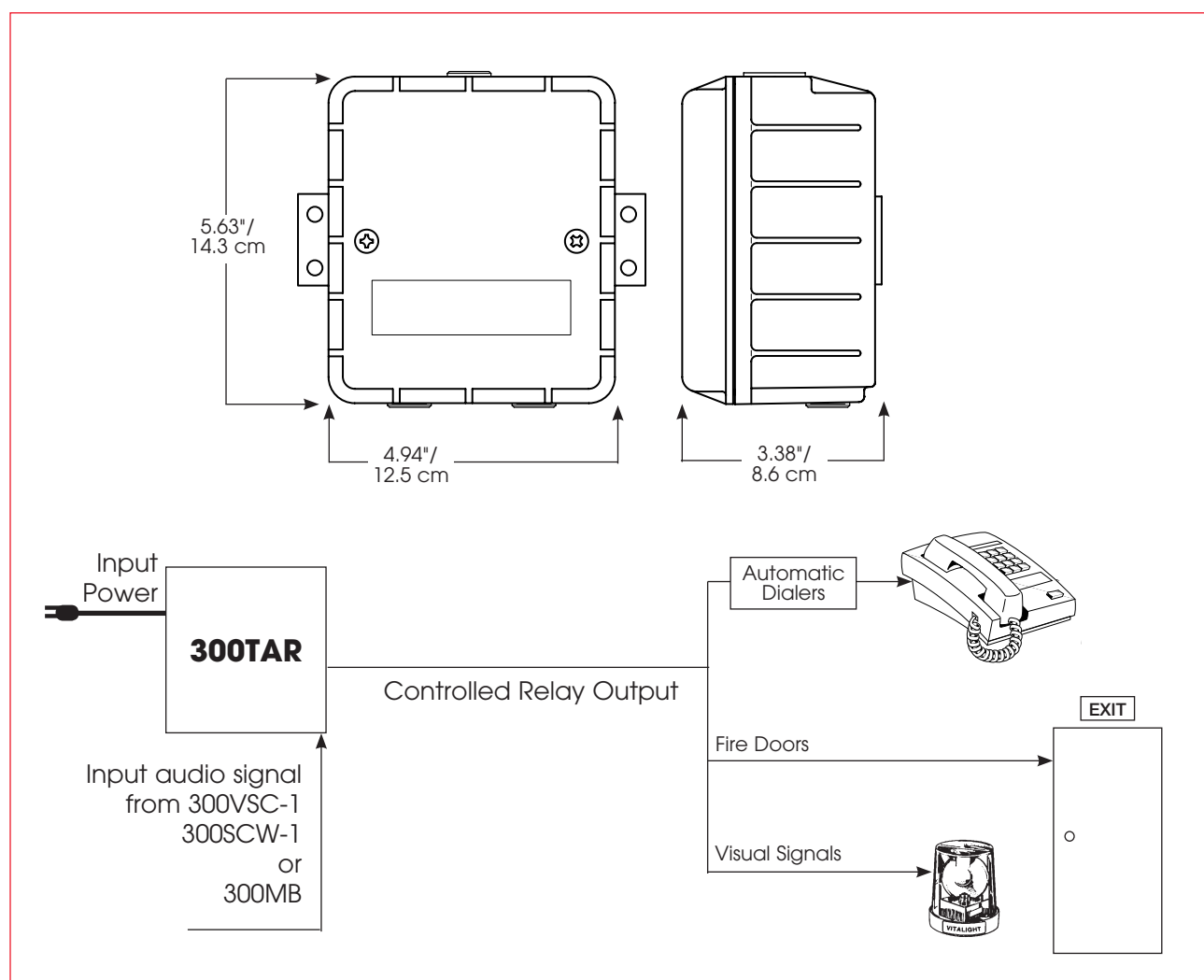
The 300TAR accepts all connector cards (300CKS, AM25CK and AM70CK), allowing its use with today's most popular audio line voltages.

The 300TAR is encased in a sturdy, die cast aluminum, corrosion-resistant housing. The unit is UL Listed.

Model	Voltage	Operating Current	Standby Current
<b>300TAR-024</b>	24VAC, 50/60Hz	56mA	29mA
<b>300TAR-024</b>	24VDC	168/180mA	92/93mA
<b>300TAR-120</b>	120VAC, 50/60Hz	64/38mA	61/32mA
<b>300TAR-240</b>	240VAC, 50/60Hz	32/19mA	31/17mA



## TONE ACTIVATED RELAY (300TAR)



### SPECIFICATIONS

Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Input Signal:	1 Vrms	1 Vrms
Input Signal Frequency:	Tone PA	470Hz to 1300Hz +/-15% 60Hz to 5000Hz +/-15%
Net Weight:	2.75 lbs.	1.25 kg
Shipping Weight:	3.15 lbs.	1.43 kg
Height:	5.63"	14.3 cm
Width:	4.94"	12.5 cm
Depth:	3.38"	8.6 cm

### HOW TO ORDER

- Specify model and voltage
- Specify Connector Kit for use in systems (sold separately)
  - 25 Vrms Connector Kit (AM25CK)
  - 70 Vrms Connector Kit (AM70CK)
- Please refer to Model Number Index 300TAR beginning on page 375

### REPLACEMENT PARTS

Description	Part Number
Double Pole Relay	K131207A
PCB Assembly, 24VDC	K2001306B-01
PCB Assembly, 120/240VAC	K2001306B





# CommCenter® Digital Message Center

## Model 300MB

### USE WITH SELECTONE® AND PUBLIC ADDRESS SYSTEMS

- Multi-voltage design accepts 24VDC, 120VAC or 240VAC
- High-quality, non-volatile playback
- Stores up to six voice messages, melodies, tones and signals
- Messages can be up to 30 seconds in length (180 second total capacity)
- Expandable and prioritized
- Type 1 enclosure
- UL Listed and cUL Listed

The Federal Signal CommCenter® Model 300MB broadcasts pre-recorded voice messages, melodies, tones and signals over SelecTone® and public address systems. The 300MB replaces out-dated loop tape units with superior, high-quality audio playback. The 300MB is remotely activated via contact closures.

The CommCenter's housing holds the solid state digital control circuitry and up to six non-volatile, 30-second chips.

Melodies, voice messages, tones and signals are available, including the pre-recorded CommCenter Standard Library and optional custom recorded messages. Units can be interconnected for greater message capacity.

CommCenter's digital messaging capability is ideal for emergency evacuation announcements. Clear, concise, pre-determined instructions can be broadcast over a SelecTone or public address system. The CommCenter's pre-recorded melodies can convey the status of a process or machine without interrupting the flow of production in surrounding areas. Voice messages in any language can alert operators to emergency situations.

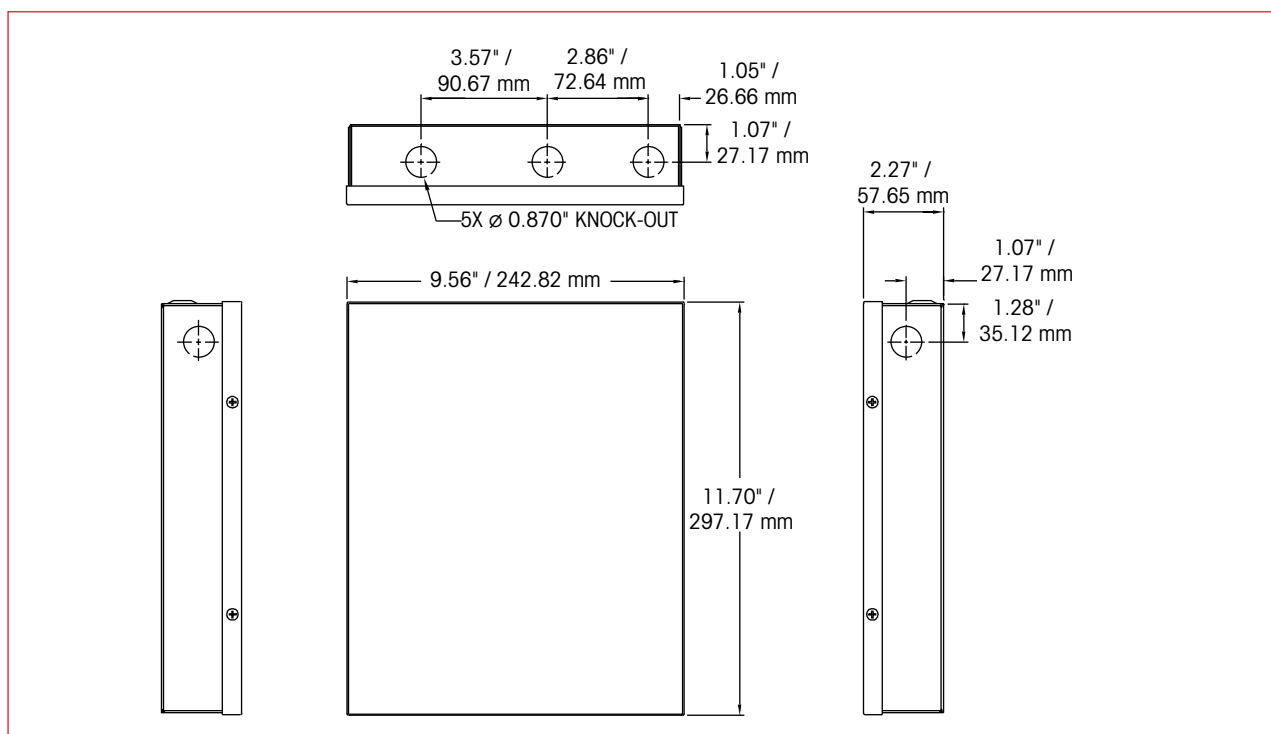
The CommCenter offers quality and versatility to public address systems that broadcast repetitive, prerecorded messages.

Model	Voltage	Operating Current	Standby Current
300MB- *SD024	24VDC	0.8 amps	0.09 amps
300MB- *SD120	120VAC 50/60Hz	0.2 amps	0.05 amps
300MB- *SD240	240VAC 50/60Hz	0.1 amps	0.02 amps

\* Indicate number of messages up to six.



## COMMCENTER® DIGITAL MESSAGE CENTER (300MB)



### SPECIFICATIONS

Ambient Operating Temperature:	32°F to 140°F	0°C to 60°C
Tone Output Levels Max. Load:		
Unbalanced Signal Line	10 Vrms (25 ohm max)	
Balanced Signal Line	25 Vrms (40 ohm max/15 Watt)	
Audio Input:		
Input Impedance	5K OHMS	
Input Voltage	1V P-P (max)	
Signal to Noise Ratio (<1.5% THD):	(chip input) 67dBa	
Signal Frequency Response:	250Hz to 3.4KHz	
Net Weight:	5.5 lbs.	2.5 kg
Shipping Weight:	6.6 lbs.	3.0 kg
Height:	11.57"	293.9 mm
Width:	9.41"	239.0 mm
Depth:	2.27"	57.7 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PC Board Assembly — Main	K200D1148F
Terminal Block, 17 Position	K140A332A-17
Terminal Block, 10 Position	K140A332A-10
Fuse 250V, 1 amp	K148A155A-01
Fuse 250V, 1/2 Amp	K148A155A
Blank Message Module	RMB9999SD
Pre-recorded Message Module (Please specify message)	RM1SD

### HOW TO ORDER

- Specify model number
- Specify number of messages (up to six)
- Choose message source(s):
  - a. Select from Standard Library (page 169)
  - b. Provide script to be recorded in studio (additional charge incurred)
  - c. Provide electronic file (additional charge incurred)
- Specify the priority of the messages
- Please refer to Model Number Index 300MB beginning on page 375



# **CommCenter® Field Programmer**

**Model 300FP**

## **PROGRAM CUSTOM DIGITAL MESSAGE MODULES**

- On-site, on-demand digital file transferring
- WAV & MP3 file format compatible
- Zero loss digital audio transfer
- Download and playback
- Self contained playback speaker
- Software and cables included

Federal Signal's Model 300FP Field Programmer is designed to transfer and program custom messages and tones on CommCenter message modules. The unit features an integrated playback speaker for review before the module is installed into any of the compatible devices, including; 300MB or TM33.

The model 300FP quickly and accurately transfers any standard WAV or MP3 file providing an opportunity for fully customizable tones and voice messages.

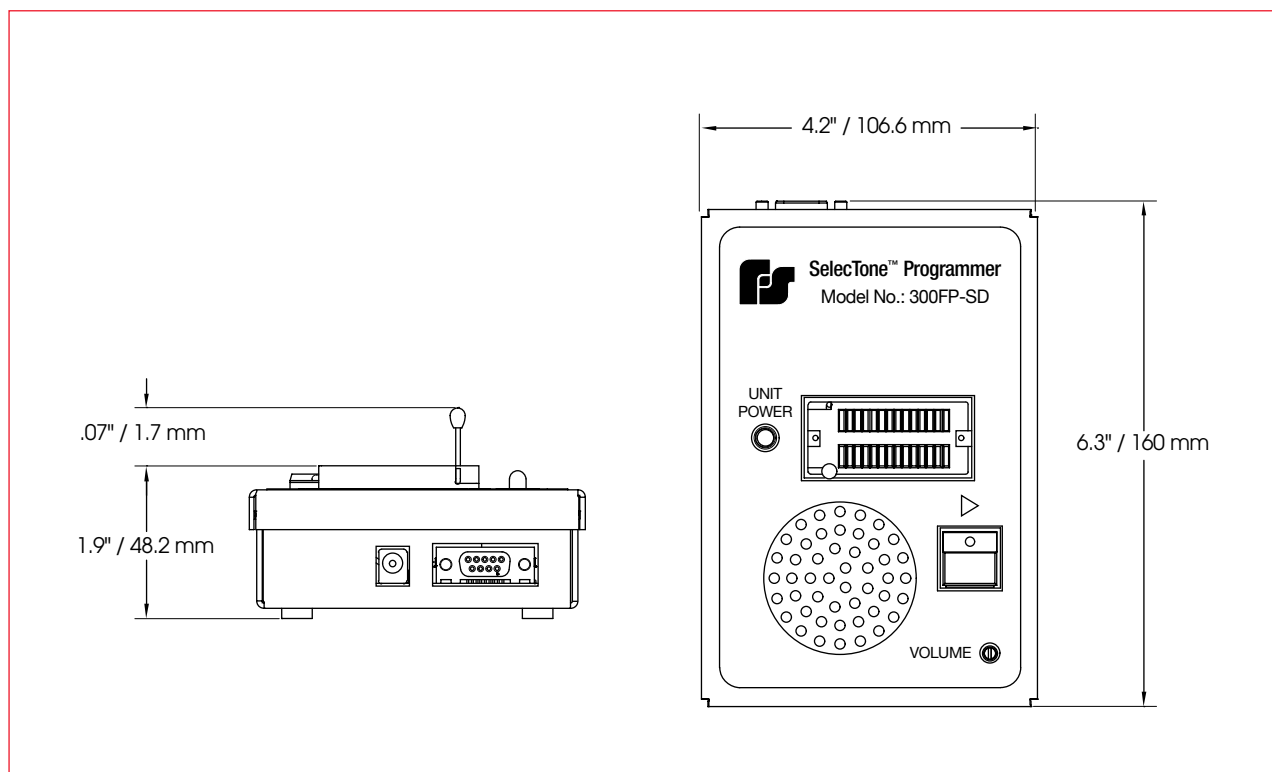
Lossless audio transfer is achieved through the use of proprietary file loading software supplied with the unit and/or downloadable from our website. Through user-friendly instructions, an end-user will simply program/transfer an audio file to the module. This is done by connecting a communications cable supplied with the unit between the PC and the 300FP Field Programmer. The end user then follows the on-screen instructions, selects a communications port on their PC and an audio file to be transferred. Once activated the software automatically programs the microprocessor. It's that easy. The transfer software is compatible with Windows XP, Vista and Windows 7.

Custom tones or voice messages can be created by simply recording the message directly to a PC or via a digital recording device, then saving or formatting to the standard WAV or MP3 file format and following the instructions listed above.

The heavy duty aluminum housing is finished in a black powder coat paint, easy to use push button and LED indicator light. The field programmer 300FP is ONLY compatible with the new PCB message module that is supplied with Series D products or the RMB9999SD and RM1SD.



## COMMCENTER® FIELD PROGRAMMER (300FP)



### SPECIFICATIONS

Operating voltage	120VAC	120VAC
Net weight	0.875 lbs	0.39 kg
Shipping weight	1.75 lbs	0.79 kg
Height	2.63 inch	66.8 mm
Width	4.19 inch	106.4 mm
Depth	6.30 inch	160.0 mm

### HOW TO ORDER

- Specify model number
- Specify optional equipment; blank module RMB9999SD

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Power adapter, 120VAC to 24VDC	K120834
Serial cable, RS-232	K1751156



## FOR PRIMARY AND EMERGENCY POWER

- Supplies 12VDC or 24VDC
- Integrated battery charger
- Choice of 7 or 12 amp-hour capacity
- Meets NFPA standards
- Type 1 enclosure
- UL Listed

# SelecTone® Standby Battery/Back-up Power Supplies

Models PS250, PS600 and PS1000

Federal Signal Power Supplies provide nominal 12VDC or 24VDC power that is switch selectable. The PS250, PS600 and PS1000 are designed for use as standby battery back-up during a power outage.

The steel enclosure is designed to mount on a wall or substantial vertical surface (indoor only). A key lock is provided to discourage unauthorized access – simple lock installation is required.

The power supply sub-assembly, which recharges the batteries, includes solid-state circuitry that provides DC operating voltage to units in a SelecTone® system, while maintaining a charge level on the batteries.

All of the units can also be used as a primary 12V or 24V power source for other devices/systems.

### Model PS250

The Model PS250 battery package includes two sealed lead-acid, gelled electrolyte batteries connected in series. Model PS250 is rated for seven amp-hours of capacity at 2.5 ampere. The PS250 is UL Listed.

### Model PS600

The Model PS600 includes two 12-volt sealed, lead-acid, gelled electrolyte batteries, connected in series. Model PS600 batteries are rated for 12 amp-hours. This unit has a six ampere capacity. Model PS600 is UL Listed.

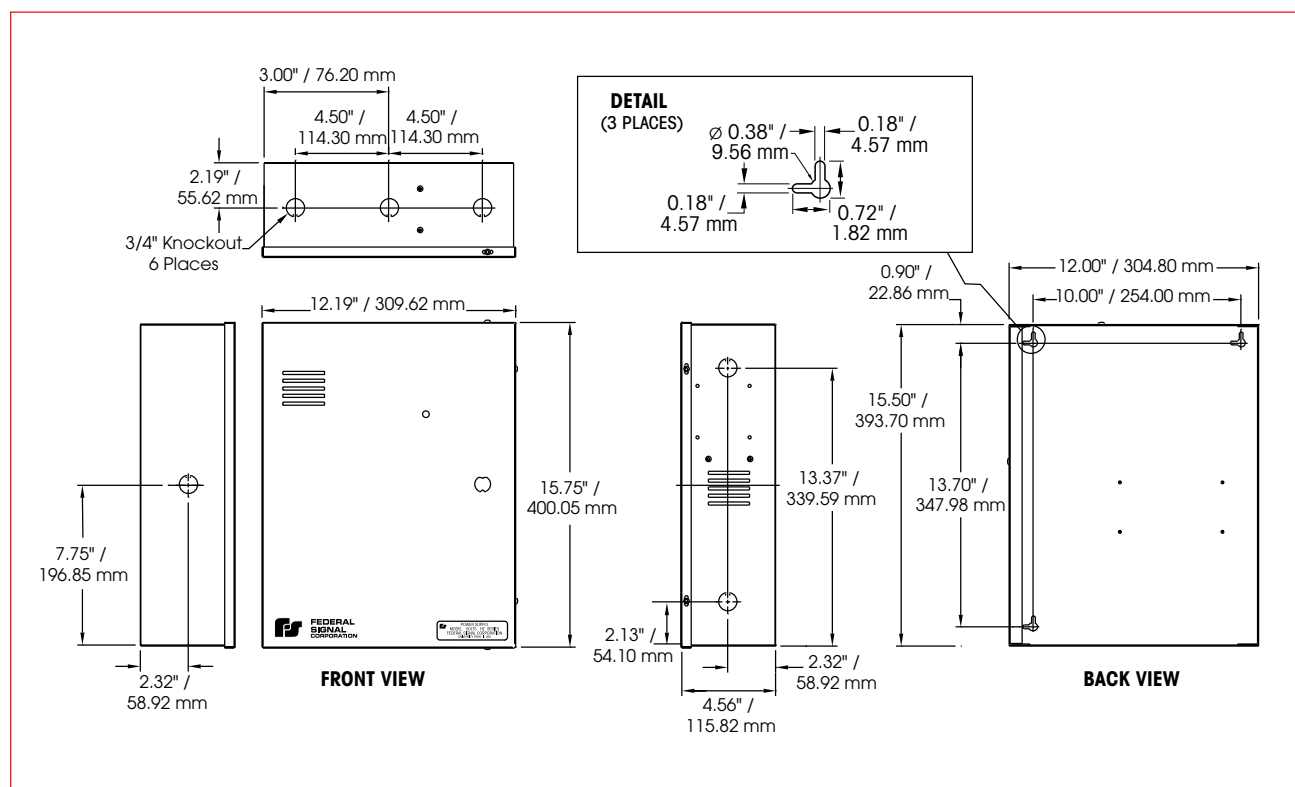
### Model PS1000

The model PS1000 includes two 12-volt sealed, lead acid, gelled electrolyte batteries connected in series. The PS1000 is rated for 12 amp-hours capacity at 10 ampere. Model PS1000 is UL Listed.



Model	Voltage	Output Current	Output Voltage
PS250	120/240VAC	2.50 amps	12/24VDC
PS600	120/240VAC	6.00 amps	12/24VDC
PS1000	120VAC	10 amps	24VDC

## SELECTONE® BACK-UP POWER SUPPLIES (PS250/PS600/PS1000)



### SPECIFICATIONS

Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:		
PS250	10.25 lbs.	4.65 kg
PS600	12.65 lbs.	5.74 kg
PS1000	12.65 lbs.	5.74 kg
Shipping Weight:		
PS250	12.1 lbs.	5.49 kg
PS600	14.5 lbs.	6.58 kg
PS1000	14.5 lbs.	6.58 kg
Height:	15.5"	394.0 mm
Width:	12.5"	318.0 mm
Depth:	4.5"	115.0 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index PS250 / PS600 / PS1000 beginning on page 375

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
12-volt, 12 amp-hour Battery (Model PS600)	K155190A
12-volt, 7 amp-hour Battery (Model PS250)	K155189A
PC Board (Model PS600)	K2001312A
PC Board (Model PS250)	K2001313A
120/240VAC Transformer	K120819A
PC Board (Model PS1000)	K2002013A





# VEHICULAR BACK-UP ALARMS

Models EBA and EPBA

## STATE OF THE ART, BACK-UP ALARMS

- Single and dual function models
- Dual function feature for selectable tone (EPBA)
- Impact resistance housing
- Universal mounting bracket included
- Low amp draw
- Sealed against moisture and contaminants
- Protected against voltage spikes
- State of the art technology and components

The Evacuator® back-up alarm offers superior reliability with exceptional warning power. Evacuator alarms utilize piezo-electric circuitry and solid-state components to minimize the effects of vibration and reduce amp draw. To seal out moisture and contaminants, the unique nickel-plated terminal inserts are hermetically sealed, and the housing is environmentally sealed.

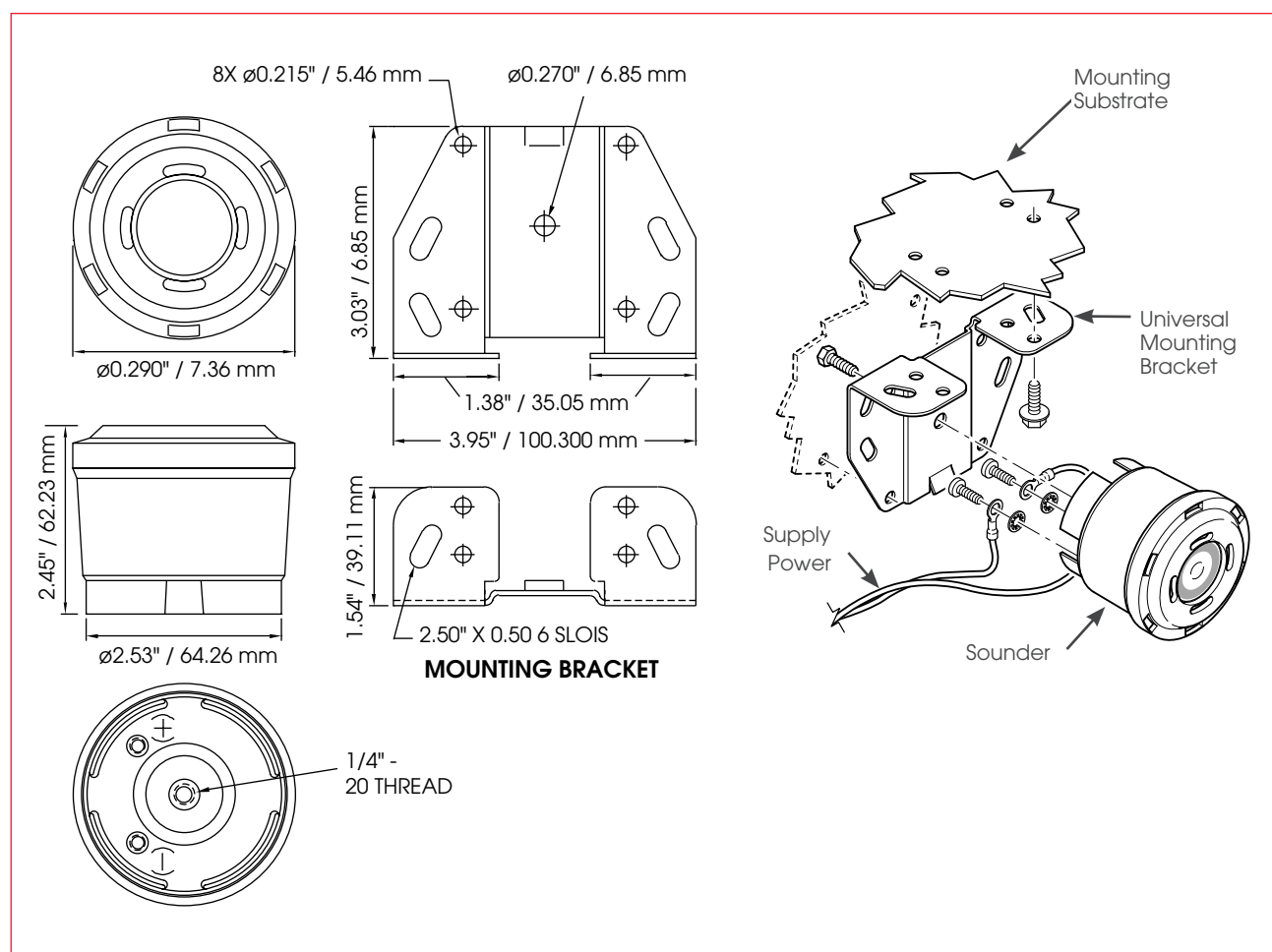
The Evacuator Plus back-up alarm is the only alarm that includes a state-of-the-art dual function feature (patent pending). The dual function feature allows the alarm to produce two distinctly different tones by reversing the polarity of the wiring. Normal polarity produces a "Pulsed" tone, which is an intermittent signal that is primarily use for back-up warning. Reversed polarity produces a "Constant-On" tone, which is a continuous signal that can be used to signal motion such as the lifting of a truck platform or gate.

The alarm is designed for multi-volt operation and meets SAE and OSHA requirements for motor vehicles and material handling equipment. All models include a universal mounting bracket.

Motage	Voltage	Operating Current	Sound Output	Sound Frequency
EBA	12-24VDC	0.04 amps	97dB	2.35kHz
EPBA	9-48VDC	0.03 amps	97dB	2.4kHz



## VEHICULAR BACK-UP ALARMS (EBA/EPBA)



### SPECIFICATIONS

Operating Temperature:	-40°F to 165°F	-40°C to 74°C
Length:	2.9"	73.0 mm
Width:	2.9"	73.0 mm
Height:	2.4"	62.0 mm
Weight:	0.6 lbs.	0.3 kg
Shipping Weight:		
EBA	0.6 lbs.	0.3 kg
EPBA	0.6 lbs.	0.3 kg

### HOW TO ORDER

- Specify model
- Please refer to Model Number Index EBA/EPBA beginning on page 376



# Vehicular Back-up Alarm

## Model 252

### SIGNALS WHEN A VEHICLE IS BACKING-UP

- Operates within the 12VDC-48VDC range used in most vehicles
- Rugged weatherproof housing
- Solid-state, epoxy-sealed electronics
- Produces 97dB @ 4' (109dB @ 1m)
- Universal mounting
- Conforms to SAE J994 sound level Type C requirements
- Type 4X enclosure

Federal Signal's Model 252 back-up alarm is a solid state audible warning device enclosed in a weatherproof housing. The alarm produces a horn tone of 97dB at four feet (109dB at 1m) and sounds at approximately 60 times per minute with equal on and off pulses. Model 252 conforms to SAE (Society of Automotive Engineers) J994 Sound Level Type C.

Federal Signal's Model 252 housing is constructed of black glass-reinforced plastic and comes equipped with universal mountings for easy installation. When properly installed, this unit is weather-proof, dust-proof and not adversely affected by the steam cleaning of vehicles.

This rugged device is polarity protected and will operate within a range of 12VDC-48VDC.

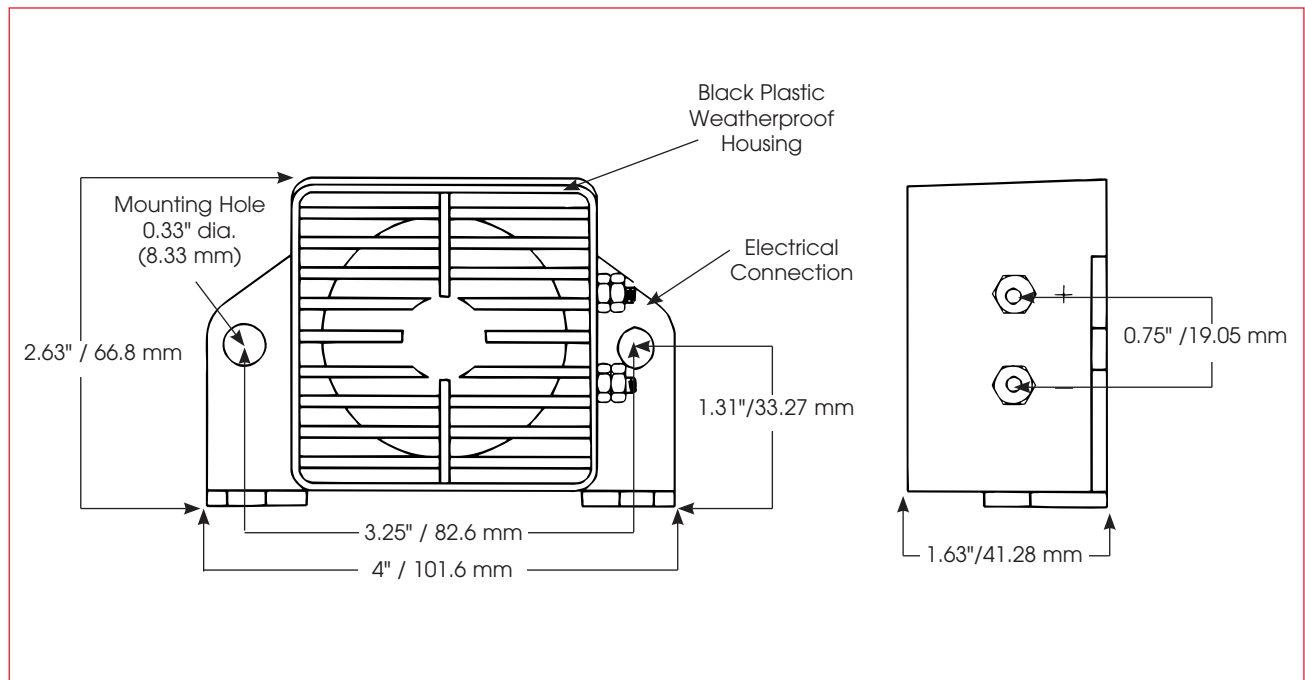
Model 252 is designed for use in a wide variety of vehicles that operate in populated areas — both indoors and out. This alarm is ideal for use on forklifts, tractors, waste disposal vehicles, dump trucks, earth moving equipment or any other vehicle that operates near people.

Federal Signal's Model 252 Vehicular Back-up Alarm is an economical life-safety device designed to prevent accidents.

Model	Voltage	Operating Current	Decibels @	
			4'	1m
252	12VDC-48VDC	0.20 amps	97	109



## BACK-UP ALARM (252)



### SPECIFICATIONS

Operating Temperature:	-40°F to 167°F	-40°C to 75°C
Net Weight:	0.3 lbs.	7.62 kg
Shipping Weight:	0.4 lbs.	10.16 kg
Height:	2.63"	66.8 mm
Width:	4.0"	101.6 mm
Depth:	1.63"	41.28 mm

### HOW TO ORDER

- Specify model number and voltage
- Please refer to Model Number Index 252 beginning on page 376



## AUTOMATICALLY ADJUSTS TO AMBIENT NOISE

- Operates on 12-48VDC power
- Universal mounting
- Produces 82dB - 107dB @ 4' (92dB - 120dB @ 1m)
- Type 4X enclosure
- UL Listed

# Vehicular Back-up Alarm

## Model 253

Federal Signal's Model 253 is a unique backup alarm that samples the ambient noise levels surrounding the vehicle and adjusts its sound output automatically. The decibel output can vary from 82dB to 107dB @ 4 feet (92dB to 120dB @ 1m) when activated.

By "listening" to the surrounding sound levels, model 253 will continuously adjust the output to provide 10dB ( $\pm 4$ ) over ambient noise levels.

This self-adjusting vehicular alarm provides just the right level of audible signal required to warn employees of an approaching fork lift or tow motor.

This solid state device operates on 12-48VDC vehicle system voltage. The Model 253 emits sound at 80 pulses per minute. It is polarity protected and will not operate when incorrectly wired.

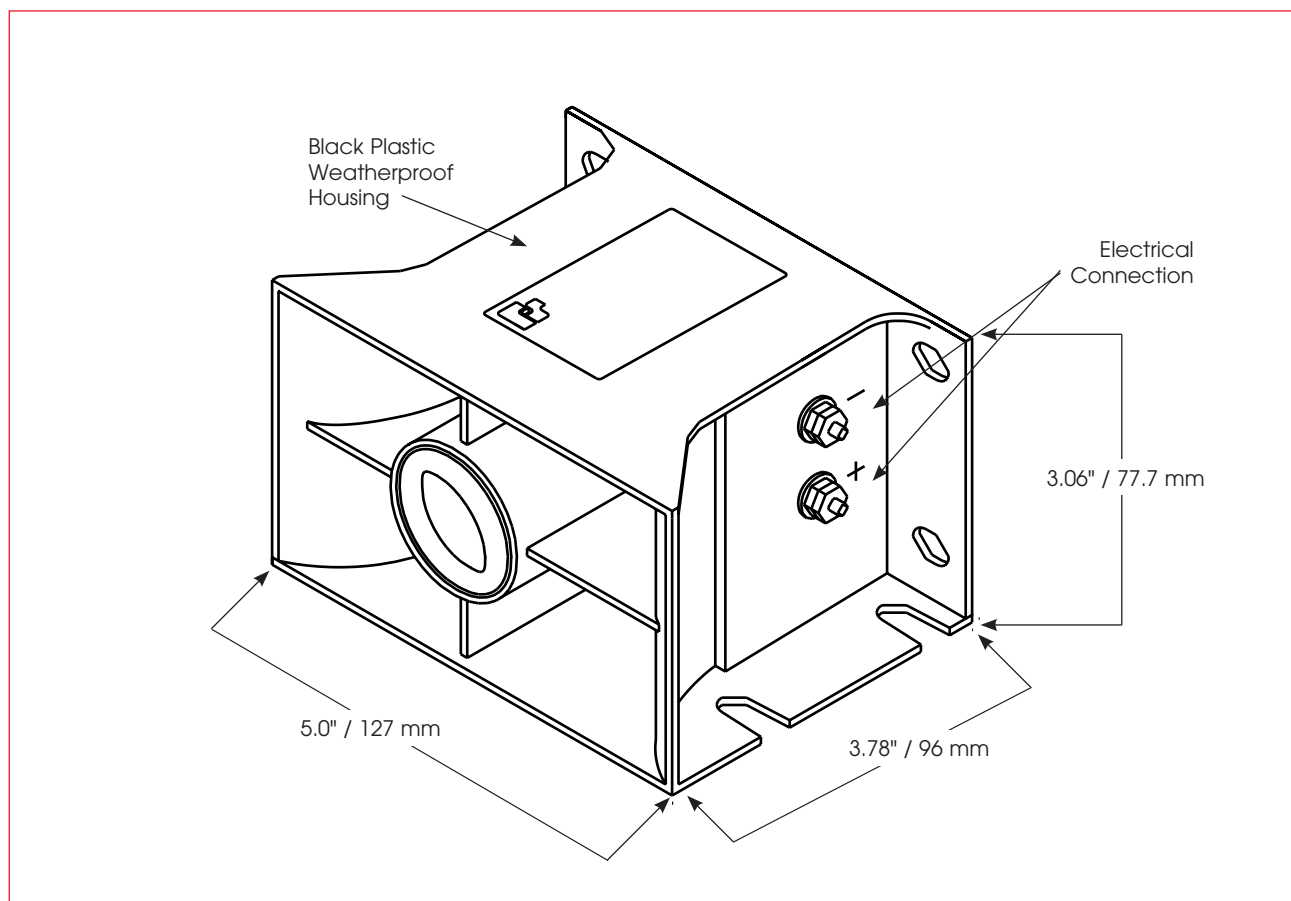
This backup alarm is completely sealed in a Type 4X housing. It complies with UL 583, recognized for use on Battery-Powered Industrial Trucks.

Federal Signal's Model 253 Backup Alarm operates as a "Smart" device, self-adjusting its sound output level to the decibel level necessary to be heard above current ambient noise levels.

Model	Voltage	Operating Current	Decibels @	
			4'	1m
253	12VDC-48VDC	0.25 amps	82-107	92-120



## BACK-UP ALARM (253)



### SPECIFICATIONS

Operating Temperature:	-40°F to 185°F	-40°C to 85°C
Net Weight:	1.44 lbs.	0.65 kg
Shipping Weight:	1.54 lbs.	0.7 kg
Height:	3.06"	77.7 mm
Width:	5.0"	127.0 mm
Depth:	3.78"	96.0 mm

### HOW TO ORDER

- Specify model number and voltage
- Please refer to Model Number Index 253 beginning on page 376





## ELECTRONIC SOUNDERS AND POWERED LOUDSPEAKERS FOR USE IN ATEX HAZARDOUS AREAS

- 8 watt, 104dBa output
- 15 watt, 107dBa output
- 25 watt, 116dBa output
- On-board choice of 15 tones
- Remote tone selection
- Dual cable entries
- Integrated DC and AC voltages
- Short horn version (8W)
- Approved for Zone 1 IIB and IIC
- Watertight to IP66/IP67

# Hazardous Area Sounder and Powered Loudspeaker

## Model ES Series Sounders and Powered Loudspeakers

Federal Signal's Model ES Series Sounders and Powered Loudspeakers are designed for rugged industrial applications where ATEX certification is required. The ES Series is comprised of two separate products that serve a variety of applications. First is a sounder that includes fifteen standard tones with a common power input that accepts an AC or DC power source. Once power is applied, a single tone may be selected through the use of a remote contact input, or all fifteen tones may be accessed independently by providing a binary string of information, specific to each tone. This allows a certain sound to match a specific alarm condition.

The second version of the ES Series is a powered loudspeaker. Once an AC or DC power source is applied, the powered loudspeaker is capable of amplifying a low-level audio signal, and reproducing it at 8, 15 or 25 watts, depending on the model selected. ES Series powered loudspeakers are the perfect option for ECHO Intercom systems, where ATEX approval is required.

The Model ES Series sounders and powered loudspeakers are available in three different configurations, from 8 watt to 25 watt, to provide an appropriate amount of sound for the ambient environment. To fine tune the product for each application, an internal volume adjustment potentiometer is provided.

Mounting is provided by a stainless-steel ratcheted mounting bracket that locks the sounder in position at a specific angle without slipping. The bottom surface of the mounting bracket also contains three mounting holes, to adapt to a variety of surfaces.

The ES Series is rated for IP66/67 through the use of a neoprene "O" ring seal. All exterior cast aluminum surfaces are finished in red powder coat paint and external hardware is manufactured from stainless steel to resist corrosion.

**ATEX**  

Model	Voltage	Operating Current	Equivalent Power
ES1-114 <sup>1</sup>	24VDC/120VAC/240VAC	950mA/210mA/125mA	8 watt
ES1-112 <sup>1</sup>	24VDC/120VAC/240VAC	950mA/210mA/125mA	15 watt
ES4-120 <sup>1</sup>	24VDC/120VAC/240VAC	950mA/210mA/125mA	25 watt
ES1-114 <sup>2</sup>	24VDC/120VAC/240VAC	500mA/125mA/90mA	8 watt
ES1-112 <sup>2</sup>	24VDC/120VAC/240VAC	500mA/125mA/90mA	15 watt
ES5-120 <sup>2</sup>	24VDC	1200mA	25 watt
ES5-120 <sup>2</sup>	120VAC	400mA	25 watt
ES5-120 <sup>2</sup>	240VAC	210mA	25 watt

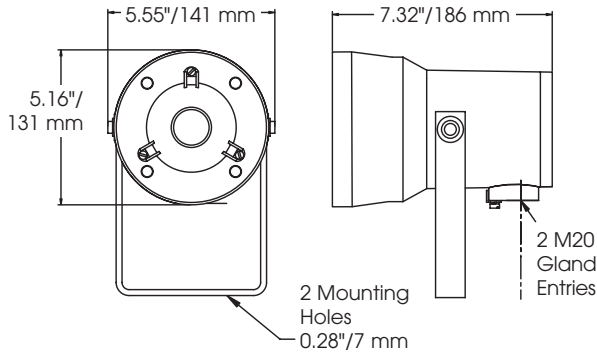
<sup>1</sup> ES-Series Sounder

<sup>2</sup> ES-Series Powered Loudspeaker

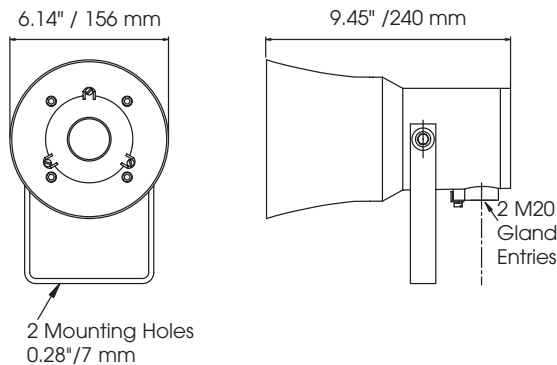


## HAZARDOUS AREA SOUNDERS AND POWERED LOUDSPEAKERS (ES)

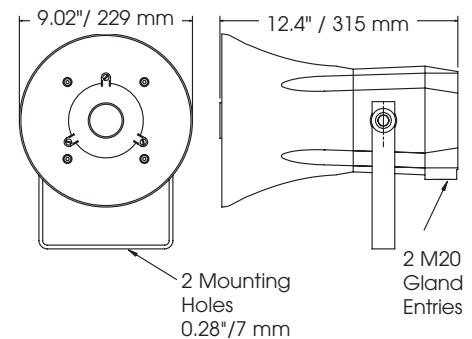
### 8W



### 15W



### 25W



## SPECIFICATIONS

Operating Voltages:	24VDC, 110/120VAC, 220/240VAC	Termination:	For 1.5mm <sup>2</sup> conductors
Factory Default Setting:	240VAC	Net Weight:	
Type:	8/15 Watt dual entry, 25 Watt dual entry	8W	3.0kg (6.6 lbs)
Material:	Aluminum Alloy LM6 (marine grade)	15W	3.2kg (7.1 lbs)
Colour:	Signal red 537 to BS381C (epoxy powder coated semi-gloss)	25W	6.4kg (14.1 lbs)
Mounting:	Stainless steel bracket (not painted)	Shipping Dimensions:	25 x 23 x 28cm <sup>(1)</sup> 32 x 30 x 37cm <sup>(2)</sup>
Output:		Certificate Number <sup>1</sup> :	
8W Short Horn Series IIB	104dBa @ 1m (1kHz)		Baseefa03ATEX0688X, II 2 G EExd IIB T4...T6
8W Short Horn Series IIC	100dBa @ 1m (1kHz)		Baseefa03ATEX0689X, II 2 G EExd IIC T4...T6
15W Series IIB	107dBa @ 1m (1kHz)	Ingress Protection <sup>1</sup> :	IP67
15W Series IIC	103dBa @ 1m (1kHz)	Ingress Protection <sup>2</sup> :	IP66 and IP67
25W Series	116dBa @ 1m (1kHz)	Certificate Number <sup>2</sup> :	
Cable Entries (bottom):	2 x M20		Nemko 05ATEX1036, II 2 G EExd IIB T4...T6
(Supplied with 1 x EEx stopping plug)			
Operating Temperature Range:	-20°C to +40°C (T6) -20°C to +55°C (T5) -20°C to +70°C (T4)		

<sup>1</sup> 8W/15W

<sup>2</sup> 25W

**Notes:** Audio input user selectable.  
Available inputs are 0.8V, 1.5V and 2.7V.

## HOW TO ORDER

- Contact Factory for Specification Assistance



## ELECTRONIC SOUNDERS AND POWERED LOUDSPEAKERS FOR USE IN MARINE AND INDUSTRIAL APPLICATIONS

- 8 watt, 114dBa @ 1m output
- 15 watt, 117dBa @ 1m output
- 25 watt, 123dBa @ 1m output
- On-board choice of 15 tones
- Remote tone selection
- Dual cable entries
- Integrated DC and AC voltages
- Short horn version (8W)
- Watertight to IP66/IP67

# Marine/Industrial Sounders

## Model MS Series Sounders and Powered Loudspeakers

Federal Signal's model MS Series Sounders and Powered Loudspeakers are designed for rugged industrial applications where CE certification is required. The MS Series is comprised of two separate products that serve a variety of applications. First is a sounder that includes fifteen standard tones with a common power input that accepts an AC or DC power source. Once power is applied, a single tone may be selected through the use of a remote contact input, or all fifteen tones may be accessed independently by providing a binary string of information, specific to each tone. This allows a certain sound to match a specific alarm condition.

The second version of the MS Series is a powered loudspeaker. Once an AC or DC power source is applied, the powered loudspeaker is capable of amplifying a low-level audio signal, and reproducing it at 8, 15 or 25 watts, depending on the model selected. MS Series Powered Loudspeakers are the perfect option for ECHO Intercom systems, where CE approval is required.

The Model MS Series sounders and powered loudspeakers are available in three different configurations, from 8 watt to 25 watt, to provide an appropriate amount of sound for the ambient environment. To fine tune the product for each application, an internal volume adjustment potentiometer is provided.

Mounting is provided by a stainless-steel ratcheted mounting bracket that locks the sounder in position at a specific angle without slipping. The bottom surface of the mounting bracket also contains three mounting holes, to adapt to a variety of surfaces.

The MS Series is rated for IP66/67 through the use of a neoprene "O" ring seal. All exterior cast aluminum surfaces are finished in gray powder coat paint and external hardware is manufactured from stainless steel to resist corrosion.



Model	Voltage	Operating Current	Equivalent Power
<b>MS1<sup>1</sup></b>	24VDC/120VAC/240VAC	950mA/210mA/125mA	8 watt
<b>MS1-112<sup>1</sup></b>	24VDC/120VAC/240VAC	950mA/210mA/125mA	15 watt
<b>MS4-120<sup>1</sup></b>	24VDC/120VAC/240VAC	950mA/210mA/125mA	25 watt
<b>MS1-114-14<sup>2</sup></b>	24VDC/120VAC/240VAC	500mA/125mA/90mA	8 watt
<b>MS1-112-14<sup>2</sup></b>	24VDC/120VAC/240VAC	500mA/125mA/90mA	15 watt
<b>MS5-120-EB<sup>2</sup></b>	24VDC	1200mA	25 watt
<b>MS5-120-EL<sup>2</sup></b>	120VAC	400mA	25 watt
<b>MS5-120-EM<sup>2</sup></b>	240VAC	210mA	25 watt

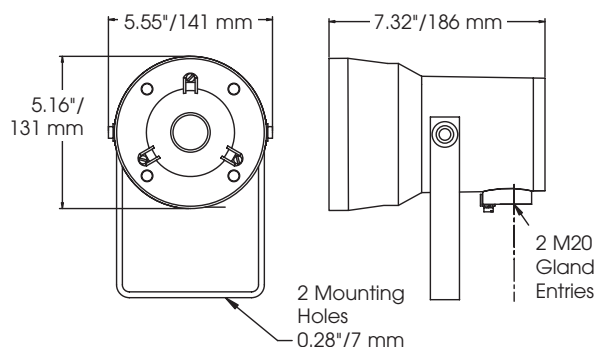
<sup>1</sup> MS-Series Sounder

<sup>2</sup> MS-Series Powered Loudspeaker

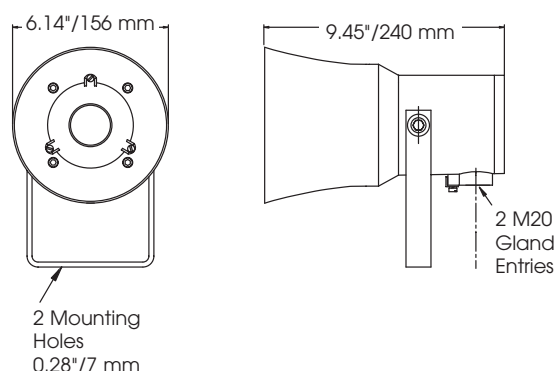


## HAZARDOUS AREA SOUNDERS AND POWERED LOUDSPEAKERS (MS)

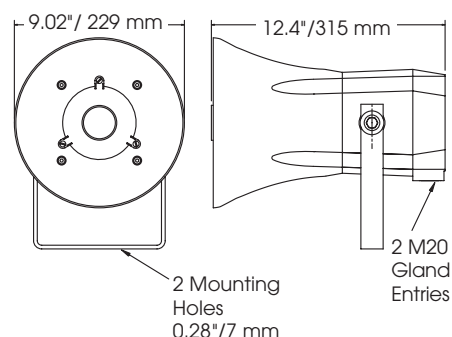
**8W**



**15W**



**25W**



### SPECIFICATIONS

Operating Voltages:	24VDC, 110/120VAC, 220/240VAC	Termination:	For 1.5mm² conductors	
Factory Default Setting:	240VAC	Net Weight:		
Type:	8/15 Watt dual entry, 25 Watt dual entry	8W	6.6 lbs.	3.0kg
Material:	Aluminum Alloy LM6 (marine grade)	15W	7.1 lbs.	3.2kg
Color:	Grey to RAL7035	25W	14.1 lbs.	6.4kg
	(epoxy powder coated semi-gloss)	Shipping Dimensions:		
Mounting:	Stainless steel bracket (not painted)	8W	25 x 23 x 28cm	
Output:		25W	32 x 30 x 37cm	
8W Short Horn	114dBa @ 1m (1kHz)	Ingress Protection¹:	IP67	
15W	117dBa @ 1m (1kHz)	Ingress Protection²:	IP66 and IP67	
25W	123dBa @1m (1kHz)			
Cable Entries (bottom):	2 x M20			
(Supplied with 1 x EEx stopping plug)		¹ 8W/15W		
Operating Temperature Range:	-20°C to 70°C	² 25W		

<sup>1</sup> 8W/15W

<sup>2</sup> 25W

**Notes:** Audio input user selectable.  
Available inputs are 0.8V, 1.5V and 2.7V.

### HOW TO ORDER

- Contact Factory for Specification Assistance



# Intrinsically Safe LED Visual Status Indicator

## Model WVL-IS

### FEATURES:

- Input overload and reverse current protection
- Fresnel lens optimizes LED effectiveness

Model WVL-IS is a compact status indicator with an array of six high output LED's. Approvals include ATEX and IECEx for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The WVL-IS is suitable for all intrinsically safe signalling applications including fire, security and process control.

### APPROVALS:

- ATEX certificate: Sira10ATEX2102X  
EN 60079-0 : 2006      EN 60079-11 : 2007  
EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 10.0046X  
IEC 60079-0 : 2007      IEC 60079-11 : 2006  
IEC 60079-26 : 2006
- FM approved  
Class 3600 1998      Class 3610 1999  
Class 3810 2005

Model	Voltage	Voltage Range	Operating Current
WVL-IS	24VDC	16-28VDC	25mA

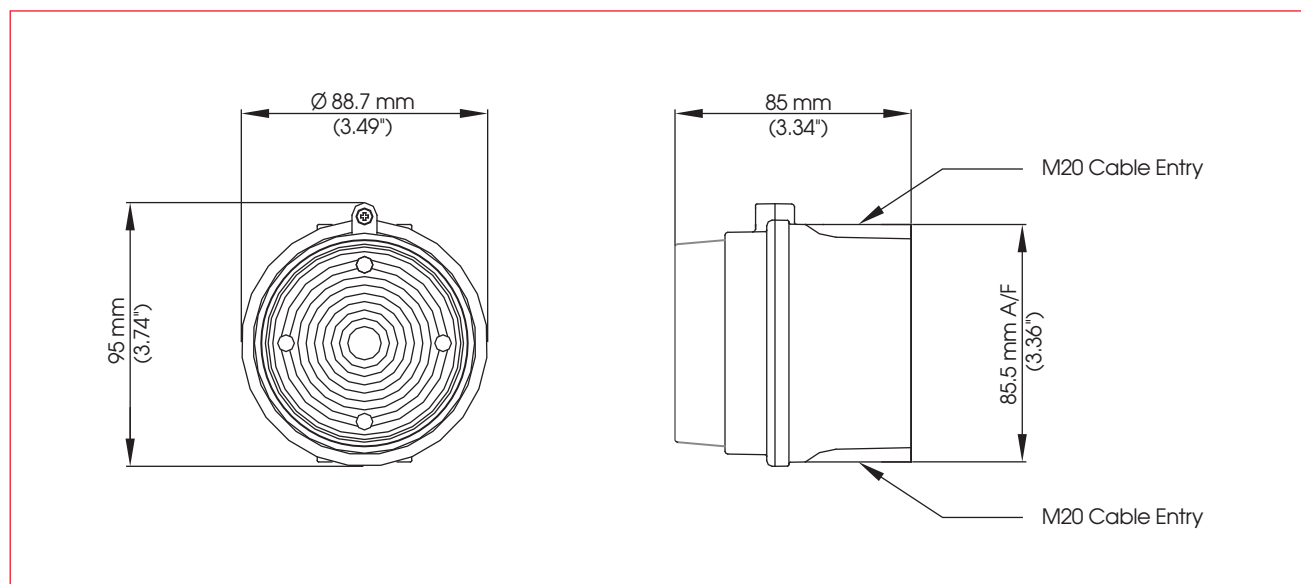
### HOW TO ORDER

#### WVL-IS - A

MODEL NUMBER	LENS COLOR
WVL-IS Intrinsically Safe LED Visual Status Indicator	A - Amber B - Blue C - Clear G - Green R - Red



## INTRINSICALLY SAFE LED VISUAL STATUS INDICATOR (WVL-IS)



### SPECIFICATIONS

ATEX / IECEx / FM:	II 1G Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +60°C) IS Class I, Zone 0, AEx ia IIC T4 IS Class I, Division 1, Groups A, B, C, D	
Light source:	Array of 6 high intensity LEDs	
LED colors:	Amber, Blue, Clear, Green & Red	
Flash modes:	Double flash at 2Hz and 1Hz	
Voltage:	16-28VDC via Zener barrier or galvanic isolator	
Current:	25mA typical when powered from 24V supply via 28V 300 Ohm Zener barrier	
Ingress protection:	IP65	
Rating:	Continuous	
Housing material:	UL94V0 & 5VA FR ABS & PC	
Housing color:	RAL3000 Red	
Fixings:	Stainless Steel	
Cable entries:	2 x M20 clearance gland knockouts. Custom configurations also available.	
Terminals:	0.001 to 0.098"	0.5 to 2.5mm <sup>2</sup>
Operating temp:	-104°F to +140°F	-40°C to +60°C
Storage temp:	-104°F to +158°F	-40°C to +70°C
Relative humidity:	90% at 68°F	90% at 20°C
Product weight:	0.20Kg	
Shipping weight:	0.35Kg	



Also available as a combined alarm sounder and LED beacon the WAV-IS unit.

May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:

Uo: 28VDC

Io: 660mA

Po: 1.2W





# Intrinsically Safe LED Audible Visual Status Indicator

## Model WAV-IS

### FEATURES:

- Input overload and reverse current protection
- Auto synchronised sound output
- Fresnel lens optimizes LED effectiveness
- Available with custom tone configurations and frequencies

Model WAV-IS is a compact combined 100dB(A) alarm sounder and LED beacon - only one Zener barrier or galvanic isolator required to run both sounder & beacon or alternatively the unit can be operated as individual signals.

Approvals include ATEX and IECEx for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

### APPROVALS:

- ATEX certificate: Sira10ATEX2102X  
EN 60079-0 : 2006      EN 60079-11 : 2007  
EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 06.0046X  
IEC 60079-0 : 2007      IEC 60079-11 : 2006  
IEC 60079-26 : 2006
- FM approved:  
Class 3600 1998      Class 3610 1999  
Class 3810 2005

Model	Voltage	Voltage Range	Operating Current
WAV-IS	24VDC	16-28VDC	30mA

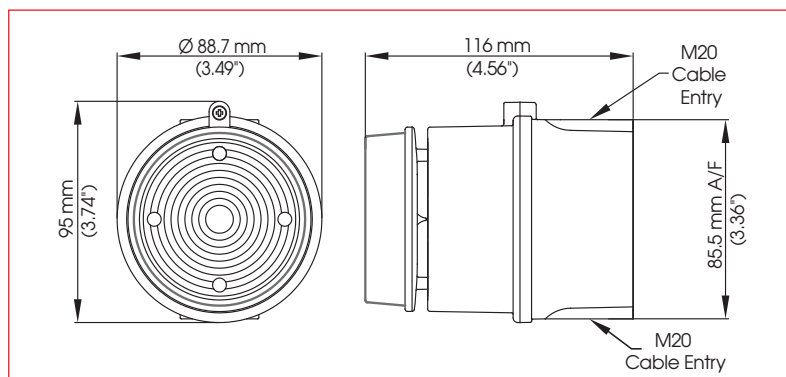
### HOW TO ORDER

WAV-IS - A	
MODEL	LENS COLOR
WAV-IS Intrinsically Safe LED Audible Visual Status Indicator	<b>A</b> - Amber <b>B</b> - Blue <b>C</b> - Clear <b>G</b> - Green <b>R</b> - Red





## INTRINSICALLY SAFE LED AUDIBLE VISUAL STATUS INDICATOR (WAV-IS)



Installation (Combined or Sounder only): Zener barrier or galvanic isolator with output parameters not exceeding: Uo: 28vdc Io: 93mA Po: 660mW

Installation (Beacon only): Zener barrier or galvanic isolator with output parameters not exceeding: Uo: 28vdc Io: 660mA Po: 1.2W

### SPECIFICATIONS

ATEX / IECEx / FM: II 1G Ex ia IIC T4 Ga  
 (-40°C ≤ Ta ≤ +60°C)  
 IS Class I, Division 1, Groups A, B, C, D  
 IS Class I, Zone 0, AEx ia IIC T4

#### ALARM SOUNDER:

Nominal output: 100dB(A) @ 1m +/- 3dB - Tone 2\*  
 No. of tones: 49 (UK00A/PFEER compliant)  
 No. of stages: 3  
 Volume control: Max. 100dB(A);  
 Min. 90dB(A) - Tone 2

#### LED BEACON:

Light source: Array of 6 high intensity LEDs  
 LED colors: Amber, Blue, Clear, Green & Red  
 Flash modes: Double flash at 2Hz and 1Hz

#### GENERAL:

Voltage: 16-28VDC via Zener barrier or galvanic isolator  
 Combined current: Approx: 30mA typical when powered from 24v supply via 28v 300 Ohm Zener barrier.  
 Ingress protection: IP65  
 Rating: Continuous  
 Housing material: UL94V0 & 5VA FR ABS & PC  
 Housing color: RAL3000 Red  
 Fixings: Stainless Steel  
 Cable entries: 2 x M20 clearance gland knockouts. Custom configurations also available.  
 Terminals: 0.001 to 0.098" 0.5 to 2.5mm²  
 Operating temp: -104°F to +140°F -40°C to +60°C  
 Storage temp: -104°F to +158°F -40°C to +70°C  
 Relative humidity: 90% at 68°F 90% at 20°C  
 Product weight: 0.30Kg  
 Shipping weight: 0.45Kg

### TONES

Stage	Frequency Description	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 17
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37



# Intrinsically Safe Sounder

Model WAS-IS

## FEATURES:

- Input overload and reverse current protection
- Auto synchronised sound output
- Available with custom tone configurations and frequencies.

Model WAS-IS is a compact, 100dB(A) alarm sounder. Approvals include ATEX and IECEx for Zone 0 applications and FM approval for Class I Division 1 and Class I Zone 0 applications.

The WAS-IS is suitable for all intrinsically safe signalling applications including fire, security and process control.

## APPROVALS:

- ATEX certificate: Sira10ATEX2102X  
EN 60079-0 : 2006      EN 60079-11 : 2007  
EN 60079-26 : 2007
- IECEx certificate: IECEx SIR 10.0046X  
IEC 60079-0 : 2007      IEC 60079-11 : 2006  
IEC 60079-26 : 2006
- FM approved  
Class 3600 1998      Class 3610 1999  
Class 3810 2005
- VdS approved to EN54-3 (CPD 89/106/EEC).

Model	Voltage	Voltage Range	Operating Current
WAS-IS	24VDC	16-28VDC	25mA

## HOW TO ORDER

**WAS-IS**

**MODEL**

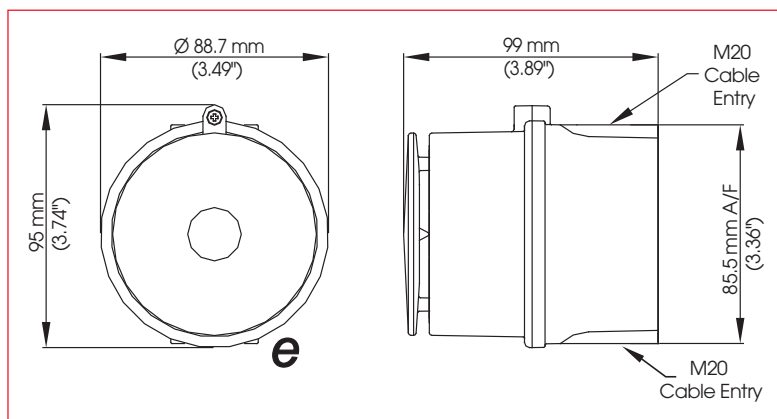
**WAS-IS**  
Intrinsically  
Safe  
Sounder



0786-CPD-20338

G207130

## INTRINSICALLY SAFE SOUNDER (WAS-IS)



May be powered from any certified Zener barrier or galvanic isolator whose output parameters do not exceed:

Uo: 28VDC

Io: 93mA

Po: 660mW

Also available as a combined alarm sounder and LED beacon the WAV-IS unit.



### SPECIFICATIONS

ATEX / IECEx / FM: II 1G Ex ia IIC T4 Ga  
(-40°C ≤ Ta ≤ +60°C)  
IS Class I, Zone 0, AEx ia IIC T4  
IS Class I, Division 1, Groups A, B, C, D

Nominal output: 100dB(A) @ 1m +/- 3dB - Tone 2\*

No. of tones: 49 (UK00A/PFEER compliant)

No. of stages: 3

Volume control: Max. 100dB(A); Min. 90dB(A) - Tone 2

Voltage: 16-28vdc via Zener barrier or galvanic isolator

Current: 25mA typical when powered from 24V supply via 28v 300 Ohm Zener barrier

Ingress protection: IP65

Rating: Continuous

Housing material: UL94V0 & 5VA FR ABS

Housing color: RAL3000 Red

Fixings: Stainless Steel

Cable entries: 2 x M20 clearance gland knockouts. Custom configurations also available.

Terminals: 0.001 to 0.098" 0.5 to 2.5mm²

Operating temp: -104°F to +140°F -40°C to +60°C

Storage temp: -104°F to +158°F -40°C to +70°C

Relative humidity: 90% at 68°F 90% at 20°C

Product weight: 0.23 Kg

Shipping weight: 0.38 Kg

### TONES

Stage	Frequency Description	Stage 2	Stage 3
Tone 1	340 Hz Continuous	Tone 2	Tone 5
Tone 2	800/1000Hz @ 0.25 sec Alternating - BS5839 Alarm tone	Tone 17	Tone 5
Tone 3	500/1200Hz @ 0.3Hz 0.5 sec Slow Whoop - NEN 2575:2000	Tone 2	Tone 5
Tone 4	800/1000Hz @ 1Hz Sweeping	Tone 6	Tone 5
Tone 5	2400Hz Continuous	Tone 3	Tone 20
Tone 6	2400/2900Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 7	2400/2900Hz @ 1Hz Sweeping	Tone 10	Tone 5
Tone 8	500/1200/500Hz @ 0.3Hz Sweeping	Tone 2	Tone 5
Tone 9	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 15	Tone 2
Tone 10	2400/2900Hz @ 2Hz Alternating	Tone 7	Tone 5
Tone 11	1000Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 12	800/1000Hz @ 0.875Hz Alternating	Tone 4	Tone 5
Tone 13	2400Hz @ 1Hz Intermittent	Tone 15	Tone 5
Tone 14	800Hz 0.25sec on, 1 sec off Intermittent	Tone 4	Tone 5
Tone 15	800Hz Continuous	Tone 2	Tone 5
Tone 16	660Hz 150mS on, 150mS off Intermittent	Tone 18	Tone 5
Tone 17	544Hz (100mS)/440Hz (400mS) - AFNOR NF S 32-001	Tone 2	Tone 27
Tone 18	660Hz 1.8sec on, 1.8sec off Intermittent	Tone 2	Tone 5
Tone 19	1.4KHz-1.6KHz 1s, 1.6KHz-1.4KHz 0.5s - AFNOR NFC48-265	Tone 2	Tone 5
Tone 20	660Hz Continuous	Tone 2	Tone 5
Tone 21	554Hz/440Hz @ 1Hz Alternating	Tone 2	Tone 5
Tone 22	544Hz @ 0.875 sec. Intermittent	Tone 2	Tone 5
Tone 23	800Hz @ 2Hz Intermittent	Tone 6	Tone 5
Tone 24	800/1000Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 25	2400/2900Hz @ 50Hz Sweeping	Tone 29	Tone 5
Tone 26	Bell	Tone 2	Tone 15
Tone 27	554Hz Continuous	Tone 26	Tone 5
Tone 28	440Hz Continuous	Tone 2	Tone 5
Tone 29	800/1000Hz @ 7Hz Sweeping	Tone 7	Tone 5
Tone 30	300Hz Continuous	Tone 2	Tone 5
Tone 31	660/1200Hz @ 1Hz Sweeping	Tone 26	Tone 5
Tone 32	Two tone chime.	Tone 26	Tone 15
Tone 33	745Hz @ 1Hz Intermittent	Tone 2	Tone 5
Tone 34	1000 & 2000Hz @ 0.5 sec Alternating - Singapore	Tone 38	Tone 45
Tone 35	420Hz @ 0.625 sec Australian Alert	Tone 36	Tone 5
Tone 36	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 35	Tone 5
Tone 37	1000Hz Continuous - PFEER Toxic Gas	Tone 9	Tone 45
Tone 38	2000Hz Continuous	Tone 34	Tone 45
Tone 39	800Hz 0.25sec on, 1 sec off Intermittent	Tone 23	Tone 17
Tone 40	544Hz (100mS)/440Hz (400mS) - NF S 32-001	Tone 31	Tone 17
Tone 41	Motor Siren - slow rise to 1200 Hz	Tone 2	Tone 5
Tone 42	Motor Siren - slow rise to 800 Hz	Tone 2	Tone 5
Tone 43	1200 Hz Continuous	Tone 2	Tone 5
Tone 44	Motor Siren - slow rise to 2400 Hz	Tone 2	Tone 5
Tone 45	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 38	Tone 34
Tone 46	1200/500Hz @ 1Hz - DIN / PFEER P.T.A.P.	Tone 47	Tone 37
Tone 47	1KHz 1s on, 1s off Intermittent - PFEER Gen. Alarm	Tone 46	Tone 37
Tone 48	420Hz @ 0.625 sec Australian Alert	Tone 49	Tone 5
Tone 49	500-1200Hz 3.75sec /0.25sec. Australian Evac.	Tone 26	Tone 37

#259369A Rev A

2645 Federal Signal Dr., University Park, IL 60484 Tel: 708.534.4756 Fax: 708.534.4852 www.federal-signal-indust.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com



**POWERFUL OMNI-DIRECTIONAL OUTDOOR WARNING SIREN**

- Available in 120VAC and 240VAC
- High-efficiency design requires only moderate power
- Produces 102dBc @ 100'
- Roof mount standard and pole mount optional

**Omni-Directional Siren**

**Model 2**

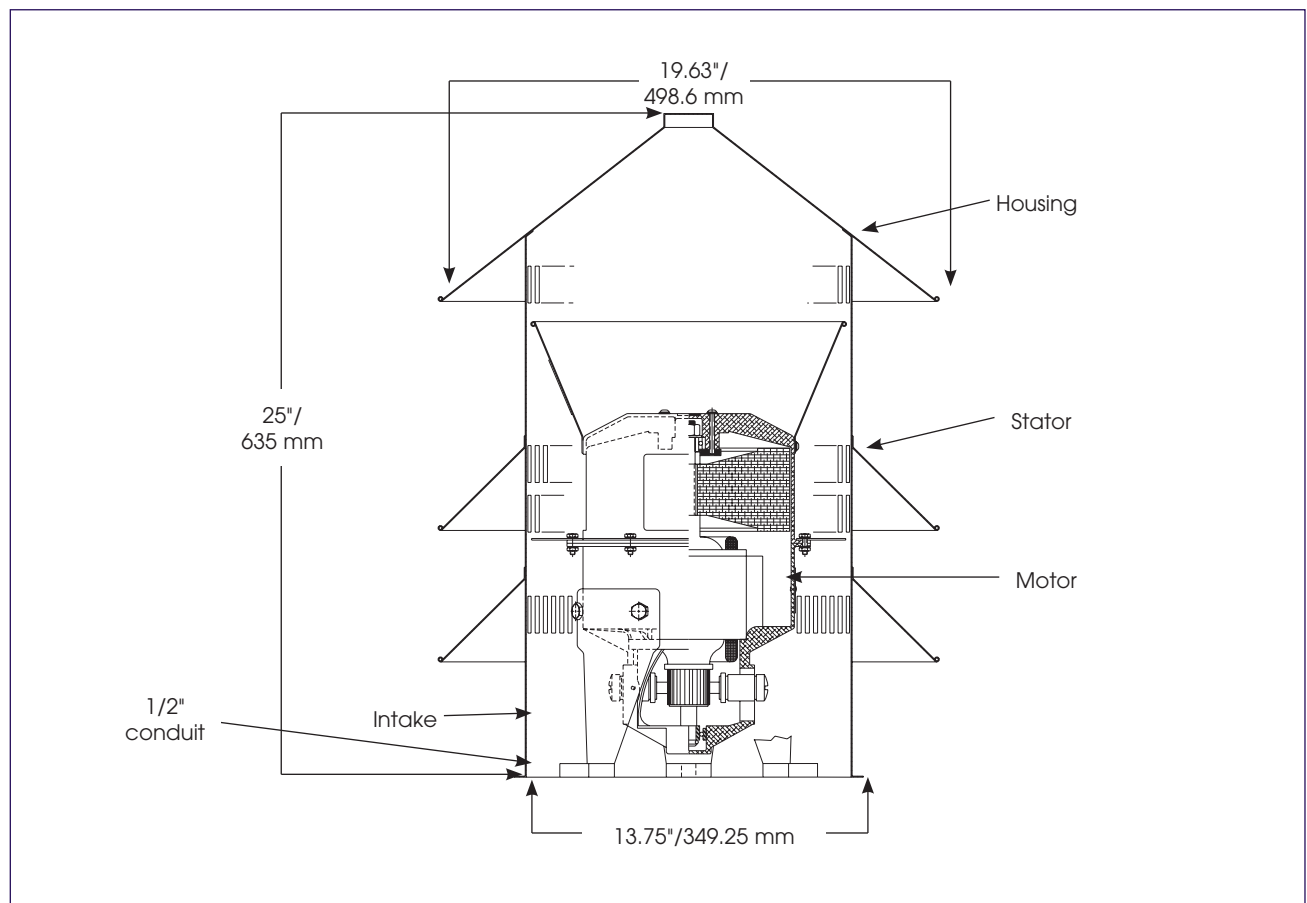
Federal Signal's Model 2 outdoor warning siren is an omni-directional siren capable of producing intense warning signals over a large area. The siren can be installed on a roof or utility pole.

Federal Signal's Model 2 is a single tone siren capable of producing 102dBc at 100 feet while making only moderate power source demands. The Model 2 has a universal motor which operates from either 120VAC/DC or 240VAC/DC. A Federal Signal Model RC2W motor starter (purchased separately) is required to operate this siren.

Federal Signal's Model 2 can serve as an outdoor plant-wide warning system where volume is needed to contrast with high ambient industrial sounds. It is ideal for use in the large, wide open areas found in industrial facilities such as refineries, steel mills and manufacturing plants. The Model 2 can be used for start/stop work signaling, plant evacuation or other emergency situations.

Model	Voltage	Decibels @100'	Output Frequency	Beam Width	Mount
2-120	120VAC/DC	102dBc	533Hz	360°	Roof (standard) or
2-240	240VAC/DC	102dBc	533Hz	360°	Pole (Model PMS required)

## OMNI-DIRECTIONAL SIREN (2)



### SPECIFICATIONS

Recommended Mounting Height:	35-40 feet	10.7-12.2 m
Available Tones:		1 standard
Effective Range*:	1,000 feet	304.8 m
Power Rating:	2 HP	2 HP
Power Requirements:	120VAC/DC	24A, single phase
	240VAC/DC	12A, single phase
Net Weight:	59.0 lbs.	23.6 kg
Shipping Weight:	85.0 lbs.	36.0 kg
Height:	25.0"	635.0 mm
Diameter:	19.63"	498.6 mm

\* Output a minimum of 70dBc

### HOW TO ORDER

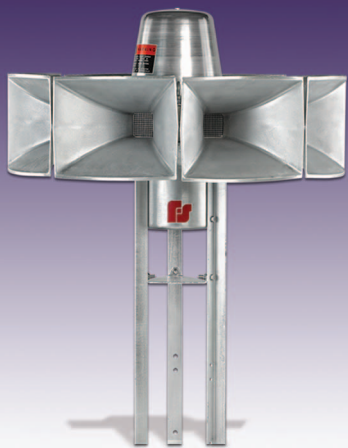
Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Considerations for system configuration:

- Specify model and voltage
- Specify motor starter (RC2W)
- Optional Accessories:  
Pole Mount Stand (PMS)  
Radio Activated Controller (FC)
- Specify radio frequency

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Bearing (Two Required)	8239A045
Brush and Spring (Two Required)	8247A020
Brush Holder (Two Required)	8247A021



**POWERFUL OMNI-DIRECTIONAL OUTDOOR WARNING SIREN**

- Omni-directional for 360° coverage
- Three distinct warning signals
- Full battery operation or battery back-up option
- High efficiency design produces 115dBc at 100 ft while making moderate power demands
- Optional roof mount stand
- 100% aluminum design

**Electro-Mechanical Siren**

**Model ECLIPSE 8**

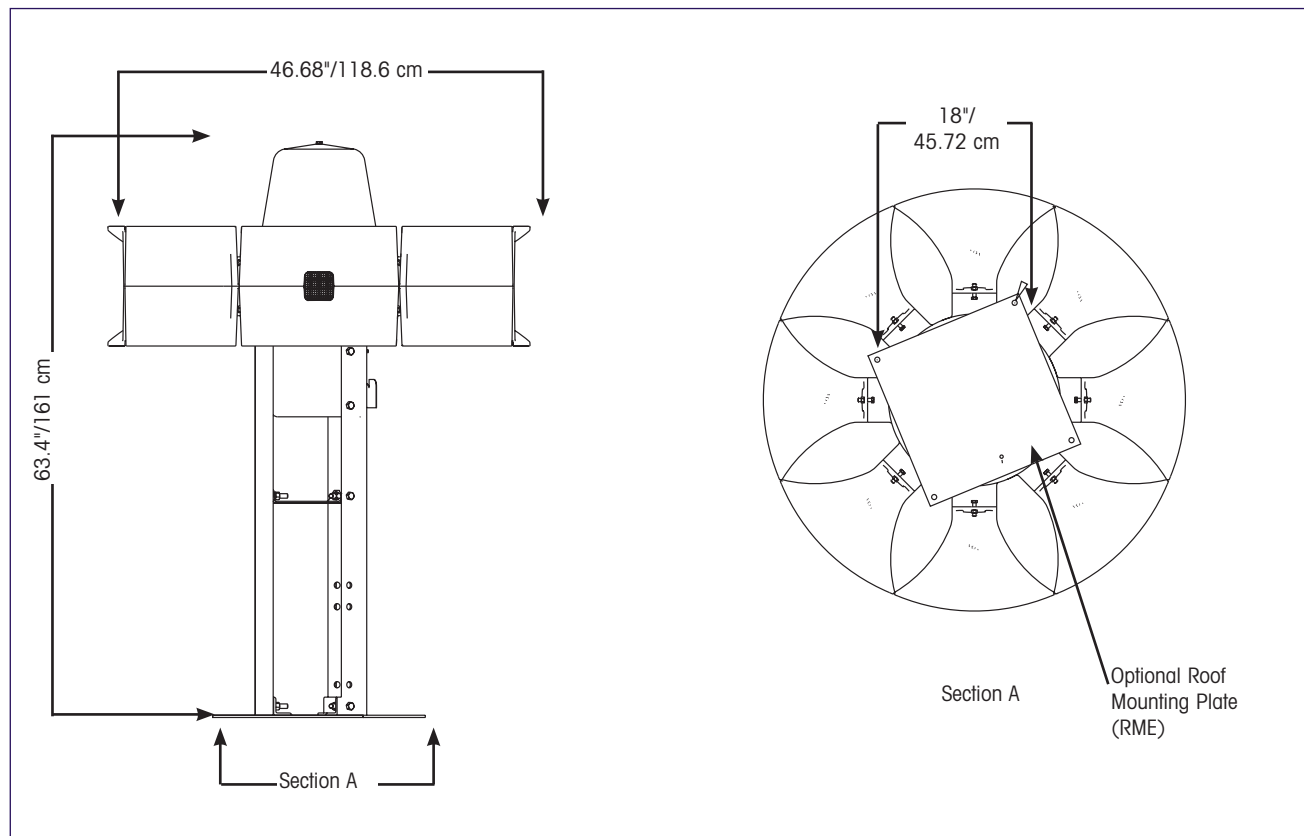
The Eclipse 8 is a mid-sized DC-powered omni-directional siren for outdoor warning that produces high intensity warning signals. This powerful and lightweight outdoor siren provides coverage with a maximum sound pressure level of 115dBc at 100 feet. The high decibel output provides maximum coverage with minimum installation costs. Operating from 48VDC, the siren utilizes the DC motor of our 2001 siren series for proven reliability.

The siren's eight projector horns covers a 360° omni-directional area, with the capability of producing three signal options: steady, wail and fast wail. The Eclipse 8 will supply a minimum of 15 minutes of siren operation from its batteries even after 24 hours without AC power. The siren controls are available with battery operation, AC operation and AC operation with battery back-up. One-way and two-way radio control or landline options are available.

Model	Voltage	Decibels @100'	Operating Current	Output Frequency	Beam Width	Mount
Eclipse 8	48VDC	115dBc	112 amps (Nominal)	525Hz	360°	Roof or Steel pole



## BATTERY POWERED SIREN (ECLIPSE 8)



### SPECIFICATIONS

Operating Temperature:	-22°F to 140°F	-30°C to 60°C
Effective Range @ 70dBc:	2200'	
Net Weight:	225 lbs.	116.0 kg
Shipping Weight:	380 lbs.	173.0 kg
Height:	63.4"	161.0 cm
Width:	46.68"	118.6 cm

### OPTIONAL ACCESSORIES

<u>Description</u>	<u>Part Number</u>
Eclipse Siren Control AC operated, 208 or 220/240 VAC (specify voltage). NEMA4X aluminum control cabinet, (2) 48VDC contactors, and transformer/rectifier. 182 lbs. / 53kg	2001AC
Federal Controller 120VAC NEMA4X aluminum control cabinet, (4) chargers (2) 48VDC contactors, and NEMA 3R aluminum battery cabinet. (4) preset siren functions. Radio not included. 224 lbs. / 102Kg	DCFCB

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Motor	84020061

### HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- Specify model (Eclipse 8)
- Specify mounting options:  
Steel Pole Mount (standard)  
Roof Mount Equipment (optional)





## DESIGNED FOR OUTDOOR WARNING

- Patented stator/horn design allows highly efficient, high-output operation from minimal battery source
- Sound output can cover four square miles
- Full battery operation or battery backup
- Produces 130dBc @ 100'
- Three-tone – Wail, Fast Wail and Steady
- Maintenance-free sealed bearing motors
- UL Listed Siren Controllers

# Battery Powered Electromechanical Siren

## Models 2001-130

The Federal Signal Model 2001-130 is a unique innovation in the high power outdoor warning siren market. The patented design represents a new generation of rotating, uni-directional electromechanical sirens.

The 2001-130 can be operated with a 120VAC battery-backup control cabinet or a 240VAC/VDC control cabinet.

This siren can be controlled remotely via wire or radio with the Model FC controller. The Model 2001-130 produces three distinctly different tones - Wail, Fast Wail and Steady. The high decibel output provides for maximum coverage from a single siren site.

Federal Signal's Model 2001-130 produces 130dBc at 100 feet. Its ring radiator projects a 60° beam of sound which rotates at two RPM and is adjustable to six RPM. The design allows for small size without compromising sound output, and minimizes wind loading.

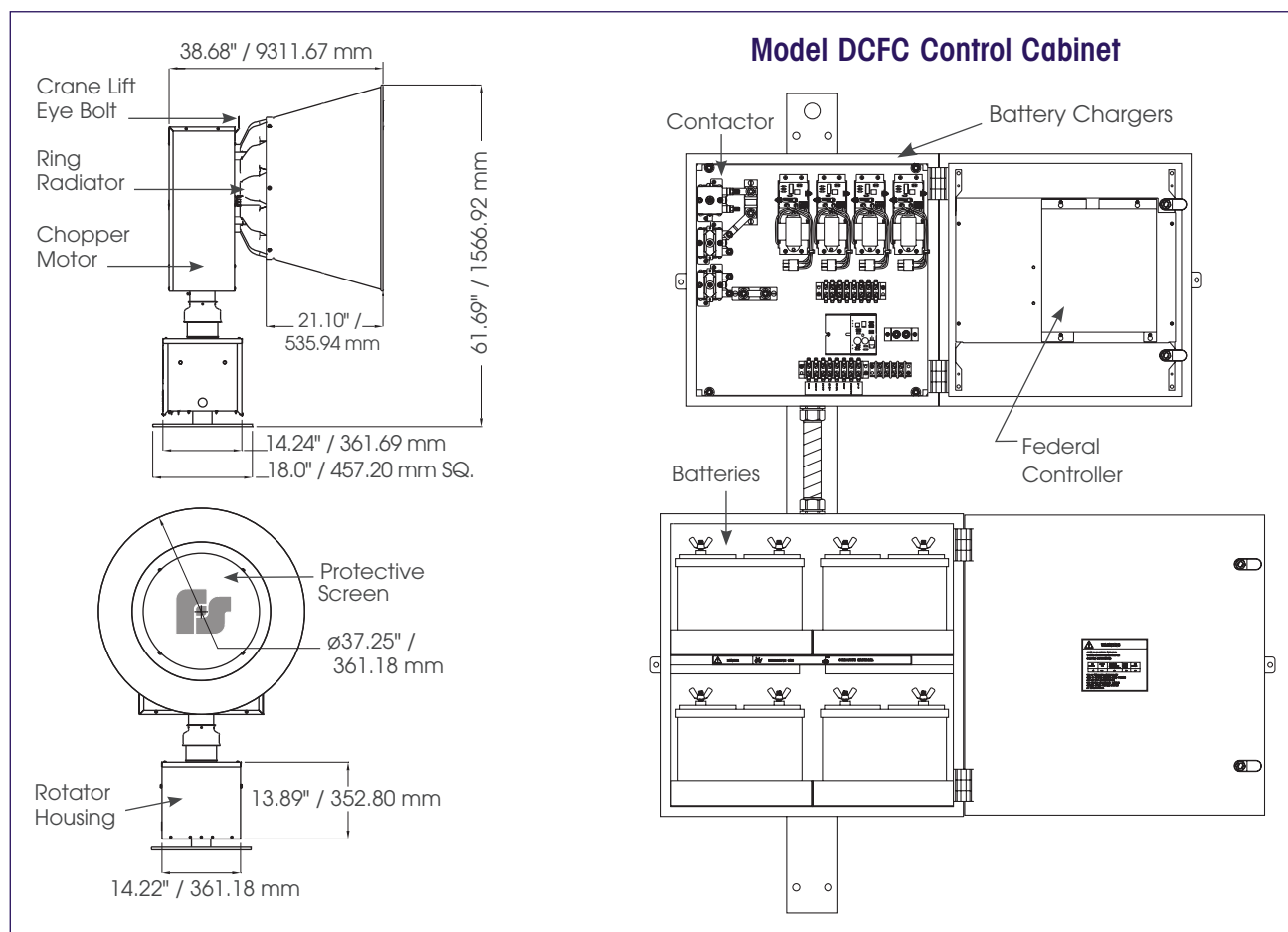
The Model 2001-130 is ideally suited for wide area coverage with high decibel output and attention getting signals. The Model 2001-130 also overcomes high ambient noise areas, such as those found in industrial plants, steel mills, chemical plants and refineries.

Model	Voltage	Decibels @ 100'	Operating Current	Standby Current
<b>2001-130</b>	48VDC	130dBc	100 amps (Nominal)	N/A
<b>DCFCB</b>	120VAC	N/A	4 amps	0.2 amps
<b>2001AC</b>	240VAC <sup>1</sup>	N/A	30 amps <sup>2</sup>	N/A

<sup>1</sup> Also operates on 208 or 220/240VDC (please specify)

<sup>2</sup> 50 amp service recommended

## ELECTROMECHANICAL SIREN (2001-130)



### SPECIFICATIONS

Rotation Speed: (2001-130) 2-6 RPM (adj.)  
 Continuous Signal Time\*: (2001DC) 15 minutes minimum @ full output  
 Standby Time: (2001DC) 20+ days  
 with 5 minutes full signal reserve  
 Effective Range at 70dBc: 6200 ft.

#### -tone

Steady:

Wail:

Fast Wail:

#### FREQUENCY

750 Hz

470-705 Hz

600-705 Hz

#### SWEEP

N/A

10.0 sec.

3.5 sec.

\* After AC power failure

### HOW TO ORDER

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Considerations for system configuration:

- Specify model
- Specify controller

Model Number	Operating Temperature	Net Weight	Shipping Weight	L	Dimensions W	H
<b>2001-130</b>	-22°F – 140°F -30°C – 60°C	395 lbs. 180 kg	450 lbs. 205 kg	41" 104.14 cm	37" 93.98 cm	55" 139.7 cm
<b>DCFCB</b>	-22°F – 140°F -30°C – 60°C	141 lbs. 64 kg	234 lbs. 106 kg	16" 40.64 cm	24" 60.96 cm	48" 121.92 cm
<b>2001AC</b>	-22°F – 140°F -30°C – 60°C	159 lbs. 72 kg	182 lbs. 83 kg	10" 25.4 cm	24" 60.96 cm	24" 60.96 cm



# Directional Speaker Array

## Model DSA

### ADAPTABLE MOUNTING SYSTEM FOR CONTROLLED MULTI-DIRECTIONAL OUTPUT

- Overcomes ambient noise of industrial environments
- Provides maximum speech recognition and tone reproduction
- Produces 111dBc to 121dBc @ 100'
- Three mounting kits available
- UL and cUL Listed

Federal Signal's Model DSA Directional Speaker Array provides excellent voice and tone reproduction and is ideal for overcoming high levels of industrial noise.

Design flexibility allows the user to combine up to four speaker arrays; each array will hold from two to six re-entrant speakers. Speakers have a 70° horizontal angle of dispersion, accommodating specific sound output patterns. (When vertical stacks are placed 90° apart, a 180° horizontal coverage is possible.)

The Model DSA mounting kits allow for multiple speaker arrays to be mounted on the same pole at 90° increments. The downward tilt can be adjusted by 15°. The mounting flexibility of this system allows the speakers to be pointed directly at a targeted area for more concentrated sound output.

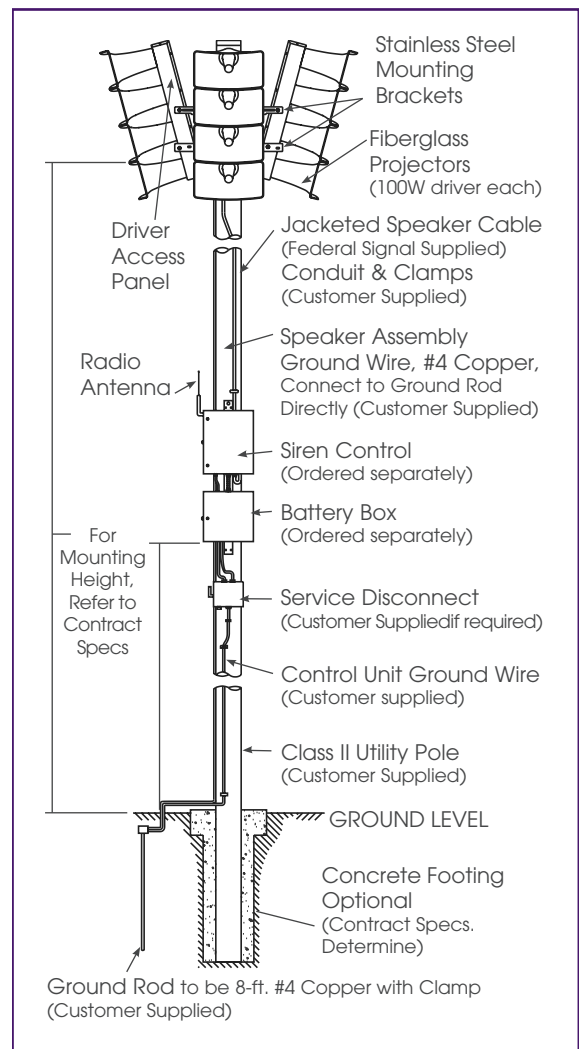
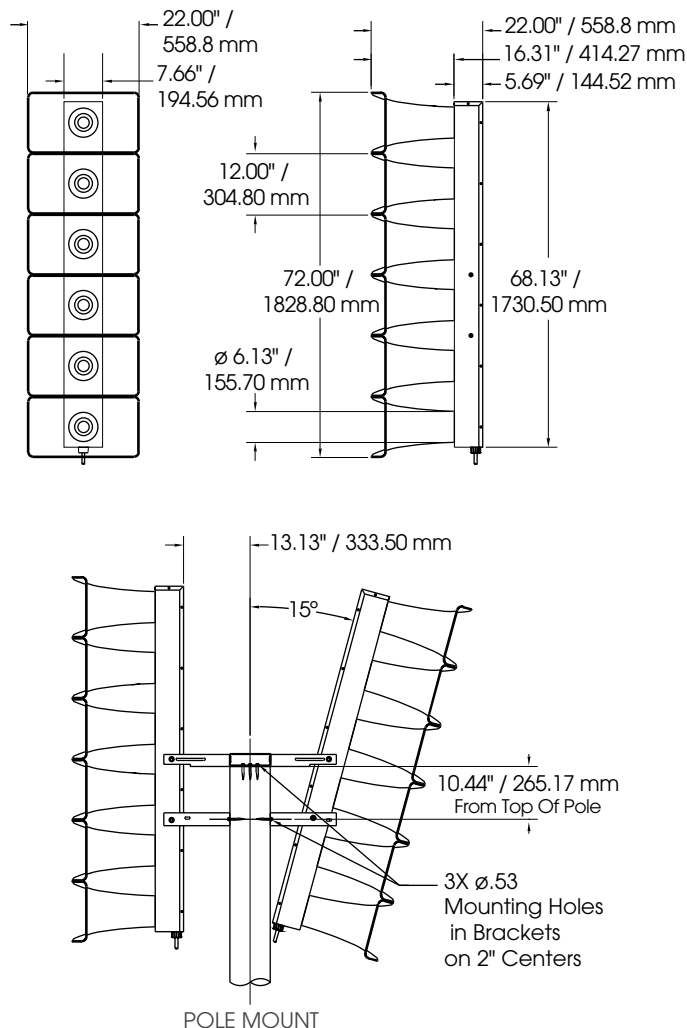
A DSA consists of a corrosion resistant aluminum frame with fiberglass projectors and stainless steel mounting hardware. Each speaker contains a high-efficiency 100 watt driver.

Amplification, tone generation and signal timing are provided by the Model UV controller, purchased separately.

Ideal for outdoor industrial plant warning, the Model DSA speaker array allows sound coverage to be customized to each site, preventing wasted sound in and around the plant. The Model DSA provides better speech intelligibility within a coverage zone than omni-directional speaker arrays.

Model	No. of 100W Speakers	Total Watts	Decibels @ 100'	Effective Range	Net. Wt. lbs./kg
DSA2	2	200	111dBc	1,700'	43/19.5
DSA3	3	300	115dBc	2,200'	80/36.2
DSA4	4	400	117dBc	2,600'	95/43.1
DSA5	5	500	119dBc	3,000'	110/49.9
DSA6	6	600	121dBc	3,400'	125/56.7

## DIRECTIONAL SPEAKER ARRAY (DSA)



### SPECIFICATIONS

Color: Black projectors with Off-White Housing  
 Paint: TGIC – Polyester Powder Coat, highly corrosion resistant  
 Frequency Response: 300Hz - 4000Hz

### HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- The DSA speaker array is used in conjunction with the UV controller. The UV houses the amplifiers that drive the DSA speaker array. Each DSA is made up of individual 100 watt speakers.
- FOR EXAMPLE:** A DSA4 has four 100 watt speakers.
- Multiple DSA arrays can be controlled by a single UV

as long as the total wattage meets or exceeds the total wattage required by the DSAs. The total watt required is the sum of all 100 watt speakers from each DSA.

### MOUNTING KITS

<b>Model</b>	<b>Mounting Configuration</b>
DSAMK1	One vertical support wall mount
DSAMK2	Two vertical supports 180° apart on pole
DSAMK4	Four vertical supports 90° or 180° apart, pole mounted
DSAMKSP	Mounting Kit for steel pole for (1) vertical stack
DSAMKSPB45	Mounting Bracket for steel pole for (1) vertical stack

### REPLACEMENT PARTS

<b>Description</b>	<b>Model</b>
Driver, 100 watt	8570063A



## DESIGNED FOR ALERT/ WARNING AND PUBLIC ADDRESS OVER A WIDE AREA

- 360° sound coverage with no variation in the horizontal plane
- Multiple tones and public address
- Excellent frequency response
- Produces 106dBc to 121dBc @ 100'
- Each module has four 100 watt drivers
- Operates with UV controller
- UL and cUL Listed

# Modulator® Speaker Array

## Model MOD Series

Federal Signal's Modulator® Speaker Array Series consists of a family of six electronic sirens. These innovative omni-directional sirens are capable of producing high-intensity warning signals over a wide area. This efficient design enables these sirens to produce a high sound level, while making only moderate demands on the power source.

Each Modulator Speaker Array is made up of aluminum modules that utilize four 100 watt drivers. Speaker arrays require a siren control unit/battery cabinet (purchased separately).

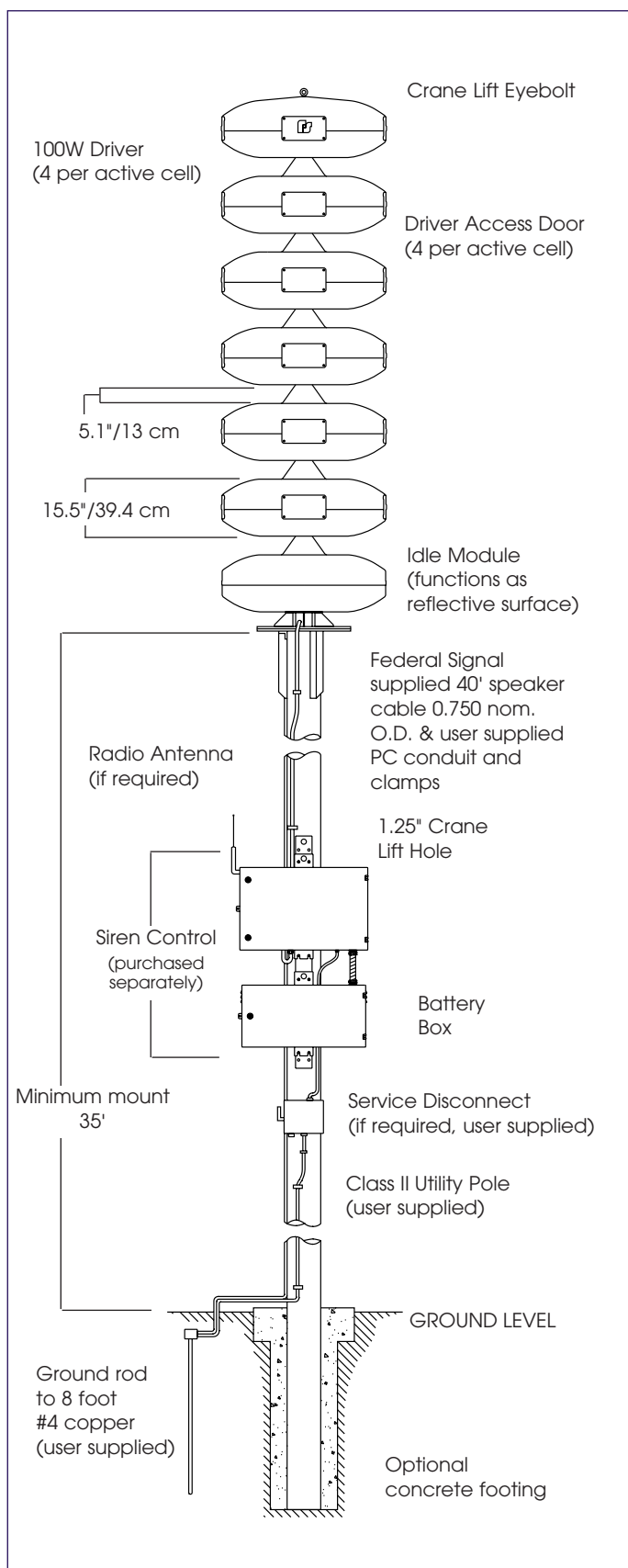
The Modulator Speaker Array provides a flat frequency response from 200 to 2000Hz for excellent voice reproduction or warning signals such as: Wail (attack), Pulsed Steady, Steady (alert), Alternating Steady, Alternating Wail, and Pulsed Wail – which are produced by the modulator siren control unit.

Federal Signal's Modulator Speaker Array is intended for outdoor applications. Industrial sites such as refineries, chemical plants, power plants, or tank farms are typical applications for these omni-directional electronic arrays.

Model	Active Modules	Watts	Decibels @ 100'*	Effective Range @ 70dBc
<b>MOD1004</b>	1	400	106dBc	1,200'
<b>MOD2008</b>	2	800	112dBc	1,800'
<b>MOD3012</b>	3	1200	115dBc	2,200'
<b>MOD4016</b>	4	1600	118dBc	2,800'
<b>MOD5020</b>	5	2000	120dBc	3,100'
<b>MOD6024</b>	6	2400	121dBc	3,400'

\* MOD 6048 available, produces 125dBc @ 100'. Contact factory for specification assistance.

## MODULATOR® SPEAKER ARRAY (MOD)



### SPECIFICATIONS

Frequency Response: 200-2000Hz  $\pm$  1dB  
 Horizontal Coverage: 360°  $\pm$  1dB

#### Wind Loading @ 110mph wind velocity<sup>1</sup>:

MOD1004	360 lbs.
MOD2008	540 lbs.
MOD3012	720 lbs.
MOD4016	900 lbs.
MOD5020	1080 lbs.
MOD6024	1260 lbs.

<sup>1</sup>Wind loading is the calculated force of wind at 110mph (shoreline), exposure D (flat, unobstructed coastal areas) on frontal area 4.64 ft. per American National Standards Institute A58.1 "Minimum design loads for buildings and other structures."

Model	Height (in./cm)	Net Wt. (lbs./kg)	Shipping Wt. (lbs./kg)
MOD1004	43.17"/109.65	181.0/82.0	350.0/158.8
MOD2008	63.7"/161.8	296.0/134.3	400.0/181.4
MOD3012	84.3"/214.1	411.0/186.4	600.0/272.2
MOD4016	105.0"/266.7	526.0/238.6	750.0/340.2
MOD5020	125.5"/318.8	641.0/290.8	1000.0/453.6
MOD6024	146.0"/370.8	760.0/344.7	1270.0/576.0

### HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- Specify speaker array model number – each speaker array model must be ordered with a specific corresponding UV and Amplifier.

#### SPEAKER CONTROLLER\*

MOD1004	UV + 1 UV400
MOD2008	UV + 2 UV400
MOD3012	UV + 3 UV400
MOD4016	UV + 4 UV400
MOD5020	UV + 5 UV400
MOD6024	UV + 6 UV400

- Specify optional CABEX 10' cable extension<sup>2</sup>

<sup>2</sup> 40 feet of cable is supplied with siren. Extension cable in 10 foot increments is also available. Mounting the UV controller further than 100 feet is not recommended (further mounting may decrease power output).

\* Controllers available in Radio, IP, and Landline.

### REPLACEMENT PARTS

Description	Model
Driver, 100 watt	8570063A





# Siren Controller

## Model FC

### ECONOMICAL, FULL-FEATURED SIREN CONTROLLER

- Remote Radio Control function available
- Controls warning lights and audible devices
- Two-tone sequential, DTMF and digital FSK decoding
- Four individually programmable output relays
- Push-button local control or dry-contact closure inputs for landline control
- Six built-in siren tone signals

The Federal Signal Controller Model FC is a 120VAC radio receiver/decoder and timer with relay outputs. This versatile model is ideal for virtually all siren control applications and any other process which can be controlled via relay contacts.

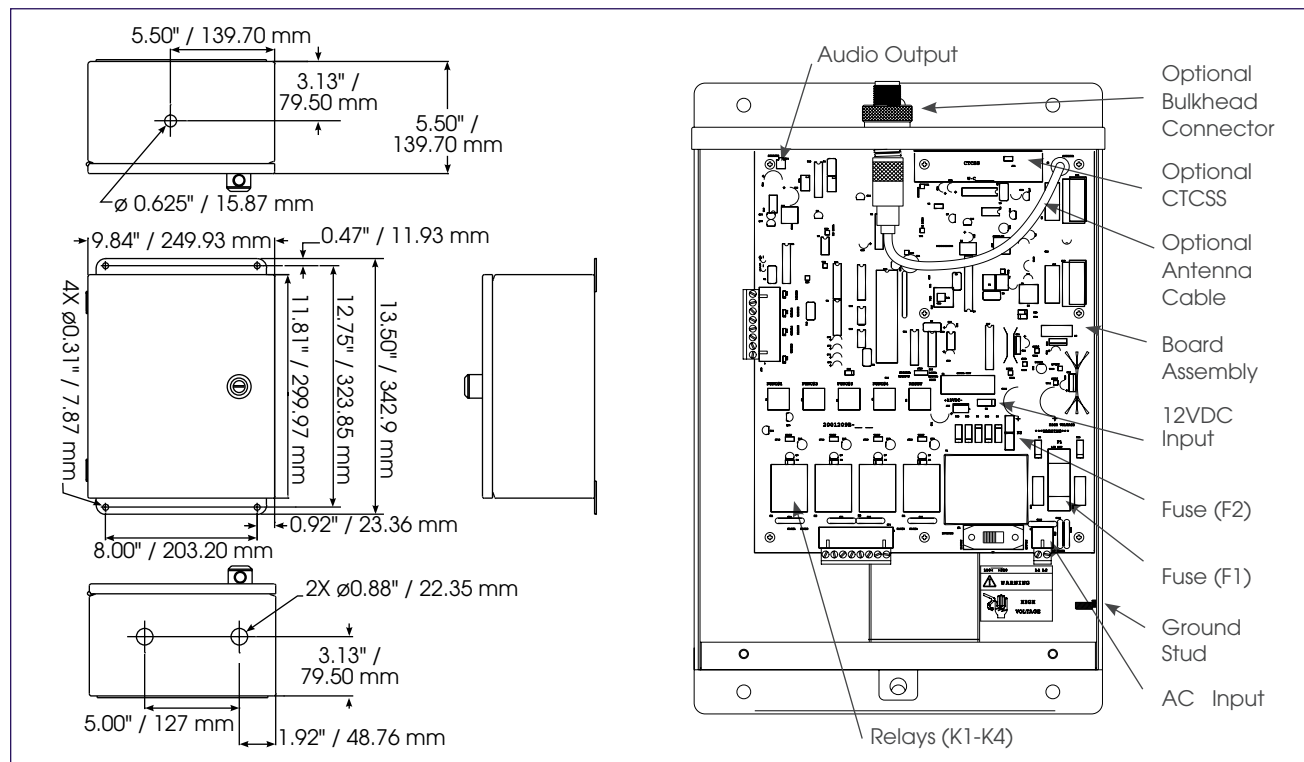
The microprocessor-based controller comes with two-tone sequential, dual-tone multiple frequency (DTMF), or frequency shift keying (FSK) decoding capabilities, and up to four individually programmable relays.

Options include a synthesized radio receiver (low band, high band, or UHF), a built-in tone generator, which adds six standard tones, public address capability, and a software package that allows the unit to be connected to any IBM-compatible computer to modify supplied timing or to create unique tone patterns. Programming options include radio receiver frequency, two-tone sequential tones/DTMF/FSK decoding digits, custom audible signal tones, and independent control of output relays and timing patterns for electromechanical sirens.

Up to six control codes may be programmed and activated by any combination of two-tone sequential, DTMF or FSK tone bursts. Four of the timing sequences can be initiated using local push buttons or remotely through dry contact closures.

The Federal Controller is used to control Federal Signal siren Models 2 and 2001. Also, the unit can be used to add radio activation of indoor PA and SelecTone® systems, to control warning lights, or to replace existing and outdated electro-mechanical timing mechanisms for existing systems.

## RADIO ACTIVATED CONTROLLER (FC/FCG)



## SPECIFICATIONS

### ELECTRICAL

AC Power Inputs:	120 or 240VAC
Battery Input (12VDC):	10.5 to 18.0VDC
Input Current:	120VAC 180mA AC Max.
	12VDC 460mA DC Max.
Relay Output Timings:	0.5 to 999.0 seconds

### RECEIVER/DECODER

Frequency Range (programmable):	
Low Band:	30 to 50MHz in 5kHz steps
High Band:	148 to 174MHz in 5kHz steps
UHF:	450 to 470MHz in 12.5kHz steps
Sensitivity:	0.35 uV for 12dB SINAD
Rejection:	(-60)dB
Selectivity:	(-60)dB
Stability:	5.0 ppm
Antenna Impedance:	50.0 ohms
Audio Band Pass:	64 to 3300 Hz

Deviation Acceptance:	3.5± 1.0kHz for valid decoding (3.3 kHz nom.)
Decode Sensitivity:	20dB S/N (typical 0.5 uV or RF)
<b>DTMF</b>	
Format:	50/50 to 1000/1000 milliseconds (digit duration/digit silence)
Digit Length:	3 to 12 digits
<b>FSK</b>	
Format:	1200 Baud, MSK
Usable Decode Sensitivity:	10dB SINAD (min.)
<b>TWO TONE</b>	
Timing:	0.5 to 8.0 seconds duration (each tone)
Intertone Silence:	0.4 seconds max.
Frequency Range:	300-3000Hz
Operating Temperature:	-30°C to 65°C (-22°F to 140°F)
Dimensions:	14.25"H x 9.25"W 5.5"D (36.2 cm x 23.5 cm x 14.0 cm)

## HOW TO ORDER

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Considerations for system configuration:

- Specify model (FC) – call representative for various options to meet specific requirements.
- Specify voltage (120VAC or 240VAC)

- Specify radio frequency
- Specify antenna (RP164) high band or UHF band (one way)
- Optional Accessories:  
Programming Software (FSPWARE)  
Tone coded squelch decoder (CTCSS/PL)



# UltraVoice™ Indoor Controller

## Model UVIC

The Federal Signal UltraVoice™ Indoor Controller, Model UVIC, is designed to deliver clean, clear, amplified audio to a network of speakers (sold separately), configured for indoor notification or evacuation. The UltraVoice Indoor Controller has been designed for high quality reproduction of live or pre-recorded voice and tone, providing the ability to automate testing and emergencies.

The UVIC is housed in a single NEMA1 style cabinet, with provisions for up to two 400 watt amplifiers (sold separately). Each controller requires 120VAC and contains two sealed lead-acid batteries, providing over 30 minutes of operation in the event power has been lost. The UVIC may be either Landline activated or Radio controlled from a remote location. Landline activation can initiate one of the 8 onboard functions by connecting a momentary dry contact closure (customer supplied) to the appropriate pc board mounted terminal block. These functions can contain a combination of tone and pre-recorded voice or Public Address. Public Address is available from the supplied microphone located inside the controller. If Radio Control of the UVIC is desired, an optional Federal Signal Encoder Model SS2000D and base station radio (approved radio license required at time of order) must be added to the control package and is typically located where administrative control and activation resides. In either configuration, each function will remain active for 3 minutes as standard.

The UVIC controller is also compatible with our Federal Commander® Windows® Based Digital status monitoring and activation software to “point and click” activation and local indication of alarms or fault conditions. Available functions to be displayed on a computer screen or captured to a database or printer are: AC Power, Battery Voltage, Charger Operation, Activation Current, Amplifier Status, Quiet Test, Intrusion and Local Activation.

### Options

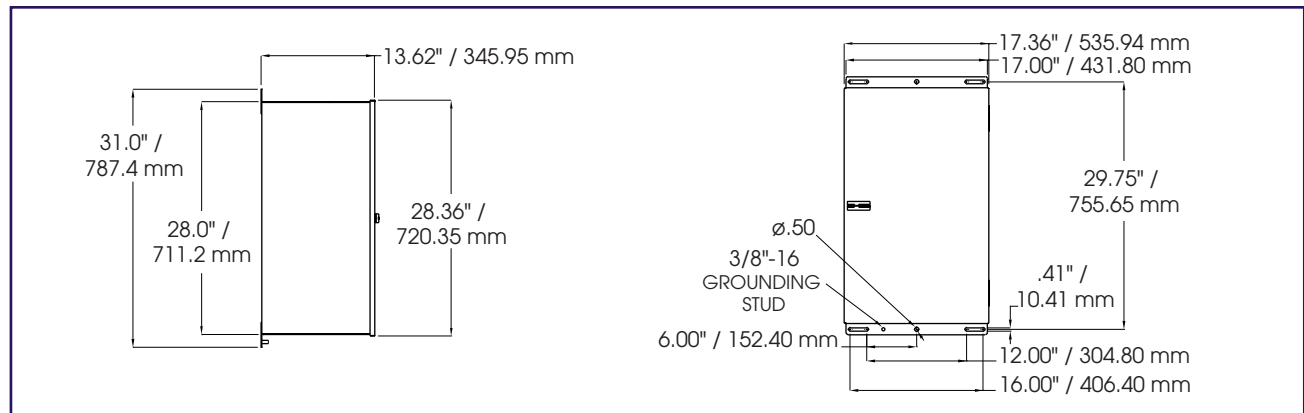
Ultravoice units may be equipped with a programmable RF receiver for remote control using MSK or DTMF protocols. Federal Commander Windows based software provides command and control for UltraVoice two way products

## FEATURES

- Landline, Ethernet (IP) or Radio Control w/Two-way Status Monitoring
- Public Address
- Seven Standard Tones
- 70 Vrms Audio Output Standard (25 Vrms optional)
- 4 Programmable Relays, 600-Ohm, Line-level and 33-OHM Audio Outputs (with optional UVARM)
- Type 1 Enclosure
- Up to 16 Digitally Stored Messages Standard (8 minute total storage capacity)
- Batteries and Local Microphone Included
- Optional Windows Based Activation and Status Monitoring Software
- UL and cUL Listed

Operating Temperature	Net Weight (No Amplifiers)	Shipping Weight (UVIC)	Shipping Weight (Batteries)	Height	Width	Depth
-30°C to 65°C	64.55 lbs	200 lbs	58.97 lbs	31"	17.36"	13.62"

## ULTRAVOICE™ INDOOR CONTROLLER (UVIC)



### ORDER INFORMATION

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Considerations for system configuration:

UVIC	Indoor Controller, No Radio
UVICH	Indoor Controller, Two-way VHF (150-174) MHz
UVICU	Indoor Controller, Two-way UHF (450-474) MHz
UVIC-IP	Indoor Controller, IP-enabled
UVIC-LL	Indoor Controller, Landline
UVICH240	Indoor Controller, Two-way 240VAC, VHF
UVICU240	Indoor Controller, Two-way 240VAC, UHF

### SPECIFICATIONS

Input Voltage:	120 or 240VAC +/- 10%, 50/60 Hz Single-phase
Input Current:	5A AC, 45A DC Max
Operating Voltage:	24VDC
Standby Time:	3 Days with 5 minutes in reserve
Continuous Signaling Time:	30 minutes
Audio Output (UV400):	70 Vrms (nominal)

### OPTIONAL ACCESSORIES

MODEL	DESCRIPTION
UV400	Amplifier, 400 Watt
DVR	Digital Voice Recording Fee
DV480	Digital Voice Chip (8 minutes)
SFCD10	Federal Commander® Two-way Status Monitoring Software, 10 Site License
SFCD25	Federal Commander Two-way Status Monitoring Software, 11-25 Site License
TB-LL	Telco Base, Landline
UVARM	UltraVoice Audio Relay Module Balanced 33-Ohm output: Adj. from 0.2-1.9 Vrms Balanced 600-Ohm output: Adj. from 0.2-3.0 Vrms or -12 to +11 dBa Single Ended Line-Level: Adj. from 0.2-3.0 Vrms Relay Outputs: 4 programmable relays rated 30Vdc, 15A
UVIC25ST	Step-down transformer, 68-25 Vrms <small>(Note: 25 Vrms step down transformer occupies one amplifier slot making the UVIC capable of a maximum of 400 watt in this configuration.)</small>



## **MICROPROCESSOR-BASED CONTROL SYSTEM FOR HIGH-POWER ELECTRONIC SPEAKER ARRAYS**

- One- or two-way siren control
- Status monitoring
- Seven warning tones
- Public address
- Digital pre-recorded voice messages
- Landline, Ethernet (IP) or Radio Control
- Pole or wall mount
- Type 4 or optional 4X enclosure
- UL and cUL Listed

# **UltraVoice™ Electronic Siren Controller**

## **Model UV**

The Federal Signal UltraVoice™ is designed to provide one- or two-way control of high-power electronic sirens such as the MOD or DSA, or to control indoor AudioMaster speaker systems. UltraVoice produces amplified audio signals including seven built-in warning tones, high-quality live public address, and pre-recorded voice messages.

The UltraVoice is housed in two cabinets. The control cabinet houses the control module and amplifiers. A separate vented cabinet houses the batteries. The standard cabinet for the UltraVoice is made from 5052-H32 grade aluminum. This control cabinet is also available in 304 or 316 stainless steel. The number of amplifiers and batteries (purchased separately) required by an UltraVoice Controller depends on the power required by the specific siren array or speaker system.

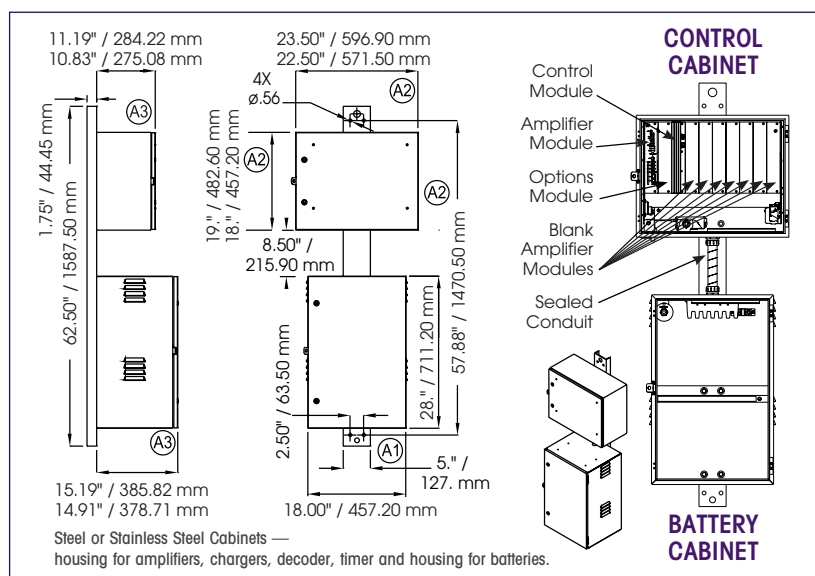
Two-way systems provide siren status to the control station and include a sensor package, radio transceiver and encoder/decoder. Computer controlled status monitoring of the following conditions is provided: AC Power, Battery Voltage, Charger Operation, Activation Current, Signal Line A and B, Mode of Operation, Quiet Test, Intrusion, and Local Activation.

### **Options**

UltraVoice units may be equipped with a programmable RF receiver for remote control using MSK, DTMF or Two-tone Sequential protocols. Pre-recorded digital voice messages can be added by simply plugging in a four- or eight-minute IC chip. Windows®-based software is available that allows users to configure activation sequences.



## ULTRAVOICE™ ELECTRONIC SIREN CONTROLLER



### HOW TO ORDER

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements. Considerations for system configuration:

- Specify Model Number –  
UV – Controller, One-way  
UVT – Controller, Two-way Digital with Radio Control Options  
UVT-IP – Controller, IP-Enabled  
UVT-LL – Controller, Landline
- Specify Radio Control Requirements –  
One-way or Two-way; Low Band, High Band, UHF and Private Line
- Specify Protocol – DTMF, MSK, Two-tone
- Specify Radio Frequency
- Specify Number of 400 Watt Amplifiers Required (Model UV400)
- Specify Accessories –  
Digital Voice Chips, 8 Minutes  
Customized Tones Available per Quote  
Solar Charging System  
FS-MWIN – Windows® Programming Software (Two-tone and DTMF)  
Antenna – SS2000 Encoder  
Stainless Steel or Aluminum Cabinets – HTR2 or HTR4 Battery Heaters  
Commander – Two-way Digital Programming and Control Software  
MNC-MC – Microphone  
TB-LL – Telco Base, Landline

### STANDARD TONES

<u>Tone</u>	<u>A/B Tone Frequency Range</u>	<u>Sweep Rate (seconds)</u>
Wail	400/480-850/1020	13.0
Pulsed Wail	400/480-850/1020	1.5 / 13.0
Alternate Wail	400/480-850/1020	1.5/13.0
Steady	850/1020	N/A
Pulsed Steady	850/1020	1.5
Alternate Steady	850/1020	1.5

### SPECIFICATIONS

#### Power

Input Voltage:	120/240±10%, 50/60Hz VAC single-phase
Input Current:	7 A Max.
Operating Voltage:	24VDC
Standby Current:	
UV	100mA DC
UVT	600mA DC
Standby Time:	> 7 days
Continuous Signaling Time:	30 min.

#### Control Module

Signal Duration (auto reset):	3 min.
Microphone	
Input Impedance:	10k ohms
Audio Distortion:	1% THD max.
Maximum Load:	600 ohms
Contact Closure: (min)	500 ms<1.0k ohms

#### Amplifier Module

Frequency Response:	
(300 to 3 kHz)	±3dB (ref. 1kHz)
Output Voltage (Tone and PA):	
(to speaker drivers)	70 Vrms
Input Impedance:	
(per amplifier)	100k ohms

#### General

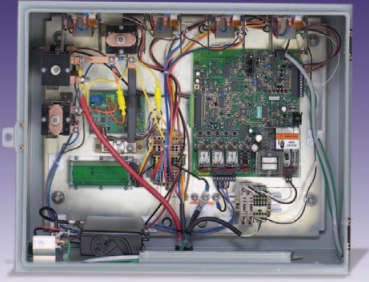
Operating Temperature**:	
-22°F to 149°F	-30°C to 65°C
Enclosures:	
Control Cabinet:	Type 4 or 4X
Battery Cabinet:	Type 4 (vented)

\*\* The siren can operate throughout this temperature range provided the battery temperature is maintained at 0°F/-18°C or higher.

### BATTERY REQUIREMENTS

- Customer must provide necessary batteries. Call for assistance with specific system requirements.





## **ELECTRO-MECHANICAL SIREN CONTROLLER**

- Two-way Siren Controller for 48VDC Sirens
- Two-way Radio Control and Status Monitoring
- FSK Two-way Signaling Format
- Simultaneous Single Tone, Two-tone Sequential, and DTMF Decoding
- Push Buttons for Local Activation
- Landline, Ethernet (IP) or Radio Control
- UL Listed for general signaling

# **Two-way Digital Controller for 2001 and Eclipse Siren**

**Models ACFCTBD and DCFCTBD**

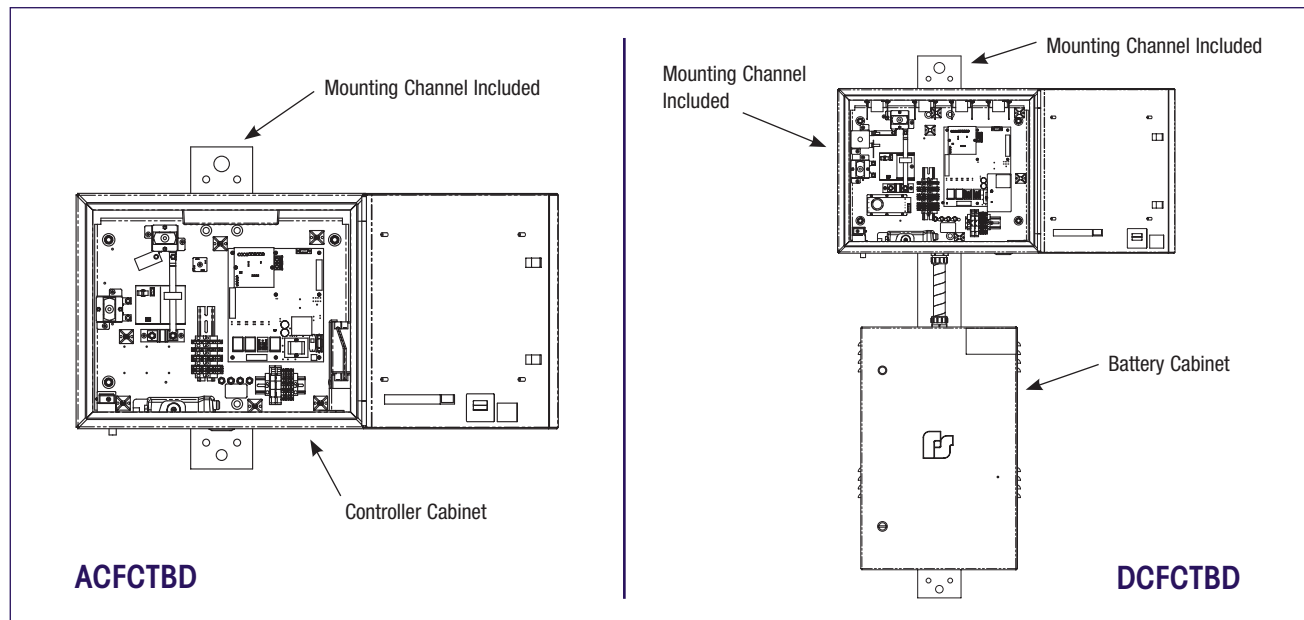
The ACFCTBD and DCFCTBD models are two-way, battery-operated status monitoring siren controllers for use with the 2001 and Eclipse siren series. These controllers interface with an off-the-shelf two-way radio transceiver and communicate to the base control via FSK signaling. In addition to FSK, the controllers will decode any combination of Single-tone, Two-tone Sequential, or DTMF formats. This makes the two-way controllers compatible with virtually any existing siren control system.

All ACFCTBD and DCFCTBD models come equipped with four (4) independent relay outputs that can be programmed to activate with various codes. There are four (4) landline inputs and four (4) local push buttons for activation, plus cancel. Activation codes, relay timing, and optional warning sounds are programmed into the unit through a standard RS232 serial port or over-the-air from the central control point.

The ACTCFTBD and DCFCTBD models offer six (6) user programmable functions in addition to the five pre-set functions: ARM, DISARM, REPORT, GROWL TEST, and MASTER RESET. The controllers includes the necessary sensors and wiring to supply information on the following areas of operation: AC Power Status, Communications Status, Low Battery Voltage Indication, Siren Activation Current, Intrusion, and Siren Rotation.

The DCFCTBD models are available in VHF-high, and UHF bands using Motorola transceivers to provide two-way signaling capabilities. An optional transformer/rectifier, used for primary system power in an AC/DC configuration, is available when AC power with battery back-up is required.

## TWO-WAY DIGITAL CONTROLLER FOR 2001 AND ECLIPSE SIREN (ACFCTBD/DCFCTBD)



### SPECIFICATIONS

Operating Temperature:	-30°C to 65°C	Shipping Weight:	
AC Supply Voltage:		ACFCTBD:	155 lbs. (70.5 kg)
ACFCTBD:	115VAC @ 4.0 amps	DCFCTBD:	300 lbs. (136.36 kg)
DCFCTBD:	120VAC @ 4.0 amps	2001TRBP:	150 lbs. (68.2 kg)
2001TR: 08/220/240 VAC single phase @ 25-30 amps (approx.)		Current Draw:	< 0.2 amps in standby
ACFCTBD:	8A @ 13.3VDC	4 Relay Outputs:	SPST
DCFCTBD:	6A @ 13.3VDC	Contact Rating:	5A @ 28VDC
Battery Backup:			5A @ 240VAC
ACFCTBD:	12VDC 12A/H standby	Audio Output Voltage:	>2V Peak to Peak
DCFCTBD:	48VDC	Total Harmonic Distortion:	10% @ 1kHz Sinewave
Dimensions:		Maximum Audio Load:	8 Ohms
ACFCTBD Controller:	18" x 22.5" x 11"		
DCFCTBD Controller:	19.0" x 23.5" x 11.19"		

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Two-way Federal Controller, AC Powered	ACFCTBD <sup>1,2</sup>
Two-way Federal Controller, DC Powered	DCFCTBD <sup>1,2</sup>
Two-way Federal Controller, High Band, 148-174 MHz, AC Powered	ACFCTBDH <sup>1,2,3</sup>
Two-way Federal Controller, High Band, 136-174 MHz, DC Powered	DCFCTBDH <sup>1,2,3</sup>
IP-enabled Two-way Electro-mechanical Controller	DCFCTBD-IP <sup>1,3</sup>
Two-way Federal Landline Controller	DCFCTB-LL <sup>1</sup>
Two-way Federal Controller, UHF Band, 450-470 MHz, AC Powered	ACFCTBDU <sup>1,2,3</sup>
Two-way Federal Controller, UHF Band, 450-470 MHz, DC Powered	DCFCTBDU <sup>1,2,3</sup>

### HOW TO ORDER

Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.

Considerations for system configuration:

- Specify Federal Programming software (FSPWARE) for non-digital applications or Federal Commander Digital Software

<sup>1</sup> For use with 2001 and Eclipse siren series

<sup>2</sup> Antenna and cable are not included with radio activation control and must be ordered separately

<sup>3</sup> Batteries required. Call for assistance with specific system requirements

# **DTMF Siren Encoder/ Decoder**

## **Model SS2000**



### **DESIGNED FOR ACTIVATION OF RADIO CONTROLLED SIGNAL DEVICES**

- LCD shows 4-line control and programming information
- 18 “hot” command keys
- Hundreds of available functions
- Two-way unit automatically logs activity to printer output on command software
- Desktop and 19" rack mount
- Optional printer and activation via contact closure through SS Remote
- Easy to program and use

Federal Signal's Model SS2000 is a versatile, user-friendly and economical siren controller that supports one-way communication with the option of two-way communications using DTMF or FSK encoding. Command sequences are programmable and stored in non-volatile memory chips for retention, even when electrical power is disrupted.

Power is supplied by a standard 120VAC wall outlet and can be backed up with a user supplied 12VDC battery and charger.

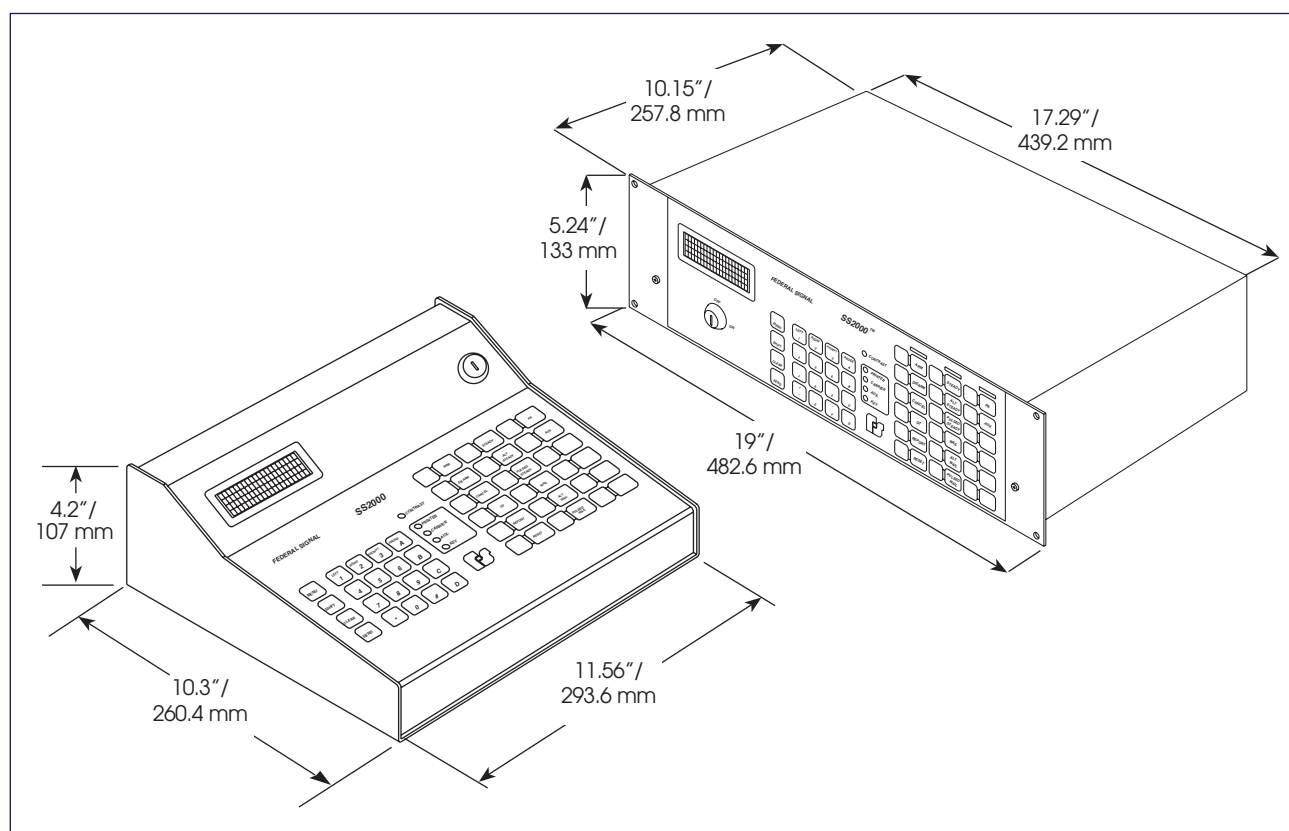
The Model SS2000 features a four-line backlit liquid crystal display (LCD), full DTMF keypad and 18 user-programmable function keys. Four LEDs are used to indicate the status of the optional printer, radio frequency (RF) carrier detection, key press and one miscellaneous function. A key lock is provided to secure the controller's keypad from unauthorized access.

As a status monitoring device for electronic sirens, the Model SS2000 monitors AC power, intrusion, amplifiers and drivers; operating current, charger, battery and audio A and B lines.

As a status monitoring device for mechanical sirens, the model SS2000 monitors AC power, intrusion, operating current, battery and rotation.

Federal Signal's Model SS2000D FSK Encoder offer many extended benefits to any radio controlled signaling device. This unit automatically reports siren/power failures and electronically checks sirens through report-back systems, eliminating the need for personnel at siren sites.

## DTMF ENCODER/CONTROLLER (SS2000)



## SPECIFICATIONS

Line Input:	120VAC wall transformer	DTMF Decode Sensitivity:	20dB signal/noise
Battery Input:	11.5-20.0VDC (overvoltage and reverse voltage protection)	Outputs:	3-DPDT (PTT, Audio and mic disconnect, spare) 1.25A at 24VDC / 0.4 at 120VAC
Input Current:	175mA standby, 250mA max.	<b>Dimensions:</b>	
Operating Temperature:	32° F to 122°F / 0°C to 50°C	Rack	19.0" x 10.15" x 5.24" (482.6 mm x 257.8 mm x 133.0 mm)
Distortion:	< 3% from pure sinewave	Desktop	11.56" x 10.25" x 4.2" (293.6 mm x 260.4 mm x 107.0 mm)
Emphasis:	Optional de-emphasis 6dB/octave	<b>Weight:</b>	
DTMF Format:	3-20 digits	Rack	8.0 lbs. / 4.0 kg
DTMF Timing:	35/5 to 999/999 milliseconds (digit length/interdigit silence)	Desktop	6.0 lbs. / 3.0 kg
Display:	80-character LCD display (4 lines x 20)		

## HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- Specify model number
  - a. 1-way control, desktop (SS2000)
  - b. 2-way control, desk top (SS2000D for FSK)
  - c. 1-way control, rack mount (SS2000R)
  - d. 2-way control, rack mount (SS2000DR for FSK)
- Optional printer
- Optional activation via contact closure (up to 20) (SS-REMOTE)



# Federal Commander Digital System

Model SFCD10 and SFCD25

## DIGITAL STATUS WARNING

- Up to 255 sites
- 10 person call list
- Conventional and trunking radio compatibility
- Optional Networking TCP/IP interface
- Send up to 20 e-mails for an alarm

The Federal Commander Digital System offers Emergency Management Directors and system operators complete, secure activation and status monitoring of any siren system, and consists of the SS2000D encoder, the Commander Software, and digital Siren Controllers. From siren activation to in-home alerting, this system is designed to provide your facility with complete alert and notification capability.

Federal Commander continues to evolve to meet the changing demands of customers throughout the world to provide a system unmatched in its features and ease of use. From controlling either one siren or more than 255, the system can expand to accommodate your changing community needs. By integrating Federal Commander with SmartMsg, now with a single mouse click, system operators can activate their outdoor warning sirens and send SmartMsg alerts to any personal device (cell phone, computer, pager, handheld radio, etc.) to notify specific people about the reason the sirens were activated with instructions on what to do. Federal Commander can also be used to activate sirens based on National Weather Service alerts with the use of EMTools software.

Over 20 different system alerts can be automatically configured and sent via email notification and SmartMsg notification to individuals or groups on their personal devices.

Digital Siren Controllers are available for both electronic sirens, speakers, and electromechanical sirens. These controllers come equipped with over-the-air programmability via secure digital technology.



## FEDERAL COMMANDER SYSTEM (SFCD)



### CCU MINIMUM REQUIREMENTS\*

#### CCU Minimum Requirements\*

- One Gigabyte or more of Random Access Memory (RAM).
- Two spare PCI BUS ports
- 160GB Hard Disk Drive or larger.
- SVGA Color Monitor and Controller.  
(800 x 600 resolution minimum, 24 bit color recommended).
- CD RD-W Drive.
- 101-key Enhanced Keyboard.
- One Parallel Printer Port - LPT1
- One RS-232 Serial Port.
- Mouse pointing device.
- Dot Matrix Printer 24-Pin with Parallel Interface and cable.
- Phone Line (Required for voice call out and remote dial-in features).
- AC surge suppression device
- UPS (Optional equipment to provide CCU backup in case of primary AC failure).
- Window OS. XP, Vista, or 2003 Server.

*\*Sold separately or customer supplied*

### HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- Specify model number:  
(SFCD10) Windows application software for up to 10 sites  
(SFCD25) Windows application software for up to 25 sites
- Specify Accessories:  
(SFCD-W) Commander extended one-year warranty  
(SFCDCLNT) TCP/IP client software (5 seats)  
(SFCD-MODEM) 56K PCI Modem for phone dial out feature

*NOTE: See EMTools and Codespear datasheets for ordering information.*





# AudioMaster® Two-Way Intercom

Model 310-MV

## TWO-WAY INTERCOM WITH SUPERIOR SOUND QUALITY

- Multi-voltage design accepts 24VDC and 120VAC/240VAC
- Heavy-duty industrial intercom for indoor or outdoor applications
- Balanced line output
- Type 4X, IP56 enclosure
- UL Listed, CSA Certified and Marine Listed

Federal Signal's AudioMaster® 310-MV is an industrial intercom that provides reliable two-way communications and superior sound quality. This unit has a rugged Type 4X housing and is UL Listed and CSA Certified.

The AudioMaster 310-MV's standard features include volume control, call button, balanced line output, dust- and water-tight housing, listen/talk switch, remote device activation and the ability to power another intercom at 24VDC.

This heavy duty intercom will operate from -31°F to 150°F (-35°C to 66°C) in both indoor and outdoor applications. Remote device activation allows you to activate an auxiliary signal such as a horn or light.

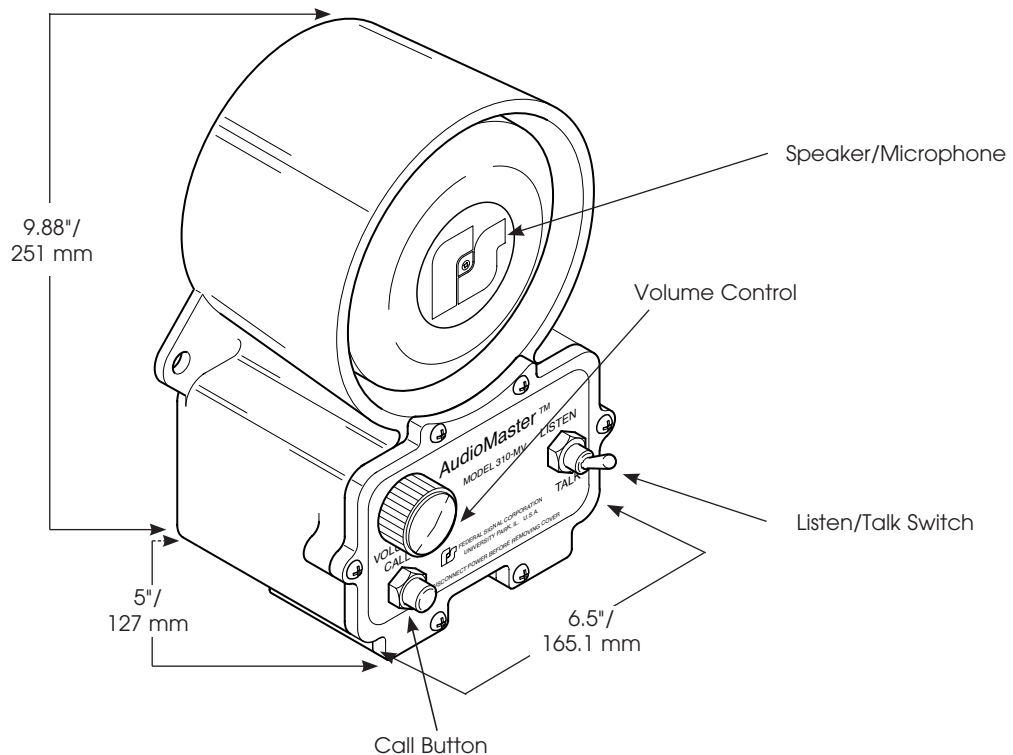
The AudioMaster 310-MV requires 24VDC, 120VAC or 240VAC to power each unit. The intercom is easy to operate. Press the switch down to talk and release to listen.

The 310-MV is ideal for use at oil refineries, petrochemical plants, offshore platforms, pulp and paper mills, water treatment facilities, airports, shipyards or anywhere reliable two-way communication is important for safe and efficient operation.

Model	Voltage	Operating Current	Standby Current	Frequency Response (-6dB)	Input Impedance
310-MV	24VDC	260mA	62mA	150Hz-12KHz	3400 ohms
	120VAC 50/60Hz	163mA	70mA	150Hz-12KHz	3400 ohms
	240VAC 50/60Hz	82mA	35mA	150Hz-12KHz	3400 ohms



## TWO-WAY INDUSTRIAL INTERCOM (310-MV)



### SPECIFICATIONS

Speaker Rating:	30 Watt	30 Watt
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	9.9 lbs.	4.5 kg
Shipping Weight:	11.5 lbs.	5.2 kg
Height:	9.88"	251.0 mm
Width:	6.5"	165.1 mm
Depth:	5.0"	127.0 mm

### HOW TO ORDER

- Specify model number
- Optional Accessories:  
Slave Kit (K8502017A)
- Please refer to Model Number Index  
310-MV beginning on page 376

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2001915B	Kit, potentiometer	K8590237A
Connector, 10 pin	K140A326A-01	Kit, toggle switch	K8590298A
Resistor, 1K, 1W	K101216A	Kit, call button and boot	K8590241A
Fuse 250V, 1/2 Amp	K148A155A	Permanent Slave Kit	K8502017A
Fuse 250V, 1 Amp	K148A155A-01	Gasket, rubber	K8590013B



## INTERCOM FOR HIGH AMBIENT NOISE ENVIRONMENTS

- Multi-voltage design accepts 24VDC, 120VAC and 240VAC
- Heavy-duty industrial intercom for indoor or outdoor applications
- Balanced line output
- Rated for Class I, Division 2
- Type 4X, IP65 enclosure
- UL and cUL Listed, CSA Certified and Marine Listed

# AudioMaster® Hazardous Location Two-way Intercom

## Model 310X-MV

Federal Signal's AudioMaster® 310X-MV is a two-way industrial intercom that provides reliable communications and superior sound quality. This unit has a rugged Type 4X housing and is rated for Class I, Division 2, Groups A, B, C, & D; Class II, Division 2, Groups F & G; and Class III.

The AudioMaster 310X-MV's standard features include volume control, call button, balanced line output, dust- and water-tight housing, listen/talk switch, remote device activation, and the ability to power another intercom at 24VDC.

This heavy duty intercom will operate from -31°F to 149°F (-35°C to 65°C) for both indoor and outdoor applications. Remote device activation allows you to activate an auxiliary signal such as a horn or light. The AudioMaster 310X-MV requires 24VDC, 120VAC or 240VAC to power each unit. The intercom is easy to operate. Press the switch down to talk and release to listen.

The AudioMaster is UL Listed and CSA Certified.

The 310X-MV is ideal for use at oil refineries, petrochemical plants, offshore platforms, pulp and paper mills, water treatment facilities, airports, shipyards or anywhere reliable two-way communication is important for safe and efficient operation.

Model	Voltage	Operating Current	Standby Current	Frequency Response (-6dB)	Input Impedance
310X-MV	24VDC	260mA	62mA	150Hz-12KHz	3400 ohms
	120VAC 50/60Hz	163mA	70mA	150Hz-12KHz	3400 ohms
	240VAC 50/60Hz	82mA	35mA	150Hz-12KHz	3400 ohms

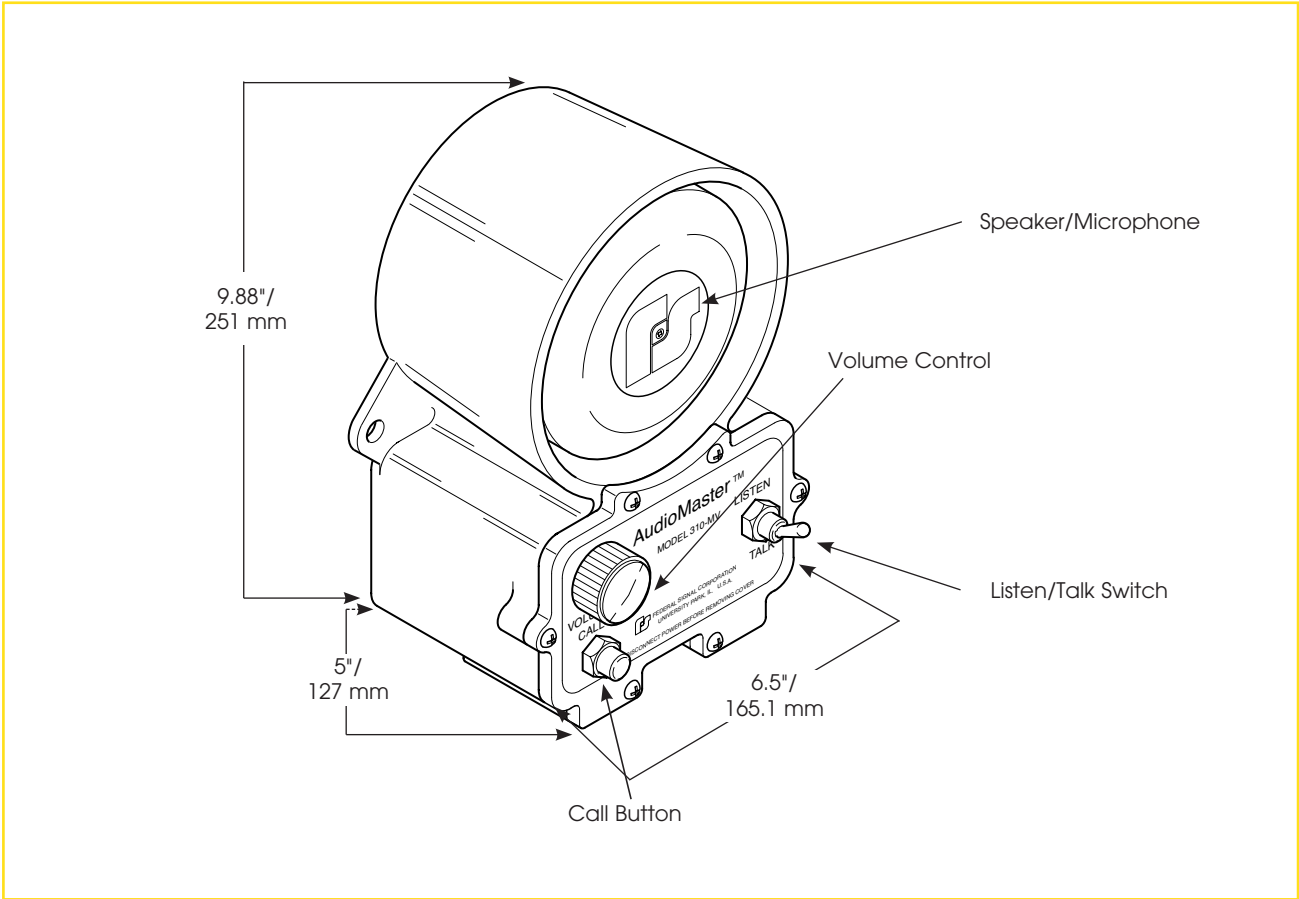
## Hazardous Location Rating:

### T-Code at Maximum Ambient Temperature, °C

Hazardous Location	40°C	66°C
Class I, Div 2, Groups A, B, C, D	T6	T5
Class II, Div 2, Groups F, G	T6	T5
Class III	T6	T5



TWO-WAY INDUSTRIAL INTERCOM (310X-MV)



SPECIFICATIONS

Speaker Rating:	30 Watt	30 Watt
Operating Temperature:	-31°F to 149°F	-35°C to 65°C
Net Weight:	10.1 lbs.	4.6 kg
Shipping Weight:	12.0 lbs.	5.4 kg
Height:	9.88"	251.0 mm
Width:	6.5"	165.1 mm
Depth:	5.0"	127.0 mm

HOW TO ORDER

- Specify model number
- Please refer to Model Number Index 310X-MV beginning on page 376

REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2001915B-02	Kit, potentiometer	K8590237A
Connector, 10 Pin	K140A326A-01	Kit, toggle switch	K8590298A
Resistors, 1K, 1W	K101216A	Kit, call button and boot	K8590241A
Fuse 250V, 1/2 Amp	K148A155A	Fuse 250V, 1 Amp	K148A155A-01
Gasket, rubber	K8590013B		



## INTERCOM FOR HIGH AMBIENT NOISE ENVIRONMENTS

- Multi-voltage design accepts 24VDC, 120VAC and 240VAC
- Heavy-duty industrial intercom
- Noise canceling microphone
- Balanced line output
- Type 3R enclosure
- UL Listed, CSA Certified and Marine Listed

# AudioMaster® Two-way Intercom with Noise Canceling Microphone

## Model 310-MV-MNC

Federal Signal's AudioMaster® 310-MV-MNC is a two-way industrial intercom that provides reliable communications and superior sound quality.

The AudioMaster 310-MV-MNC's standard features include volume control, call button, balanced line output, listen/talk switch, remote device activation, and the ability to power another intercom at 24VDC.

This heavy duty intercom will operate from -31°F to 150°F (-35°C to 66°C). The remote device activation feature allows you to activate an auxiliary signal such as a horn or light. The AudioMaster 310-MV-MNC requires 24VDC, 120VAC or 240VAC to power each unit. The intercom is easy to operate. Press the switch down to talk and release to listen.

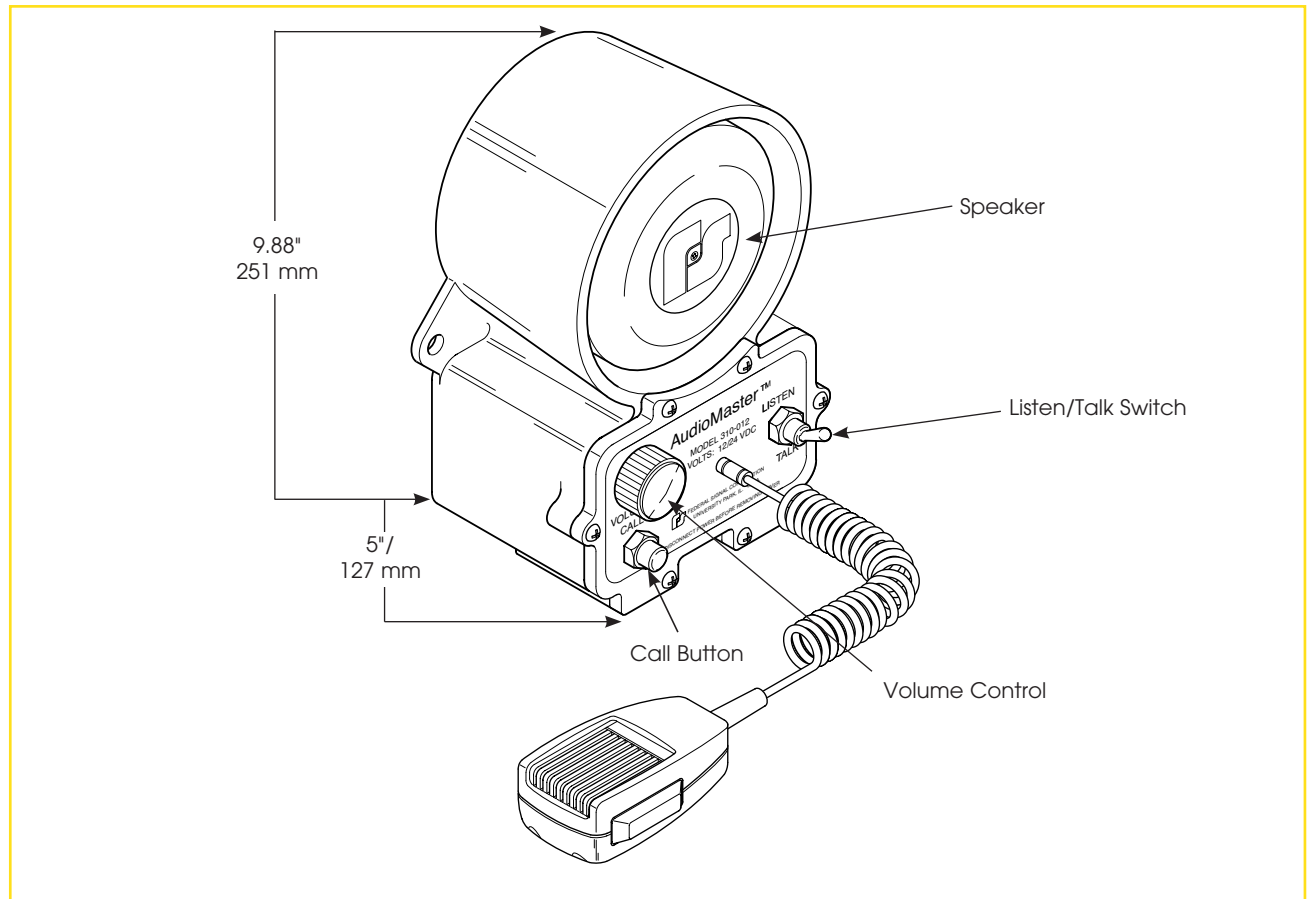
When the ambient noise level is too high for the standard 310-MV integrated microphone, the 310-MV-MNC noise canceling unit is used to improve transmission quality.

The 310-MV-MNC is ideal for use at oil refineries, petrochemical plants, offshore platforms, pulp and paper mills, water treatment facilities, airports, shipyards or anywhere reliable two-way communication is important for safe, efficient operation.

Model	Voltage	Operating Current	Standby Current	Frequency Response (-6dB)	Input Impedance
310-MV-MNC	24VDC	260mA	62mA	150Hz-12KHz	3400 ohms
	120VAC 50/60Hz	163mA	70mA	150Hz-12KHz	3400 ohms
	240VAC 50/60Hz	82mA	35mA	150Hz-12KHz	3400 ohms



## TWO-WAY INDUSTRIAL INTERCOM (310-MV-MNC)



### SPECIFICATIONS

Speaker Rating:	30 Watt	30 Watt
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	10.1 lbs.	4.6 kg
Shipping Weight:	12.0 lbs.	5.4 kg
Height:	9.88"	251.0 mm
Width	6.5"	165.1 mm
Depth:	5.0"	127.0 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index 310-MV-MNC beginning on page 376

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2001915B	Kit, potentiometer	K8590237A
Connector	K140A326A-01	Kit, toggle switch	K8590298A
Fuse 250V, 1/2 Amp	K148A155A	Kit, call button and boot	K8590241A
Fuse 250V. 1 Amp	K148A155A-01	Resistors, 1K, 1W	K101216A
Microphone	MNC-MC	Gasket, rubber	K8590013B





# AudioMaster® Light Duty Two-Way Intercom

Model 310LD-MV

## A LIGHT-DUTY TWO-WAY INTERCOM WITH SUPERIOR SOUND QUALITY

- Multi-voltage design accepts 24VDC, 120VAC and 240VAC
- Balanced line output
- Gain control
- Remote device activation
- TYPE 1, IP10 enclosure
- UL Listed and CSA Certified

Federal Signal's AudioMaster® light-duty industrial intercom provides reliable two-way communications and superior sound quality.

The AudioMaster 310LD-MV's standard features include internal volume control, balanced line output, Type 1 wall mount housing, integrated call/listen/talk switch, remote device activation, and the ability to power another intercom at 24VDC.

310LD-MV operates from -31°F to 150°F (-35°C to 66°C) for indoor applications. An integrated remote device activation feature allows you to activate an auxiliary signal such as a horn or light. The AudioMaster 310LD-MV requires 24VDC, 120VAC or 240VAC to power each unit. The intercom is easy to operate. Press the switch down to talk and release to listen.

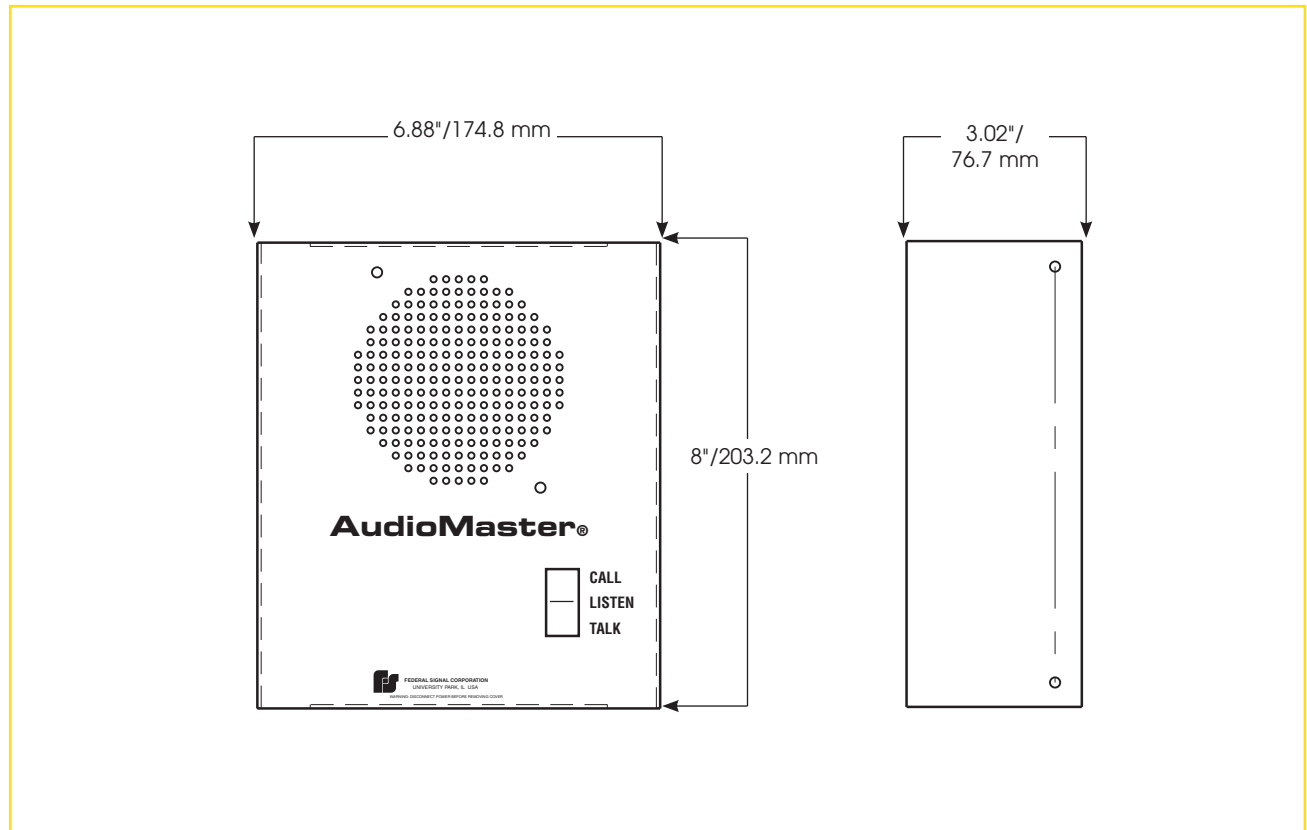
The AudioMaster Model 310LD-MV is UL Listed and CSA Certified.

The Model 310LD-MV is ideal for office environments and other dry, non-hazardous locations or anywhere reliable two-way communication is important for a safe efficient operation.

Model	Voltage	Operating Current	Standby Current	Frequency Response (-6dB)	Input Impedance
310LD-MV	24VDC	120mA	60mA	150Hz-12KHz	3400 ohms
	120VAC 50/60Hz	80mA	60mA	150Hz-12KHz	3400 ohms
	240VAC 50/60Hz	40mA	30mA	150Hz-12KHz	3400 ohms



## LIGHT DUTY TWO-WAY INTERCOM (310LD-MV)



### SPECIFICATIONS

Speaker Rating:	2 Watt	2 Watt
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net. Weight:	3.2 lbs	1.45 kg
Shipping Weight:	3.9 lbs.	1.77 kg
Height:	8.0"	203.2 mm
Width:	6.88"	174.8 mm
Depth:	3.02"	76.7 mm

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PC Board Assembly	K2001290B
Resistor, 1K, 1W	K101216A
Fuses — F1, 250V	K144A125A
Switch	K122283A

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index 310LD-MV beginning on page 376



## VOICE COMMUNICATION SYSTEM FOR IN-PLANT USE

- Up to 9072 field stations
- Addressable intercom control with auto conference
- Public address, general alarm and intercom
- PBX and radio interface
- Ordinary location, hazardous area and weatherproof stations
- Supervised fault diagnostics
- Fiber optic ready
- Field programmable
- Pre-recorded messages
- Alarm functions
- Networkable and expandable
- Windows® based software
- Ambient noise monitoring / volume tracking

# ECHO Digital Intercom System

ECHO digital intercom and communication systems provide addressable intercom, public address, general alarm, paging and telecommunication capabilities. A single ECHO system can provide the same level of safety, coverage and reliability normally achieved with multiple systems.

ECHO interfaces simply with a variety of third-party equipment, including fire and gas detection systems, auxiliary security systems and signals, PA/GA systems, two-way radios and telephone PBX. ECHO accepts multiple input sources for tones, pre-recorded voice messages, and background music. ECHO enables you to integrate all of your critical life safety, evacuation and communication systems.

Installation and commissioning is easy and cost effective. Off the shelf, two-conductor cable provides power, communication and control with a range of up to 2.4 miles (4km). Systems can be commissioned and customized quickly in the field or remotely with push button menu selections or a point-and-click software interface.

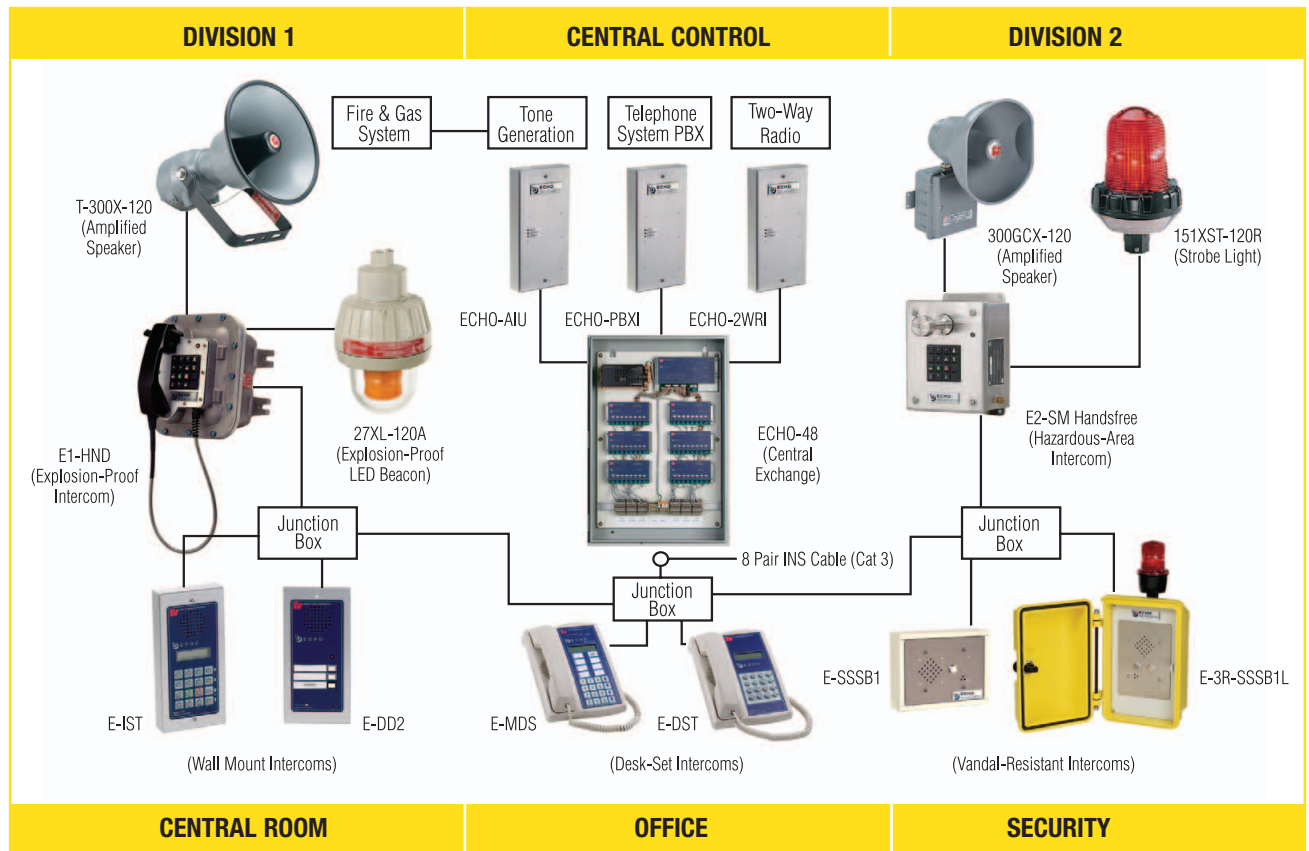
### HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

- Specify model

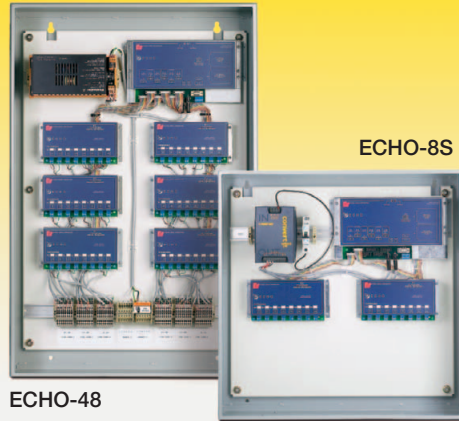


## ECHO DIGITAL INTERCOM SYSTEM



**Note:** Power supplied to central cabinet and external powered loudspeakers and beacons only.

- Private communication, conference calls and public address
- System supervision and full fault diagnostics
- DSP technology provides crisp, clear communication and noise immunity
- Standard features include one-touch emergency paging, programmable station directory, speed dialing, caller ID and auto conference
- Hazardous-area, explosion-proof, panel mount, flush-mount, desktop, vandal-resistant and weather-proof stations
- Field programmable via Windows® interface software
- Handset, gooseneck microphone, headset, hands-free and single button communication options
- Fiber optic, PBX, two-way radio, radio pocket pager, public page and background music interfaces
- ECHO cancellation, noise and feedback elimination for digital quality/high intelligibility audio
- Industry standard low-cost wiring
- 24VDC, 120-240VAC
- Ambient noise monitoring automatically adjusts speaker volume to surpass ambient sound level



# Digital Intercom And Communication System

Model ECHO-8 Through ECHO-48  
Central Control

## CENTRAL CONTROL: WALL OR RACK MOUNT

- Up to 9072 field stations
- Addressable intercom control with auto conference
- Public address, general alarm and intercom
- PBX and radio interface
- Ordinary location, hazardous area and weatherproof stations
- Supervised fault diagnostics
- Fiber optic ready
- Field programmable
- Pre-recorded messages
- Alarm functions
- Networkable and expandable
- Windows® based software
- Ambient noise monitoring / volume tracking

ECHO Digital intercom and communication systems provide addressable intercom, public address, general alarm, paging and telecommunication capabilities. A single ECHO system can provide the same level of safety, coverage and reliability normally achieved with multiple systems.

ECHO interfaces simply with a variety of third-party equipment, including fire and gas detection systems, auxiliary security systems and signals, PA/GA systems, two-way radios and telephone PBX. ECHO accepts multiple input sources for tones, pre-recorded voice messages, and background music. ECHO enables you to integrate all of your critical life safety, evacuation and communication systems.

Installation and commissioning is easy and cost effective. Off the shelf, two-conductor cable provides power, communication and control with a range of up to 2.4 miles (4km). Systems can be commissioned and customized quickly in the field or remotely with pushbutton menu selections or a point-and-click software interface. Spare parts are standardized and minimal.

## HOW TO ORDER

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

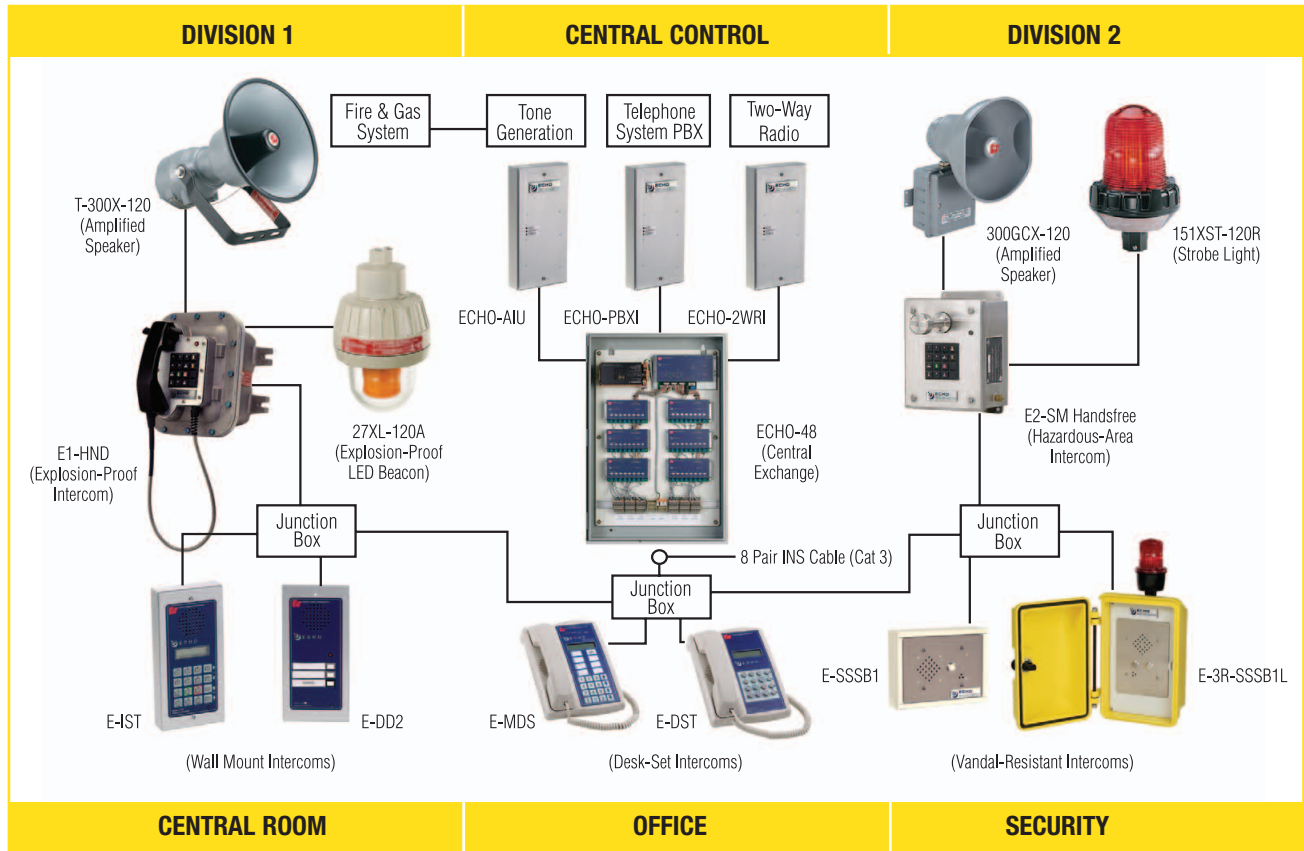
- Specify model



CE ECHO



## DIGITAL INTERCOM AND COMMUNICATION SYSTEM ( ECHO 8 – ECHO 48)



- Private communication, conference calls and public address
- System supervision and fault diagnostics
- DSP technology provides crisp, clear communication and noise immunity
- Standard features include one-touch emergency paging, programmable station directory, speed dialing, caller ID and auto conference
- Hazardous-area, explosion proof, panel mount, flush-mount, desktop, vandal-resistant and weatherproof stations
- Handset, gooseneck microphone, headset, hands-free and single button communication options
- Fiber optic, PBX, two-way radio, radio pocket pager, public page and background music interfaces
- Field programmable via Windows interface software
- ECHO cancellation, noise and feedback elimination for digital quality/high intelligibility audio
- Industry standard low-cost wiring
- 24 VDC, 120-240 VAC
- Volume tracking automatically adjusts speaker volume to surpass ambient sound level

### Rack Mounted ECHO System



**NOTE:** Power supplied to central cabinet and external powered loudspeakers and beacons only.





## **WALL MOUNT ECHO INTERCOM STATION**

- Hands-free duplex voice communication
- Place calls to one or two predetermined locations
- Receive calls from any station in the system
- Remotely controlled contacts for gate/door activation
- Call status LED
- Remotely programmed using LCD stations or ECHO Windows® based software

# **Single And Dual Direct Dial Sub-Stations**

## **Model ECHO E-DD**

The Federal Signal Models E-DD1 and E-DD2 Single and Dual direct dial substations provide efficient, hands free duplex two-way voice communications with single button call capability. Applications include doors, dock areas or any location where limited call selection is needed. The stations instantly adjust volume levels to compensate for high ambient noise levels while providing instantaneous high-speed connections.

The E-DD1 / E-DD2 direct dial substations may be preprogrammed to call any other station in the system. E-DD1 Single Call Station can call one location, E-DD2 Dual Call Station can call two locations. By pressing the Call button on the station, a call will be placed to the station at the preprogrammed location. A call may be canceled by depressing the cancel button. Built-in relay contacts may be activated from the calling Master Station for remote door control or anything that a normally open dry contact can initiate.

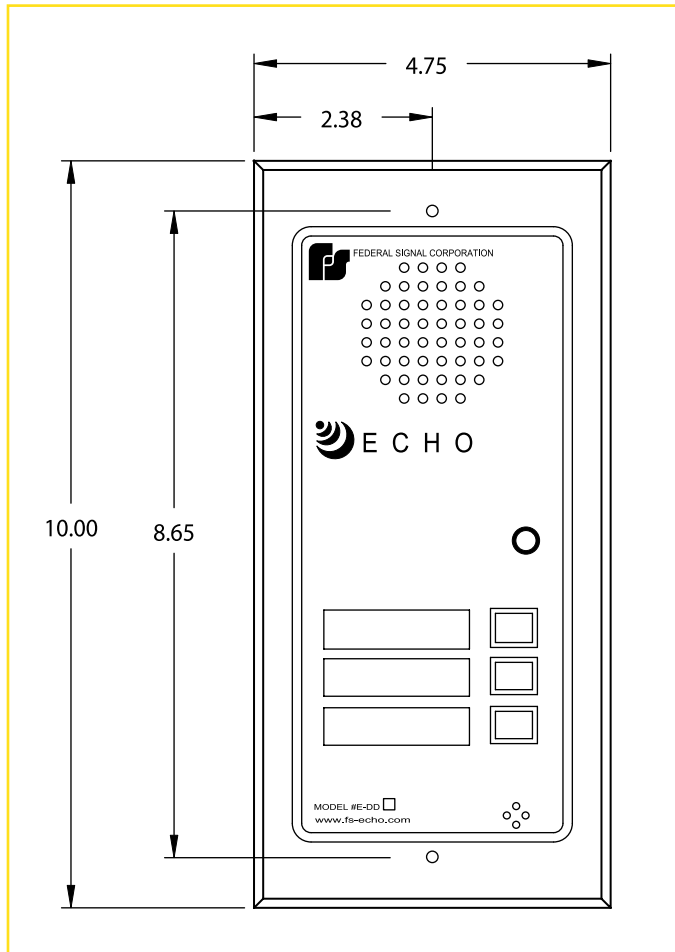
The E-DD stations are constructed of heavy gauge anodized aluminum with a rugged Mylar face plate. The E-DD1 Single Call Station is equipped with one Call and one Cancel button and a Call Placed LED. The E-DD2 Dual Call Station has two Call buttons, one Cancel button and a Call Placed LED. Both units have built-in, heavy-duty relay contacts. The units are intended for indoor use with flush E-BB2 Back box or E-SMB Surface Box.

The E-DD stations may be programmed for call destination, volume level and other features using any LCD Station in the system or via the Windows based programming software Model ECHO-SFW.



**CE ECHO**

## SINGLE AND DUAL DIRECT DIAL SUB-STATIONS (E-DD1 / E-DD2)



### OPTIONS



**E-BB2 Flush Mount Back Box**  
Back Box For Flush Wall Mounting

**MATERIAL:**  
Galvanised Steel

**WEIGHT:**  
0.5 lbs / 0.230 kg

**E-SMB Surface Mount Back Box**  
Back Box For Surface Wall Mounting

**MATERIAL:**  
Anodised Aluminum

**WEIGHT:**  
0.5 lbs / 0.230 kg



### HOW TO ORDER

- Specify model:  
Wall mounted single direct dial substation (E-DD1)  
Wall mounted dual direct dial substation (E-DD2)
- Optional Accessories:  
Fiber Optic Interface (ECHO-FOTI)  
Back Box For Flush Mounting (E-BB2)  
Back Box For Surface Mounting (E-SMB)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Loop Resistance:	170 Ohm Max
Current Idle:	250mA	Distance:	1.2 miles      2km Max
Current Connected:	650mA	Cable:	One twisted pair, non-shielded
Microphone Type:	Electret	Termination	Plug-in screw terminal, non-polar
Microphone Sensitivity:	-70dB	Relay Switching Capacity:	5A at 24VDC 3A at 240VAC
Audio Output:	1.0 Watt	Net Weight:	1.5 lbs      0.68kg
Loudspeaker Size:	2.5 in	Shipping Weight:	1.2 lbs      0.5kg
Loudspeaker Impedence:	45 ohms	Shipping Dimensions:	13.25" x 7.13" x 3" 337cm x 181cm x 76cm
Volume Control via Keypad:	30dB in ten steps		
Line Attenuation:	24dB@160kb/s Max		



# Desktop Or Wall Mount Intercom Stations

Model ECHO E-DS

## COMPACT NEMA 1 STATION

- Handset or speakerphone duplex voice communication
- ADA compliant volume levels and controls
- Large LCD display with directory scroll
- Requires only one twisted pair of wires
- Speed dial and auto conference
- Caller ID
- Dedicated paging buttons (All Call & Priority)

Federal Signal Models E-DST (tactile keypad), E-DSM (membrane keypad), E-DSMG (membrane keypad with gooseneck mic), are NEMA 1 handset intercom stations that may be used on a desktop or surface / wall mount application to provide speaker phone or private handset duplex two-way voice communication with LCD visual status display. The station's digital signal processor instantly adjusts speakerphone volume levels to compensate for high ambient noise while providing high-speed connections and clear, crisp voice quality from anywhere in the room. The large, easy-to-read LCD display provides information to identify the name and number of each calling party, provides a name and number directory and an on-line help menu.

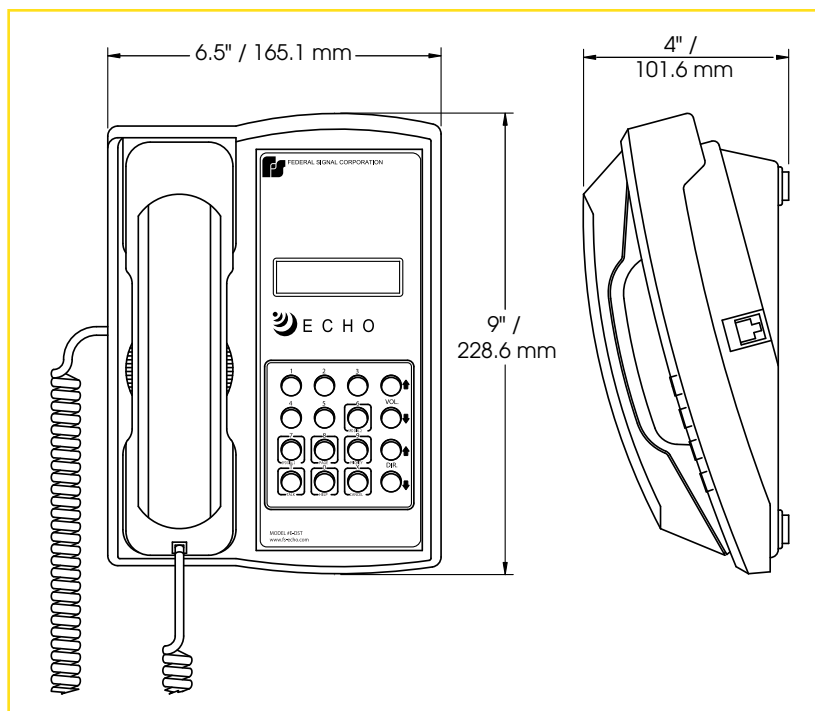
The Models E-DST, E-DSM, E-DSMG Handset Call Stations can call any other station in the system and are capable of full duplex communication using the handset. Since the Digital Central Exchange can process calls simultaneously, there is no dial tone or delay. After keying in the two digits, the call can be connected immediately. The keypad provides tactile and audible feedback for positive activation. The LCD display at each Master station shows the called and calling station ID. A station may be preset to any of four levels of privacy for receiving calls; Non-Private, Semi-Private, Full Privacy, and DND (Do Not Disturb). Volume for both the handset and speaker phone can be adjusted.

The compact console unit is equipped with a handset, panel speaker and electret microphone. A standard 16 button keypad and LCD display with 2 lines of 16 characters is provided. The unit is intended for indoor use.



CE ECHO

## DESKTOP OR WALL MOUNT INTERCOM STATIONS (E-DS)



### HOW TO ORDER

- Specify model:  
 Desk or wall mounted station with tactile keypad (E-DST)  
 Desk or wall mounted station with membrane keypad (E-DSM)  
 Desk or wall mounted station with a gooseneck microphone instead of a panel microphone (E-DSMG)
- Optional Accessories:  
 Fiber Optic Interface (ECHO-FOTI)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Keypad Construction:	E-DST E-DSM	Grey Conductive Rubber Membrane Keys
Current Idle:	25mA	Line Attenuation:		24dB@160kb/s Max
Current Connected:	100mA	Loop Resistance:		170 Ohm Max
Microphone Type:	Electret	Distance:	1.2 miles 2km Max	
Microphone Sensitivity:	70dB	Cable:		One twisted pair, non-shielded
Audio Output:	1.0 Watt	Termination:		Plug-in screw terminal, non-polar
Enclosure Material:	ABS Flame-Retardant	Net Weight:	2.2 lbs 1.0kg	
Display LCD:	2 lines, 16 characters/line	Shipping Weight:	2.5 lbs 1.1kg	
Volume Control via Keypad:	30dB in ten steps	Shipping Dimensions:	10.5" x 7.00" x 7.5" 267mm x 178mm x 191mm	





# Administrative Master Station

Model ECHO E-MDS

## DESK OR WALL MOUNT ADMINISTRATIVE MASTER STATION

- Multiple simultaneous substation call stacking and display
- 10 levels of priority for substation calls
- Flexible substation ownership
- All-call and priority all-call
- Audible alert with tone silence and resound
- Partitioning
- Call placed indicators; routine and emergency
- Desktop or wall mount
- Call engineer light, system diagnostics and alarm tone

Federal Signal Model E-MDS Management Station is used with ECHO® Systems to provide hands-free or private handset duplex two-way voice communication. The LCD call status display provides the ability to review and respond to Substation calls out of sequence. Programmable buttons provide single touch access for features such as Conference, All-Call and Group Call. The large, easy to read LCD display provides vital information to identify the name and location of each calling party, name and number directory as well as an on-line help menu to personalize station features.

The E-MDS Management Station can be programmed to call any other station in the system. Calls from other masters may be programmed to ring or answer automatically in the speakerphone mode. Master-to-Master calls may manually Camp-on, Message-wait and Pre-empt. Calls from Substations will be stacked in a queue by priority and may be answered or reviewed in any order. Substations may each be assigned any of 10 text call messages for Routine or Emergency levels with selectable locking or Non-locking status. Substations can be programmed to report to one, several, or all E-MDS Management Masters. In the Night Mode, one Management Station can assume ownership of another's sub-stations. The keypad volume control keys may be used to adjust voice and ring levels.

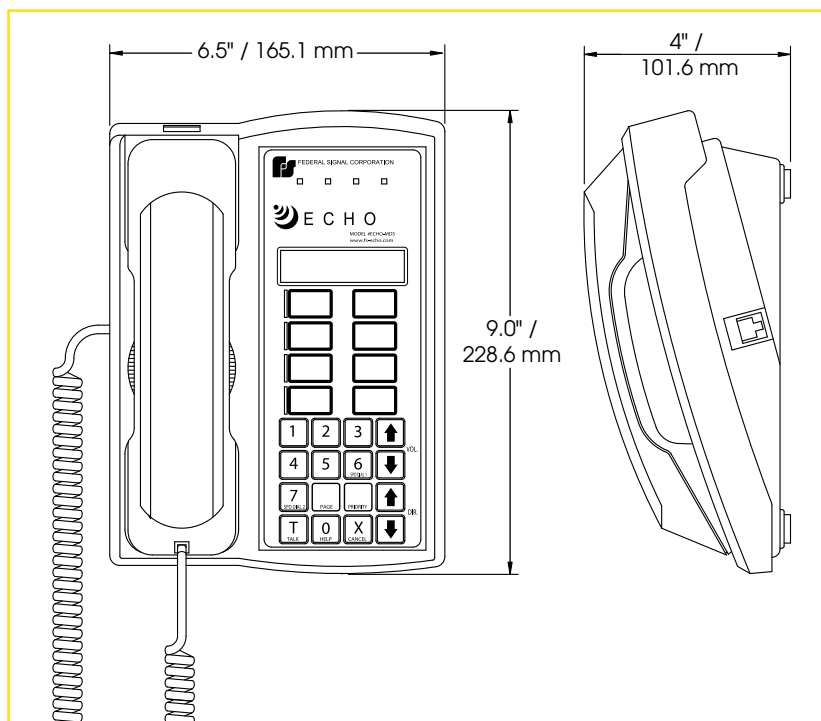
This compact unit may be used in a desk top or surface wall mount application. The unit is equipped with a handset, panel microphone and speaker. The flush membrane keypad provides tactile and audible feed back for positive activation. The Model E-MDSMG is furnished with a gooseneck push-to-talk microphone.



CE ECHO



## ADMINISTRATIVE MASTER STATION (E-MDS)



### HOW TO ORDER

- Specify model:  
 Desk or wall mounted administrative master station with membrane keypad (E-MDS)  
 Desk or wall mounted administrative master station with 415mm a goose-neck microphone instead of a panel microphone (E-MDSMG)  
 Flush mount administration master station with membrane keypad (E-MWS)
- Optional Accessories:  
 Fiber Optic Interface (ECHO-FOTI)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Keypad Construction:	Membrane Keys
Current Idle:	250mA	Line Attenuation:	24dB@160kb/s Max
Current Connected:	650mA	Loop Resistance:	170 Ohm Max
Microphone Type:	Electret	Distance:	2km (1.2 miles) Max
Microphone Sensitivity:	-70dB	Cable:	One twisted pair, non-shielded
Audio Output:	1.0 Watt	Termination:	Plug-in screw terminal, non-polar
Enclosure Material:	ABS Flame-Retardant	Net Weight:	2.2 lbs 1.0kg
Display LCD:	2 lines, 16 characters/line	Shipping Weight:	2.5 lbs 1.1kg
Volume Control via Keypad:	30dB in ten steps	Shipping Dimensions:	10.5" x 7" x 7.5" 267mm x 178mm x 191mm







**DESK OR WALL MOUNT  
ADMINISTRATIVE  
MASTER STATION**

- Corrosion and vandal resistant design
- Private full duplex handset communication
- Headset, gooseneck microphone and handset options
- Single touch speed dialing
- Group call, all-call, priority call
- Simple one pair wiring
- Output to powered loudspeaker
- IP66

# Weather Proof Digital Intercom Stations

## Model ECHO E-EWP

Federal Signal Model EWP ECHO Intercom Stations provide safe and efficient two-way voice communications in large and small ECHO Digital Intercom Systems.

The EWP ECHO station provides instantaneous high-speed connections and clear, crisp digital voice quality. Each station offers single-button all call, priority emergency paging, group paging, speed dial, conference call, and relay output.

Any station can call any other station(s) in an ECHO Digital Intercom System. With the headset or gooseneck microphone options, each is capable of hands-free voice communication. Because the ECHO Digital Central Exchange provides 30 channels of simultaneous communication, calls are processed and connected immediately without dial tone or delay.

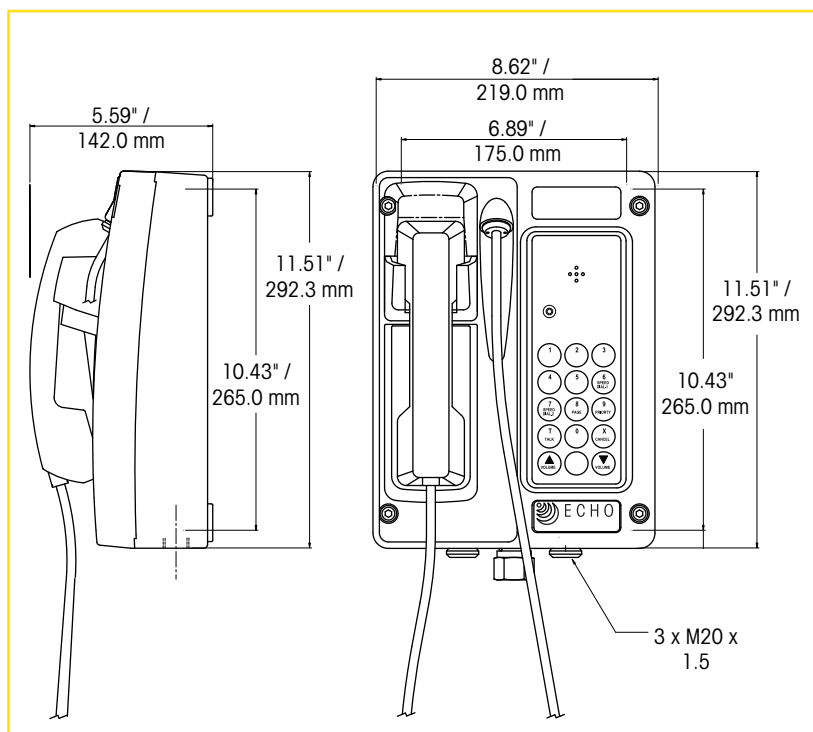
The EWP Station keypad is designed to provide tactile and audible feedback (via external powered loudspeaker) for a positive activation. Each station may be programmed for four levels of privacy for receiving calls; non-private, semi-private, full privacy and do-not-disturb. Volume for voice and signal levels are easily adjusted on the keypad.

Each EWP Station is constructed of heavy duty glass reinforced polyester (GRP), equipped with a weatherproof keypad, and are rated for use in IP66 dust- and water-tight applications.



CE ECHO

## WEATHER PROOF DIGITAL INTERCOM STATIONS (E-EWP)



## HOW TO ORDER

- Specify model:
  - Handset, 1.8m curly cord (EWP-HND-C)
  - Handset, 1.0m stainless steel cord (EWP-HND-S)
  - Jack station (EWP-JS)
  - Stubby microphone, 65mm (EWP-SM)
  - Gooseneck microphone, 260mm (EWP-GM1)
  - Gooseneck microphone, 440mm (EWP-GM2)
  - Gooseneck microphone, 590mm (EWP-GM3)
  - Relay, EWP (K131240A)
- Optional Accessories:
  - Headset (K137149A-01)
  - 10m Headset extension cord (K1751234A)
  - Handset with 10m curly cord (detachable) (K8601272A-01)

## SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Loop Resistance:	170 Ohm Max
Current Idle:	25mA	Distance:	1.2 miles 2.0 km Max
Current Connected:	100mA max.	Cable:	One twisted pair, non-shielded
Handset Microphone Type:	Dynamic	Cable Entries:	3 x M20
Handset Material:	Moulded Polyurethane	Operating Temperature Range:	-35C to +70C
Handset Cord:	Stainless Steel	Termination:	Plug-in screw terminal, non-polar
Stubby Microphone Type:	Dynamic	Relay Switching Capacity:	3A at 240VAC
Stubby Microphone Sensitivity:	-54dB	Shipping Dimensions:	6.25" x 9.5" x 9.25" 413mm x 241mm x 235mm
Stubby Microphone Enclosure:	Stainless Steel	Net Weight:	9.5 lbs 4.3kg
Audio Output:	2.7 Vrms / 1.0k ohm load	Shipping Weight:	11.1 lbs 5.1kg
Volume Control via Keypad:	30dB in ten steps	Shipping Dimensions:	16.25" x 9.5" x 9.25" 413mm x 241mm x 235mm
Line Attenuation:	24dB@160kb/s Max		

## OPTIONS

Headset	K137149A-01
10m Headset extension cord	K1751234A
Handset with 10m curly cord (detachable)	K8601272A-01



EWP-GM1



EWP-JS



EWP-SM



## HAZARDOUS AREA INTERCOM STATION

- All stainless steel construction
- Super-bright LED indicator
- Tactile keypad
- Headset, gooseneck microphone and handset options
- Output to powered loudspeaker
- Designed for Type 4X, IP66
- UL and cUL Listed

# Class I, Division 2 Digital Intercom Stations

## Model ECHO E2

Federal Signal Model E2 ECHO Intercom Stations provide safe and efficient two-way voice communications in large and small ECHO Digital Intercom Systems. The E2 ECHO Station is designed and approved for use in Hazardous Areas including Class 1, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III.

The E2 ECHO station provides instantaneous high-speed connections and clear, crisp digital voice quality. Each station offers single-button all call, priority emergency paging, group paging, speed dial, conference call, and relay output.

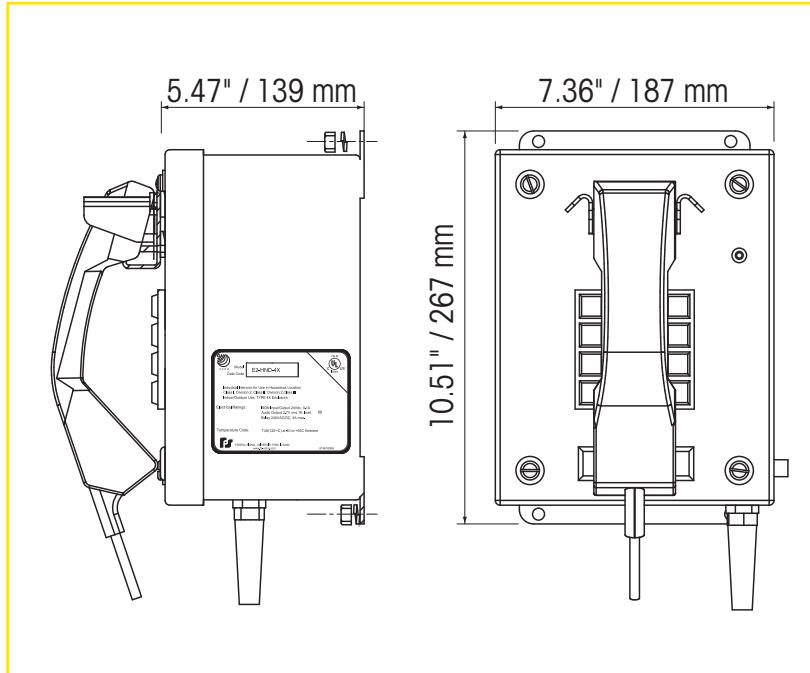
Any station can call any other station(s) in an ECHO Digital Intercom System. With the headset or gooseneck microphone options, each is capable of hands-free voice communication. Because the ECHO Digital Central Exchange provides 30 channels of simultaneous communication, calls are processed and connected immediately without dial tone or delay.

The E2 Station keypad is designed to provide tactile and audible feedback (via external powered loudspeaker) for positive activation. Each station may be programmed for four levels of privacy for receiving calls; non-private, semi-private, full privacy and do-not-disturb. Volume for voice and signal levels are easily adjusted on the keypad.

Each E2 Station is constructed of heavy duty, corrosion –resistant stainless steel, equipped with weatherproof keypads, and are rated for use in Type 4X dust- and water-tight applications.



## CLASS I, DIVISION 2 DIGITAL INTERCOM STATIONS (E2)



### HOW TO ORDER

- Specify model:  
 Station with Handset (E2-HND)  
 Station with Stubby Microphone (65mm) (E2-SM)  
 Station with Headset (E2-HDS)  
 E2-HND in 4X enclosure (IP66) (E2-HND-4X)  
 E2-SM in 4X enclosure (IP66) (E2-SM-4X)  
 E2-HDS in 4X enclosure (IP66) (E2-HDS-4X)  
 Gooseneck microphone, 260mm (E2-GM1)  
 Gooseneck microphone, 440mm (E2-GM2)  
 Gooseneck microphone, 590mm (E2-GM3)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Line Attenuation:	24dB@160kb/s Max
Current Idle:	25ma	Loop Resistance:	170 Ohm Max
Current Connected:	100ma	Distance:	1.2 miles 2 km Max
Handset Microphone Type:	Dynamic	Cable:	One twisted pair, non-shielded
Handset Material:	Moulded Polycarbonate/ABS Blend	Cable Entries:	.88" 3 x Ø22mm Hole
Handset Cord:	Stainless Steel	Operating Temperature Range:	-40C to +65C
Stubby Microphone Type:	Dynamic	Termination:	Plug-in screw terminal, non-polar
Stubby Microphone Sensitivity:	-54dB	Relay Switching Capacity:	3A at 240VAC
Stubby Microphone Enclosure:	Stainless Steel	Net Weight:	9.9 lbs 4.5kg)
Audio Output:	2.7 Vrms , 1k load	Shipping Weight:	14.8 lbs 6.7kg
Volume Control via Keypad:	30dB in ten steps	Shipping Dimensions:	20.63" x 14.13" x 13.63" 524mm x 359mm x 346mm



E2-SM



E2-HDS



E2-SM-4X



## **EXPLOSION PROOF INTERCOM STATION**

- Stainless steel hardware
- Super-bright LED indicator
- Tactile keypad
- Speed dial / auto conference
- Headset, gooseneck and handset options
- Output to powered loudspeaker
- Hinged front cover
- Designed for Type 4X
- UL and cUL Listed

# **Explosion Proof Digital Intercom Stations**

## **Model ECHO E1**

Federal Signal Model E1 ECHO Intercom Stations provide safe and efficient two-way voice communications in large and small ECHO Digital Intercom Systems. The E1 ECHO Station is designed and approved for use in Hazardous Areas including Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F and G; and Class III.

The E1 ECHO station provides instantaneous high-speed connections and clear, crisp digital voice quality. Each station offers single-button all call, priority emergency paging, group paging, speed dial, conference call, and relay output.

Any station can call any other station(s) in an ECHO Digital Intercom System. With the headset or gooseneck microphone options, each is capable of hands-free voice communication. Because the ECHO Digital Central Exchange provides 30 channels of simultaneous communication, calls are processed and connected immediately without dial tone or delay.

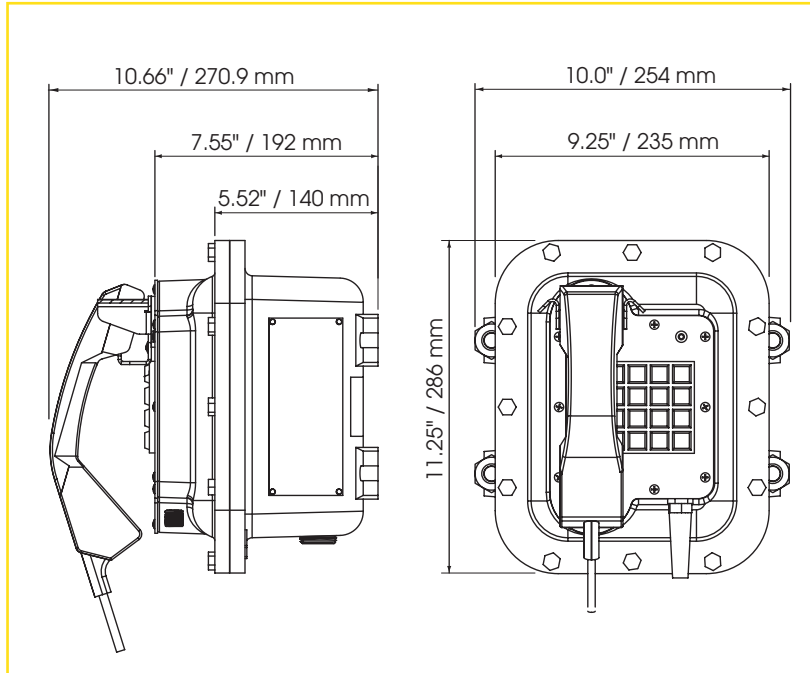
The E1 Station keypad is designed to provide tactile and audible feedback (via external powered speaker) for positive activation. Each station may be programmed for four levels of privacy for receiving calls; non-private, semi-private, full privacy and do-not-disturb. Volume for voice and signal levels are easily adjusted on the keypad.

Each E1 Station is constructed with a heavy duty, corrosion –resistant cast aluminum and a powder coated aluminum faceplate, equipped with weatherproof keypads, and is rated for use in Type 4X dust- and water-tight applications.





## EXPLOSION PROOF DIGITAL INTERCOM STATIONS (E1)



### HOW TO ORDER

- Specify model:
  - Station with Handset (E1-HND)
  - Station with Headset (E1-HDS)
  - E1-HND in 4X enclosure (E1-HND-4X)
  - E1-SM in 4X enclosure (E1-SM-4X)
  - E1-HDS in 4X enclosure (E1-HDS-4X)
  - Stubby Microphone, 65mm (E1-SM)
  - Gooseneck Microphone, 260mm (E1-GM1)
  - Gooseneck Microphone, 440mm (E1-GM2)
  - Gooseneck Microphone, 590mm (E1-GM2 E1)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Line Attenuation:	24dB@160kb/s Max
Current Idle:	25mA	Loop Resistance:	170 Ohm Max
Current Connected:	100mA max.	Distance:	1.2 miles 2.0 kms Max
Handset Microphone Type:	Dynamic	Cable:	One twisted pair, non-shielded
Handset Material:	Moulded Polycarbonate/ABS Blend	Cable Entries:	3 x 3/4" NPT
Handset Cord:	Stainless Steel	Operating Temperature Range:	-40°C to +65°C
Stubby Microphone Type:	Dynamic	Termination:	Din rail mount tensioned clamp terminals
Stubby Mic Sensitivity:	-54dB	Relay Switching Capacity:	3A at 240VAC
Stubby Mic Enclosure:	Stainless Steel	Net Weight:	25 lbs 11.4 kg
Audio Output:	2.7 Vrms / 1k ohm load	Shipping Weight:	30 lbs 13.6 kg
Volume Control via Keypad:	30dB in ten steps	Shipping Dimensions:	20.63" x 14.13" x 13.63" 524mm x 359mm x 346mm



E1-SM



E1-HDS





## HAZARDOUS LOCATION INTERCOM STATION•

- Corrosion and vandal resistant design
- Private full duplex handset communication
- Headset, gooseneck microphone and handset options
- Single touch speed dialing
- Group call, all-call, priority call, auto conference
- Simple one pair wiring
- Output to powered loudspeaker
- IP66

# Zone 1 Digital Intercom Stations

## Model ECHO EZ1

Federal Signal Model EZ1 ECHO Intercom Stations provide safe and efficient two-way voice communications in large and small ECHO Digital Intercom Systems. The EZ1 ECHO Station is designed and approved for use in Zone 1 Hazardous Areas, Ex II 2 G EEx meib IIC T6.

The EZ1 ECHO ATEX station provides instantaneous high-speed connections and clear, crisp digital voice quality. Each station offers single-button all call, priority emergency paging, group paging, speed dial, conference call, and relay output.

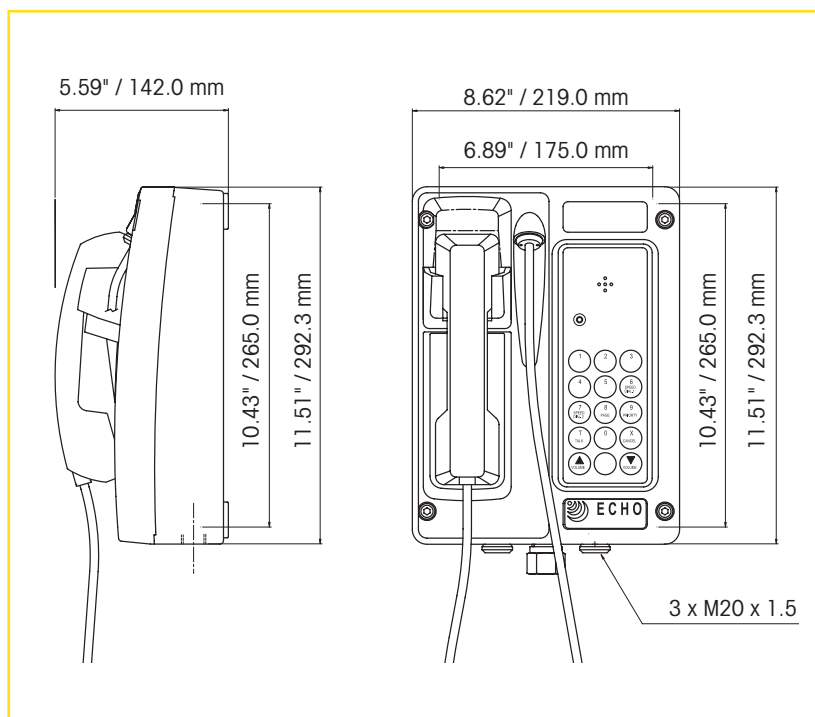
Any station can call any other station(s) in an ECHO Digital Intercom System. With the headset or gooseneck microphone options, each is capable of hands-free voice communication. Because the ECHO Digital Central Exchange provides 30 channels of simultaneous communication, calls are processed and connected immediately without dial tone or delay.

The EZ1 Station keypad is designed to provide tactile and audible feedback (via external powered loudspeaker) for a positive activation. Each station may be programmed for four levels of privacy for receiving calls; non-private, semi-private, full privacy and do-not-disturb. Volume for voice and signal levels are easily adjusted on the keypad.

Each EZ1 Station is constructed of heavy duty glass reinforced polyester (GRP), equipped with a weatherproof keypad, and are rated for use in IP66 dust- and water-tight applications.



## ZONE 1 DIGITAL INTERCOM STATIONS (EZ1)



### HOW TO ORDER

- Specify model:
  - Handset, 1.8m curly cord (EZ1-HND-C)
  - Handset, 1.0m stainless steel cord (EZ1-HND-S)
  - Jack station (EZ1-JS)
  - Stubby microphone, 65mm (EZ1-SM)
  - Gooseneck microphone, 260mm (EZ1-GM1)
  - Gooseneck microphone, 440mm (EZ1-GM2)
  - Gooseneck microphone, 590mm (EZ1-GM3)
  - Potted relay assembly, EZ1 (K8601241A)
- Optional Accessories:
  - Headset (K137149A-01)
  - 10m Headset extension cord (K1751234A)
  - Handset with 10m curly cord (detachable) (K8601272A-01)

### SPECIFICATIONS

Operating Voltage:	24VDC nominal (line driven from ECHO control)	Distance:	1.2 miles	2.0km Max
Current Idle:	25mA	Cable:	One twisted pair, non-shielded	
Current Connected:	100mA	Cable Entries (bottom):	3 x M20	
Handset Microphone Type:	Dynamic	Operating Temperature Range:	-35C to +50C (T6)	
Handset Material:	Moulded Polyurethane	Termination:	EEx e screw terminal block	
Handset Cord:	Stainless Steel	Relay Switching Capacity:	3A at 240VAC	
Stubby Microphone Type:	Dynamic	Net Weight:	9.5 lbs	4.3kg
Stubby Microphone Sensitivity:	-54dB	Shipping Weight:	11.1 lbs	5.1kg
Stubby Microphone Enclosure:	Stainless Steel	Shipping Dimensions:	16.25" x 9.5" x 9.25"	
Audio Output:	2.7 Vrms / 1.0k ohm load		413mm x 241mm x 235mm	
Volume Control via Keypad:	30dB in ten steps	Certificate Number:	BAS01ATEX2306X	
Line Attenuation:	24dB@160kb/s Max	Classification Marking:	II 2 G EEx meib IIC T6	
Loop Resistance:	170 Ohm Max	Ingress Protection:	IP66 (IP65 on handset)	



EZ1-GM1



EZ1-SM



# Public Address High-Powered Amplifiers

Models CTS600, CTS1200,  
CTS2000, CTS3000

## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Available in power ratings of 600, 1200, 2000, and 3000 watt
- Two channels
- Selectable dual or mono modes
- In-rush limiting
- Energy efficient
- Integrated coding system
- Dual input sensitivity switches
- ETL Listed

The Federal Signal line of high-powered audio amplifiers provides the flexibility, quality, and performance required in an industrial public address system. AudioMaster® amplifiers are available in four different power ratings from 600 watt to 3000 watt. Each output channel can be independently configured to drive either the step-down transformers in a distributed “constant-voltage” loudspeaker system (70-volt mode) or a system of loudspeakers that do not require step-down transformers (8/4 ohm mode). Additionally, the Models CTS2000 and CTS3000 can operate in 100-volt mode. The 70-volt and 100-volt outputs eliminate the need for step-up transformers, which can create distortion and cause insertion loss.

The quality of AudioMaster amplifiers is apparent in the noise-free, crystal clear highs and lows they reproduce. The grounded bridge design of the CTS series provides for less distortion and thermal stress, and a simpler, more reliable power supply than found in typical stepped “linear” output systems.

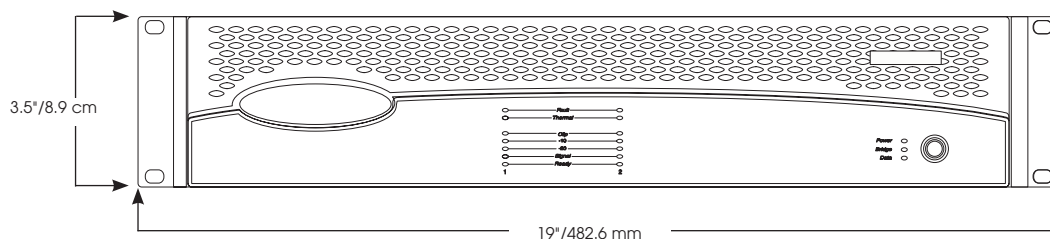
AudioMaster amplifiers consume significantly less power per watt than typical central amplifiers and reduce long term operating costs. A unique soft-start circuit and a four second pseudo-random turn-on delay minimizes inrush currents and eliminates the need for power sequencers.

When combined with the AudioMaster AudioRouter and the complete line of AudioMaster Speakers, these high-powered amplifiers are a key component in a high performance, industrial public address system.

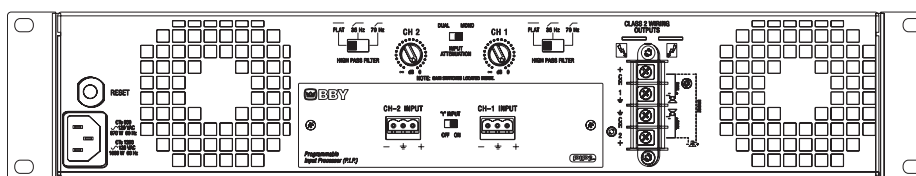
Model	Operating Power	Frequency Response	Output Power
<b>CTS600</b>	120VAC	±0.25dB from 20Hz to 20Khz at 1 watt	600 watt
<b>CTS1200</b>	120VAC	±0.25dB from 20Hz to 20Khz at 1 watt	1200 watt
<b>CTS2000</b>	120VAC	±0.25dB from 20Hz to 20Khz at 1 watt	2000 watt
<b>CTS3000</b>	120VAC	±0.25dB from 20Hz to 20Khz at 1 watt	3000 watt



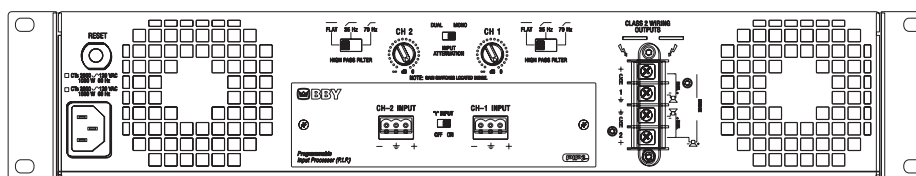
## AMPLIFIERS (CTS600/CTS1200/CTS2000/CTS3000)



**CTS600, CTS1200, CTS2000, CTS3000 - front**



**CTS600, CTS1200 - back**



**CTS2000, CTS3000 - back**

### SPECIFICATIONS

#### Net Weight:

CTS600	23.0 lbs.	11.3 kg
CTS1200	23.0 lbs.	11.3 kg
CTS2000	27.0 lbs.	12.2 kg
CTS3000	27.0 lbs.	12.2 kg

#### Shipping Weight:

CTS600	29.5 lbs.	13.4 kg
CTS1200	29.5 lbs.	13.4 kg
CTS2000	36.2 lbs.	16.4 kg
CTS3000	36.2 lbs.	16.4 kg

#### Dimensions (all models):

Height:	3.5"	8.9 cm
Width:	19.0"	48.3 cm
Depth:	14.21"	36.1 mm

### HOW TO ORDER

- Specify model number
- 240VAC models can be special ordered from the factory.
- Please refer to Model Number Index CTS600/CTS1200/CTS2000/CTS3000 beginning on page 376



## **PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS**

- Operates on 24VDC or 120/240VAC
- Routes audio input to eight zones and eight presets
- Activation of output via buttons or dry contacts
- Access to paging via local microphone or telephone
- Rack mount
- Auxiliary zone and preset models available
- UL and cUL Listed and FCC Approved

# **AudioMaster® Public Address AudioRouter™**

Models AR2000-P, AR2000-Z, AR2000-M

The Federal Signal AudioRouter™ is an audio multiplexing system capable of directing selected audio inputs to specific zones. The AudioRouter can be used in a public address system as a central control for routing voice pages, pre-recorded messages, and other audio sources to specified zones or areas within a facility.

The center of the AudioRouter system is the Model AR2000-M. The AR2000-M accepts the following source inputs: 25 Vrms, 70 Vrms, 1 Volt peak-to-peak, a telephone line, and a local microphone. The 25 Vrms and 70 Vrms inputs are designed for use with the AM25CK, AM70CK, or any SelecTone® Command Unit or CommCenter. The 1 Volt peak-to-peak input is suitable for line-level, amplified audio sources, such as CD players. The telephone input allows users to broadcast messages from any telephone in the facility. To page, the user dials the AudioRouter's extension, records a message, and hangs up. The digitally recorded message is stored and broadcast over the system immediately after the call is completed. The local microphone input works with the Federal Signal Models MNC-1 Hand-held Microphone or MSB-1 Desktop Microphone.

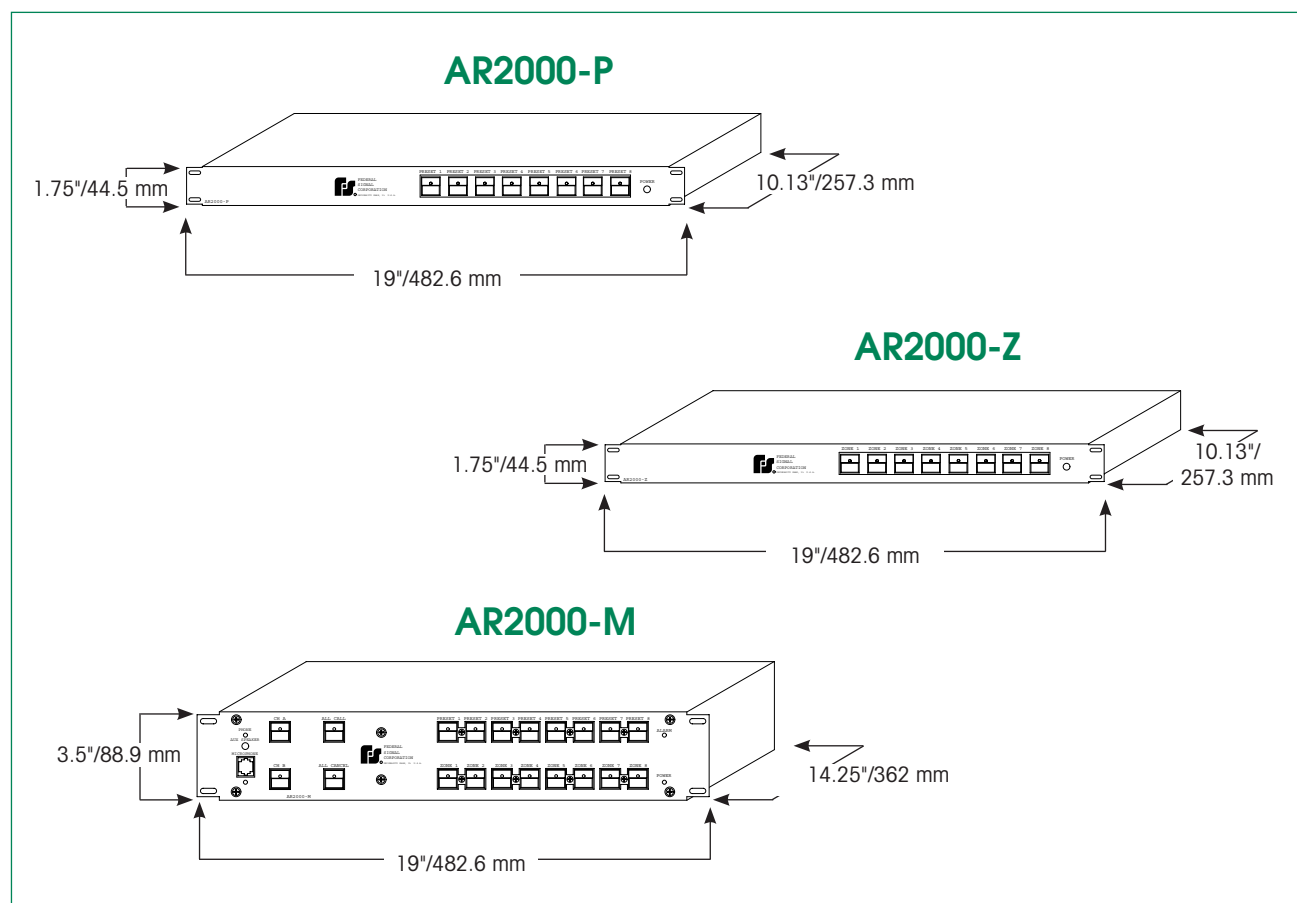
AudioRouter outputs are organized into two source Channels and eight Zones. Combinations of multiple Zones and Channels can be programmed into eight additional Presets. Zones, Channels, and Presets are easily programmed and selected with buttons on the front panel of the unit. Presets can also be activated remotely via dry contacts located on the back panel of the unit. An 'All-Call' button located on the front panel selects all zones simultaneously. Outputs can be configured for 25 Vrms, 70 Vrms, or 1 Volt peak-to-peak. The 25 Vrms and 70 Vrms lines are suitable for use with SelecTone amplified speakers and the 1 Volt peak-to-peak can be coupled with any AudioMaster HP Series Amplifier to drive AudioMaster® Speakers.

Should more than eight Zones and Presets be required, auxiliary units can be added for increased capacity. The AR2000-Z offers eight additional Zones and the AR2000-P offers eight additional Presets. Seven of each model can be installed with a single AR2000-M to provide for a total of 64 Zones and 64 Presets.

The AR2000 operates on 24VDC or 120/240VAC. The AudioRouter is UL Listed to standard 813 Commercial Audio Equipment. The AudioRouter is also FCC Approved.



## AUDIOROUTERS (AR2000-P, AR2000-Z, AR2000-M)



## SPECIFICATIONS

Net Weight:			Width:		
AR2000-M	16.5 lbs.	7.5 kg	AR2000-M	19.0"	482.6 mm
AR2000-P	3.9 lbs.	1.77 kg	AR2000-P	19.0"	482.6 mm
AR2000-Z	3.9 lbs.	1.77 kg	AR2000-Z	19.0"	482.6 mm
Shipping Weight:			Depth:		
AR2000-M	18.5 lbs.	8.39 kg	AR2000-M	14.25"	362.0 mm
AR2000-P	4.9 lbs.	2.22 kg	AR2000-P	10.13"	257.3 mm
AR2000-Z	4.9 lbs.	2.22 kg	AR2000-Z	10.13"	257.3 mm
Height:					
AR2000-M	3.5"	88.9 mm			
AR2000-P	1.75"	44.5 mm			
AR2000-Z	1.75"	44.5 mm			

## HOW TO ORDER

- Specify model number and voltage
- Please refer to Model Number Index  
AR2000-P, Z, M beginning on page 376





## PUBLIC ADDRESS FOR LARGE AREAS

- Transformer coupled
- 80 watt, expandable to 130 watt
- 25, 70 or 100 Vrms
- Wall, pole or I-beam mount

# AudioMaster® Wide Area Dispersion Speaker

## Model WDS80

Federal Signal Wide Area Dispersion Speakers are audible notification appliances specifically designed for extensive area coverage with minimal installation effort. These products are configured with full range transducers mounted in a vertical line or line array. This configuration affords the following improvements over typical horn loaded speakers; extremely wide horizontal coverage, improved sound level consistency over an increased coverage area, and drastically improved intelligibility. Wide-Area Dispersion Speakers are ideal for voice messaging, tone generation and live public address. Sealed with powder-coat paint, these units are suitable for use indoors and out.

When mounted properly, the Model WDS80 generates a full power sound level of 80dB at 400 feet and provides the same coverage as four typical industrial speakers. An extension speaker, the Model WDS50, can be added to increase the full power distance to 700 feet.

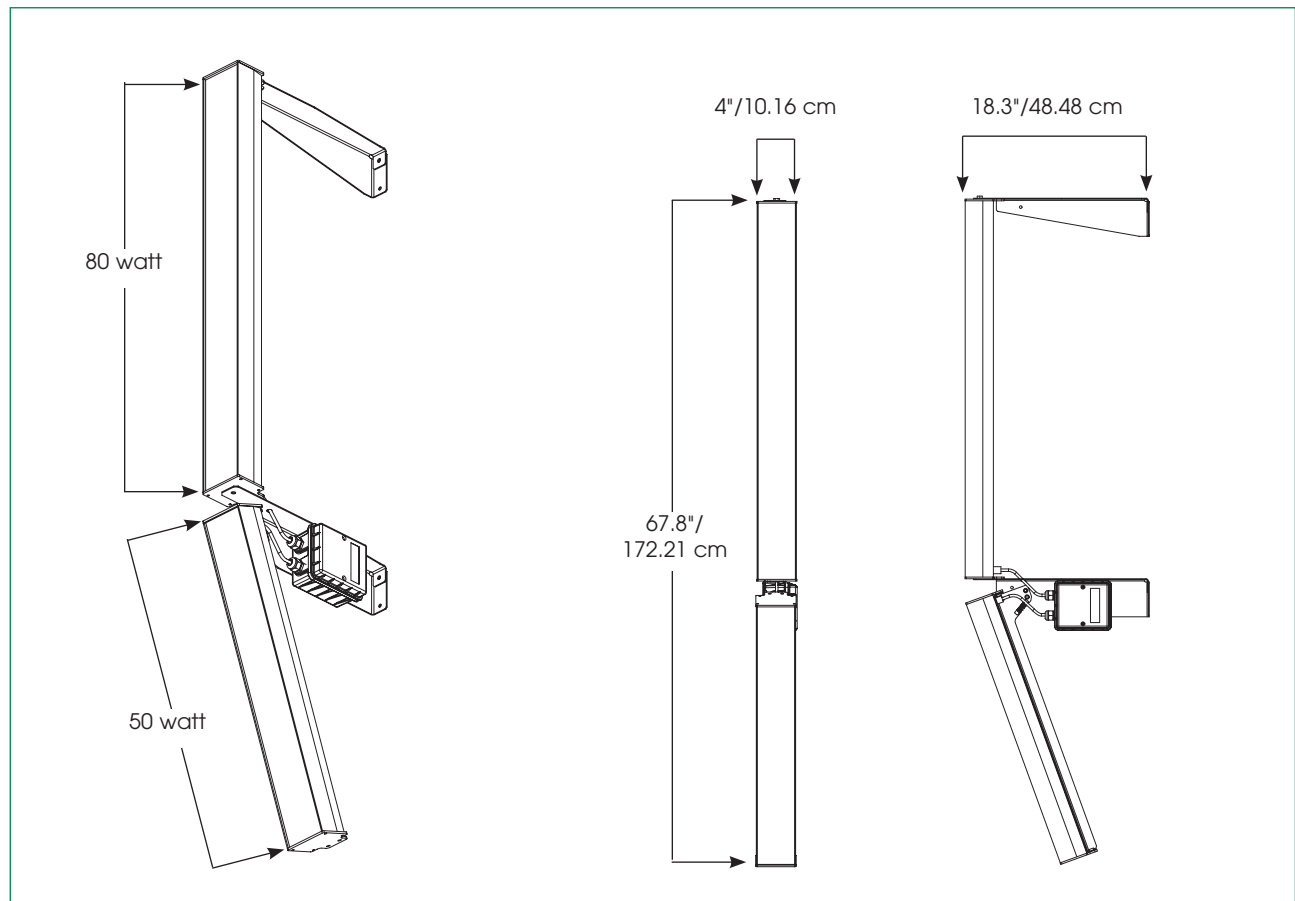
Power handling for the Model WDS80 is 80 watt with transformer taps at 80, 50, 25 and 12.5 watt. When the extension speaker, Model WDS50, is added, the combined power handling is 130 watt with transformer taps at 130, 80, 40 and 20 watt. These products are adjustable for use in 100, 70 or 25 volt systems.

These products are shipped with all necessary hardware for wall mounting. Kits for pole mounting and I-Beam mounting are sold separately. Also included is the hardware to mount an optional LP3P or Fireball® strobe visual signal.

Model	Power Handling	Frequency Response	Transformer	Horizontal Beam Spread	Power Taps	Decibels @ 10'	1m
WDS80	80 watt	200 - 11,000Hz	25/70/100 Vrms	140°	80,50,25,12.5	103	113
WDS80/WDS50	130 watt	200 - 11,000Hz	25/70/100 Vrms	140°	130,80,40,20	106	116



## WIDE AREA DISPERSION SPEAKER (WDS80)



### SPECIFICATIONS

Operating Temperature: -31°F to 161°F -35°C to 72°C

#### WDS80

Net Weight:	25.0 lbs.	11.4 kg
Shipping Weight:	30.0 lbs.	13.6 kg
Height:	67.8"	172.21 cm
Width:	4.0"	10.16 cm
Depth:	18.3"	48.48 cm

#### WDS50

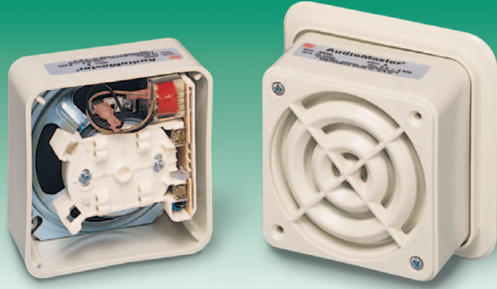
Net Weight:	15.0 lbs.	6.8 kg
Shipping Weight:	19.0 lbs.	8.6 kg
Height:	38.2"	97.03 cm
Width:	4.0"	10.16 cm
Depth:	18.3"	48.48 cm

### OPTIONS

<u>Description</u>	<u>Part Number</u>
50 Watt Extension Speaker	WDS50
Pole Mount Bracket	K8594061A
I-Beam Mount Bracket	K8594062A

### HOW TO ORDER

- Specify model
- Optional Accessories  
(order two optional brackets per WDS80 and one per WDS50)
- Please refer to Model Number Index WDS80 beginning on page 376



## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer coupled
- 25 or 70 Vrms
- 2 watt
- Several mounting options
- Re-entrant horn design
- Pre-assembled
- Type 3R with WB Box
- AM50 is UL Fire Listed
- UL 1480 and CSFM Approved

# AudioMaster® Public Address 2 Watt Re-Entrant Speaker

## Model AM50

The Federal Signal Model AM50 is a compact, two watt, transformer coupled speaker for use in public address or paging applications. The unique design of this four-inch square speaker centers around the short, folded, re-entrant horn that is interposed between the diaphragm and the surrounding space. The beige, thermoplastic, flame-retardant housing provides greater efficiency and frequency response while blending easily into commercial and industrial spaces.

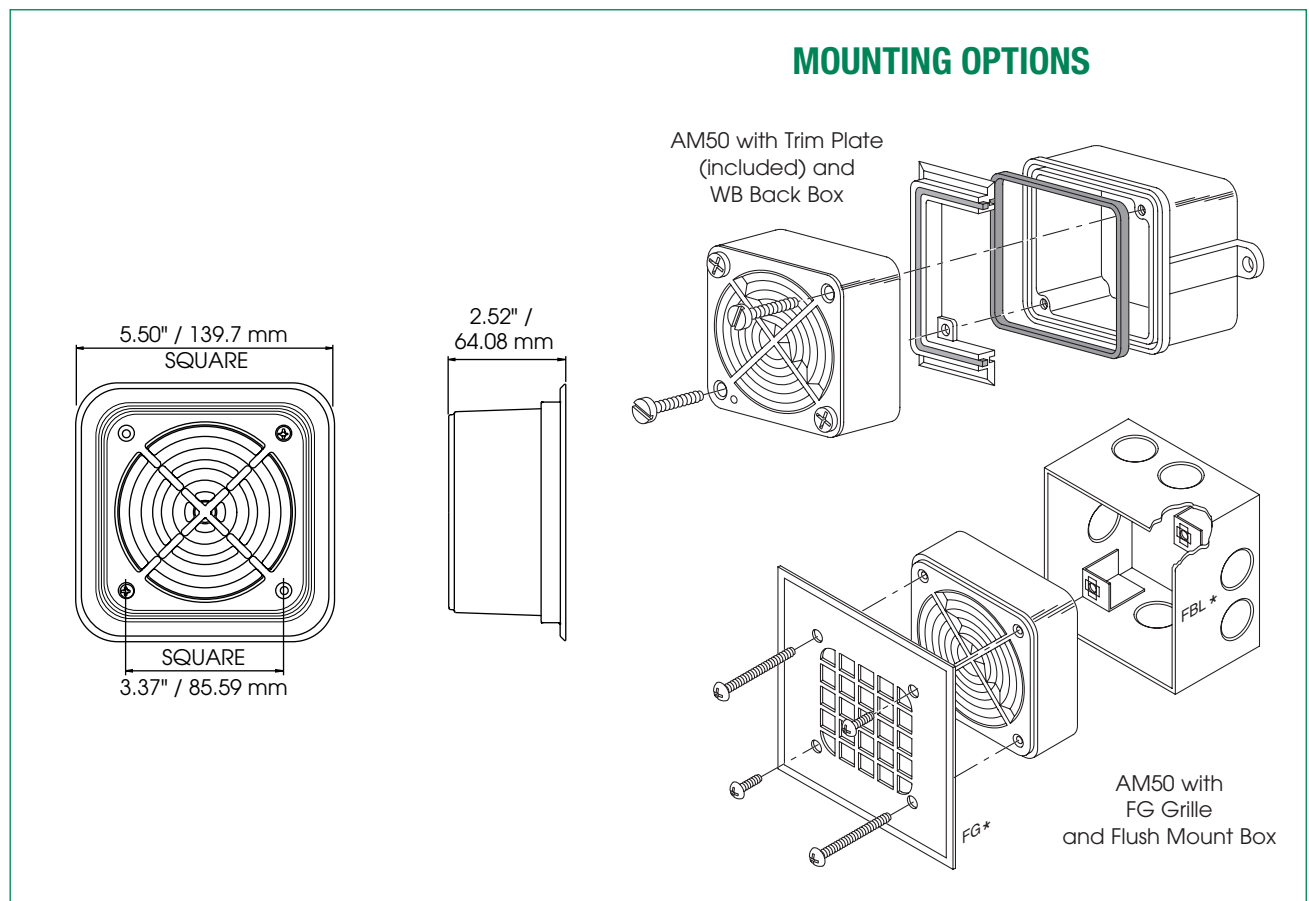
Power handling for the AM50 is two watt with transformer taps of 2, 1,  $\frac{1}{2}$ , and  $\frac{1}{4}$ . A moveable contact is used to select the power output. The AM50 comes factory preset in the  $\frac{1}{4}$  watt position. Two models of the speaker are available for use in 25 Vrms and 70 Vrms distributed systems. This speaker is supplied with wiring terminals and strain relief for inbound and outbound speaker wiring.

The AM50 is designed primarily for wall mounting and includes a trim ring for adapting to any standard four-inch square or weatherproof back box. This speaker is Underwriters Laboratories Listed for "Fire Protective Signaling Use" and California State Fire Marshall approved.

Model	Power Handling	Frequency Response	Transformer	Power Taps	Beam Width	Decibels @	
						10'	1m
AM50	2 watt	140Hz - 10KHz	25/70 Vrms	2, 1, $\frac{1}{2}$ , $\frac{1}{4}$	170°	87	97



## PUBLIC ADDRESS SPEAKER (AM50)

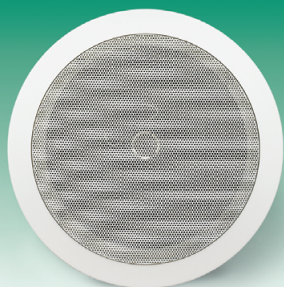


### SPECIFICATIONS

Operating Temperature:	-40°F to 151°F	-40°C to 66°C
Net Weight::	1.4 lbs.	0.64 kg
Shipping Weight::	1.75 lbs.	1.3 kg
Height::	5.5"	137.9 mm
Width:	5.5"	137.9 mm
Depth:	2.5"	63.5 mm

### HOW TO ORDER

- Specify model number
- Optional Accessories:
  - Weatherproof Back Box (WB)
  - Grille (FG)
  - Flush Mount Back Box (FBL)
- Please refer to Model Number Index AM50 beginning on page 376



## HIGH QUALITY PUBLIC ADDRESS AND MUSIC

- Transformer coupled for 25, 70 or 100 Vrms systems
- 8 watt
- Flexible mounting
- Back box and tile bridge included

# AudioMaster® 8 Watt Ceiling Speaker

## Model AMR6

The Federal Signal Model AMR6 is a high-quality ceiling speaker for public address and music in industrial, municipal and commercial office environments.

Power handling for the AMR6 is eight watt with transformer taps at 8, 4, 2 and 1 watts. The AMR6-2570K operates in 25 or 70 Vrms systems and the AMR6-100K operates in 100 Vrms systems.

The speaker is designed to mount flush in a ceiling or wall cavity. Adjustable "L" shaped clamps offer the flexibility of mounting to any surface thickness from 1/4" to 1 1/2". The AMR6 is suitable for use in air handling spaces.

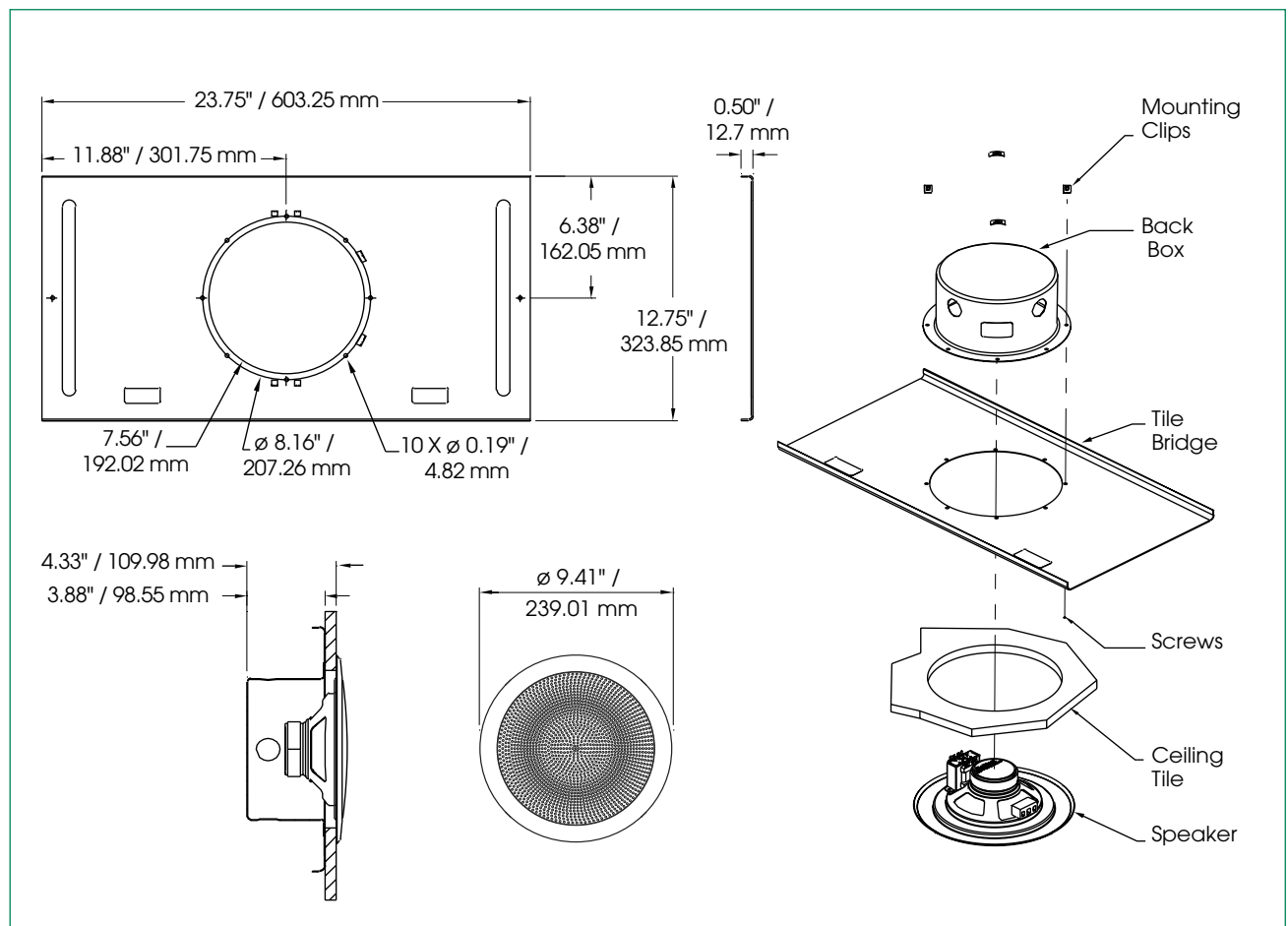
Construction materials were selected to provide years of service in demanding conditions. The speaker frame is flame-retardant ABS that meets Underwriter's Laboratories requirements for Flame Class V-0, 5VA. The speaker cone is constructed of polypropylene and the surround material is a phenolic impregnated cloth, rather than the traditional paper structures.

The AMR6 offers a wide frequency response of 110Hz to 20,000Hz that reproduces a full range of voice, music and electronically generated tones. To achieve these impressive results both a woofer and a neodymium tweeter are utilized. Neodymium is a rare earth metal known for high energy in compact sizes.

Model	Power Handling	Frequency Response	Transformer	Power Taps	Decibels @ 10'	1m
AMR6-2570K	8 watt	110-20,000Hz	25 Vrms	8, 4, 2, 1.1	81	91
	8 watt	110-20,000Hz	70 Vrms	8, 4, 2, 1.1	85	95
AMR6-100K	8 watt	110-20,000Hz	100 Vrms	8, 4, 2, 1.1	85	95



## PUBLIC ADDRESS SPEAKER (AMR6)



### SPECIFICATIONS

Operating Temperature:	32°F to 120°F	0°C to 49°C
Net Weight:	3.06 lbs.	1.39 kg
Shipping Weight:	4.75 lbs.	2.15 kg
Diameter:	9.0"	228.6 mm
Depth:	4.9"	124.4 mm

### HOW TO ORDER

- Specify model number and Vrms of system (25/70 Vrms or 100 Vrms)
- Please refer to Model Number Index AMR6 beginning on page 376





## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Eight ohm
- 15 watt
- Re-entrant horn design
- Wall mount
- 1/2-inch conduit openings
- Type 3R enclosure
- UL 1480 Approved and cUL Listed

# AudioMaster® Public Address 15 Watt Speaker

## Model AM15

The Federal Signal Model AM15 is a rugged, re-entrant speaker for use in public address or paging applications. This 15 watt speaker features a rugged speaker cone and projector constructed of spun aluminum. The speaker wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum compartment. All external surfaces are sealed with gray powder coat paint.

Two screws inserted through the back of the wiring compartment provide for simple wall mount installation. The bottom of the AM15 contains two 1/2-inch conduit openings to accommodate inbound and outbound audio wiring. The unique shape of the AM15 projector provides a 60° sound dispersion. The projector is held in position with a Teflon coated lock ring that can be rotated 180° in order to obtain the desired sound distribution.

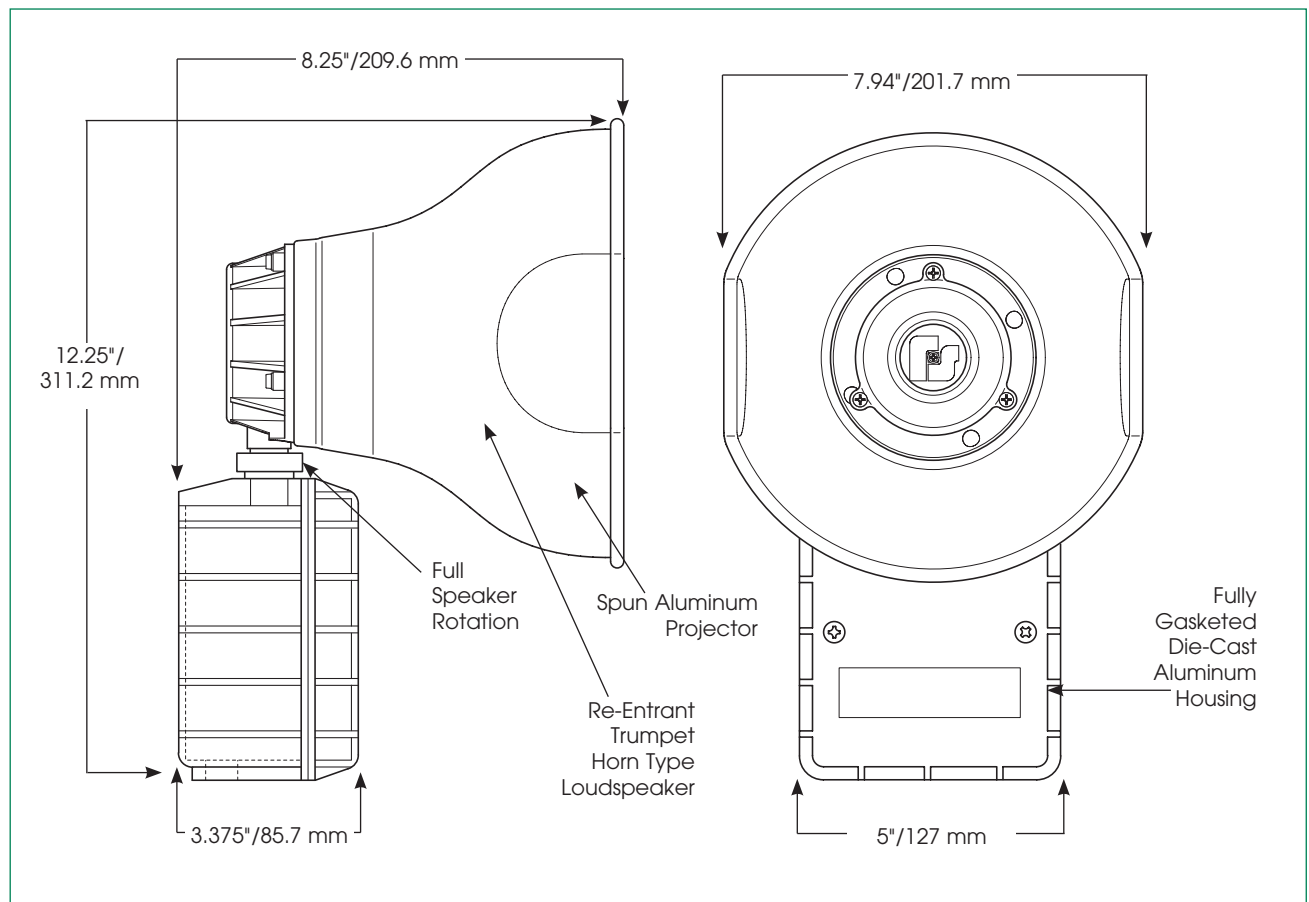
The AM15 is rated for indoor and outdoor use. This speaker is UL Listed.

The AM15 can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Impedance	Beam Spread	Decibels @	
					10'	1m
AM15	15 watt	400-4000Hz	8 ohm	60°	110	120



## PUBLIC ADDRESS SPEAKER (AM15)



### SPECIFICATIONS

Operating Temperature:	-40°F to 151°F	-40°C to 66°C
Net Weight:	4.85 lbs.	2.2 kg
Shipping Weight:	6.0 lbs.	2.72 kg
Height:	12.25"	311.2 mm
Width:	7.94"	201.7 mm
Depth:	8.25"	209.6 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM15 beginning on page 376



## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Eight ohm
- 15 watt
- Re-entrant horn design
- Wall mount
- 1/2-inch conduit openings
- Class 1, Division 2 rated
- Type 4X enclosure
- UL 1480 Approved and cUL Listed

# AudioMaster® Public Address Hazardous Location Speaker

## Model AM15XD2

The Federal Signal Model AM15XD2 is an 8 ohm, re-entrant, Type 4X speaker for use in public address or paging applications. The AM15XD2 features a rugged cone and projector constructed of spun aluminum. The speaker wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum housing. All external surfaces are sealed with a gray powder coat paint.

The AM15XD2 is rated for 15 watt and is UL Listed for Class 1, Division 2, Groups A,B,C, and D; Class II, Division 2, Groups F & G; and Class III environments. The design and seal of the speaker assembly and housing have been tested and approved by UL for Type 4X requirements.

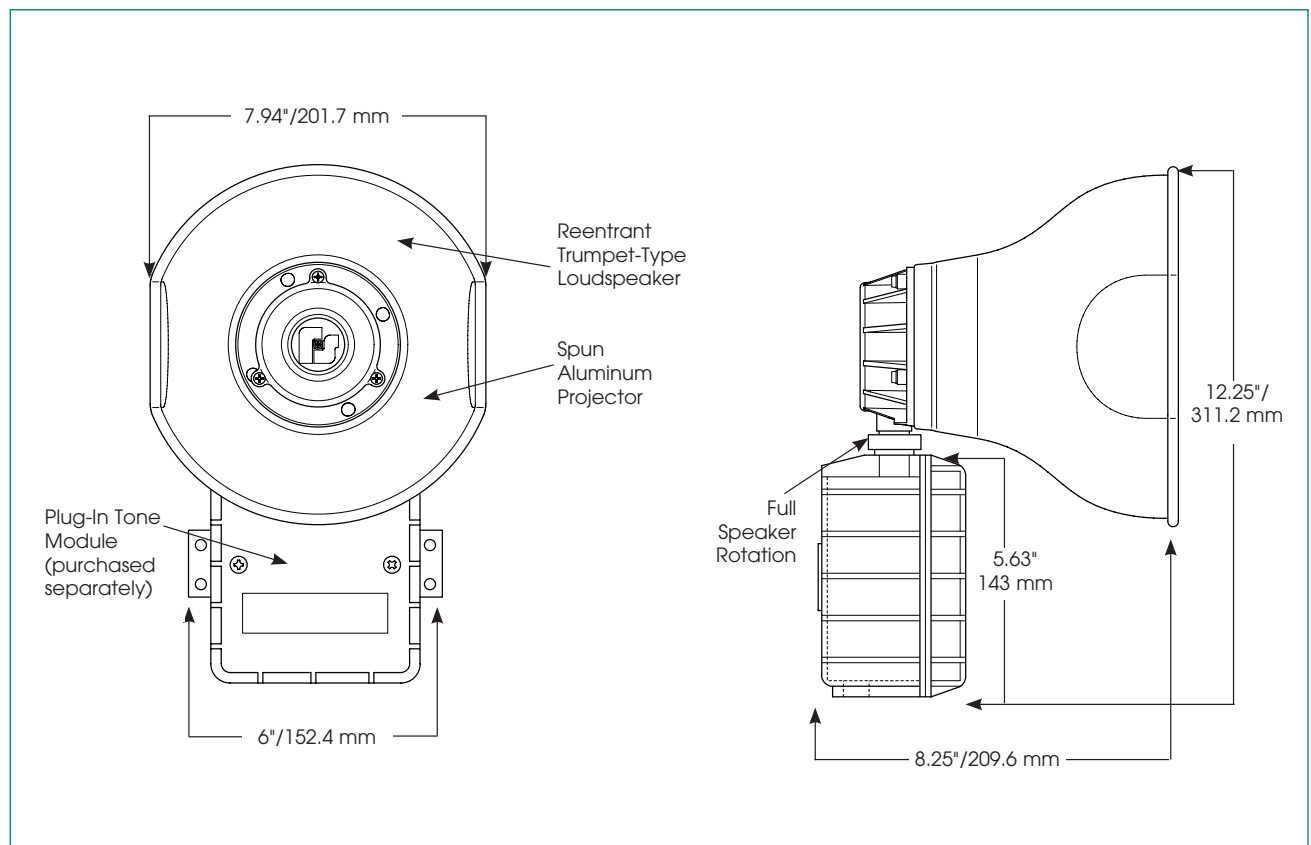
Four screws inserted through the metal tabs located at the sides of the housing provide a quick wall mount installation. Two 1/2-inch conduit openings in the base of the housing simplify wiring and accommodate inbound and outbound audio wiring. The unique shape of the speaker projector provides a 60° sound dispersion. The projector is held in position with a Teflon coated lock ring that can be rotated 180° in order to obtain the desired sound distribution.

The AM15XD2 can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial-grade public address system.

Model	Power Handling	Frequency Response	Impedance	Beam Width	Decibels @	
					10'	1m
AM15XD2	15 watt	400-4000Hz	8 ohm	60°	110	120



## PUBLIC ADDRESS SPEAKER (AM15XD2)



### SPECIFICATIONS

Operating Temperature:	-40°F to 151°F	-40°C to 66°C
Net Weight:	4.85 lbs.	2.2 kg
Shipping Weight:	6.0 lbs.	2.72 kg
Height:	12.25"	311.2 mm
Width:	7.94"	201.7 mm
Depth:	8.25"	209.6 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM15XD2 beginning on page 376



# AudioMaster® Public Address 15 Watt Speaker

Model AM300

## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer coupled
- 25 or 70 Vrms
- 15 watt
- Re-entrant horn design
- Wall mount
- Type 3R enclosure
- UL 1480 and CSFM Approved

The AM300 is a rugged, transformer coupled, re-entrant speaker for use in public address or paging applications. This 15 watt speaker features a durable speaker cone and projector constructed of spun aluminum. The speaker wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum compartment. All external surfaces are sealed with a gray powder coat paint.

Two screws inserted through the back of the wiring compartment provide for simple wall mount installation. The bottom of the AM300 contains two 1/2-inch conduit openings to accommodate inbound and outbound audio wiring. The unique shape of the AM300 projector provides a 60° sound dispersion. The projector is held in position with a Teflon coated lock ring that can be rotated 180° in order to obtain the desired sound distribution.

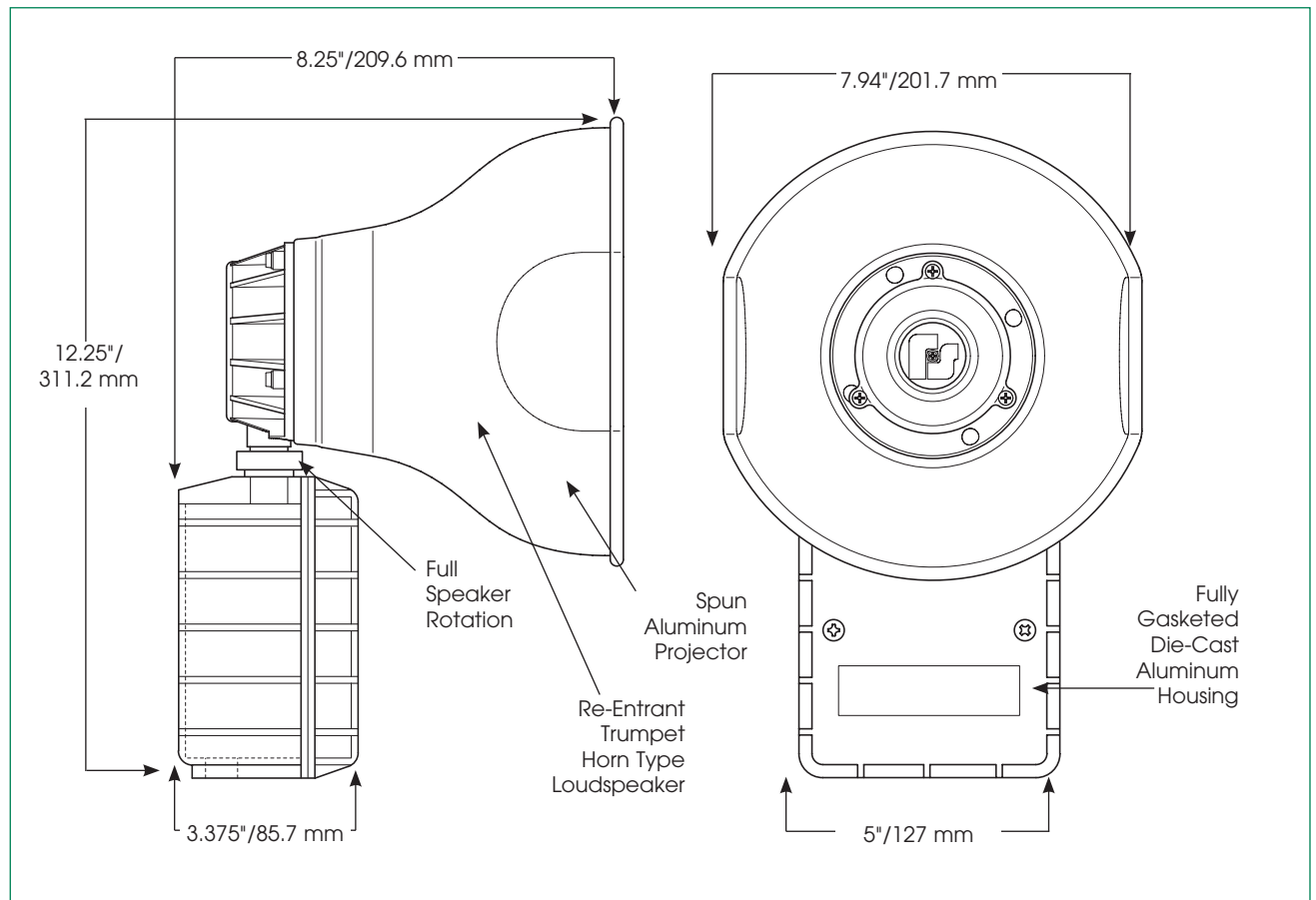
Power handling for the AM300 is 15 watt with transformer taps of 15, 9, 3 and 1.5 watt. This unit is designed for use in 25 and 70 Vrms distributed systems.

The AM300 is rated for indoor and outdoor use. This speaker is Underwriters Laboratories Listed for "Fire Protective Signaling Use". An in-line capacitor (included) provides the isolation necessary for use in supervised systems. The AM300 can be used with the AudioMaster® CTS series amplifiers and the Audio Router to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Transformer	Power Taps	Beam Width	Decibels @	
						10'	1m
AM300	15 watt	400-4000Hz	25/70 Vrms	15, 9, 3, 1.5	60°	110	120



## PUBLIC ADDRESS SPEAKER (AM300)



### SPECIFICATIONS

Net Weight:	4.85 lbs.	2.2 kg
Shipping Weight:	6.15 lbs.	2.79 kg
Height:	12.25"	311.2 mm
Width:	7.94"	201.7 mm
Depth:	8.25"	209.6 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM300 beginning on page 376





## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer coupled
- 15 watt (AM300GCX)
- 30 watt (AM302GCX)
- 25 or 70 Vrms
- Re-entrant horn design
- Wall mount
- 1/2-inch conduit openings
- Type 4X enclosure
- AM300GCX is UL Fire Listed
- UL 1480 and CSFM Approved, CUL Listed

# AudioMaster® Public Address Hazardous Location Speaker

Models AM300GCX and AM302GCX

Federal Signal Models AM300GCX and AM302GCX are rugged, transformer coupled, re-entrant speakers for use in public address or paging applications. These speakers feature rugged cones and projectors constructed of spun aluminum. The wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum compartment. All external surfaces are finished with a gray powder coat paint.

Power handling for the AM300GCX is 15 watt and the AM302GCX is rated for 30 watt. There are transformer taps at 15, 9, 3 and 1.5 watt in the AM300GCX and 30, 15 and 9 watt in the AM302GCX. Both speakers are designed for use in 25 or 70 Vrms distributed systems. Both models are UL and CUL Listed for Class 1, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F & G; and Class III environments. The design and seal of the speaker assembly and housing have been tested and approved by UL for Type 4X requirements.

Four screws inserted through the metal tabs located at the side of the housing make for a simple wall mount. The bottom of these speakers contains two 1/2-inch conduit openings in the base of the housing to accommodate inbound and outbound audio wiring. The unique shape of the speaker projectors provides an impressive 60° sound dispersion pattern. The projectors are held in position with a Teflon coated lock ring that can be rotated 180° in order to obtain the desired sound distribution.

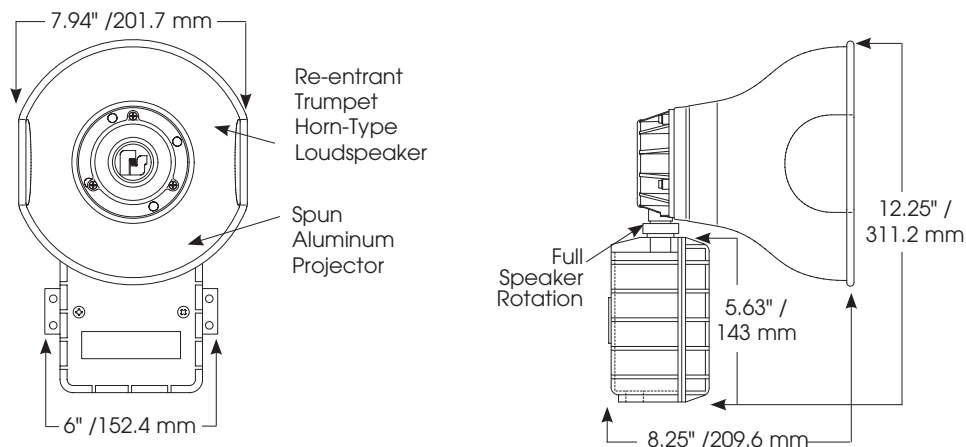
The AM300GCX and the AM302GCX can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Transformer	Power Taps	Beam Width	Decibels @	
						10'	1m
AM300GCX	15 watt	600-5000Hz	25/70 Vrms	15, 9, 3, 1.5	60°	110	120
AM302GCX	30 watt	400-4000Hz	25/70 Vrms	30, 15, 9	60°	114	124

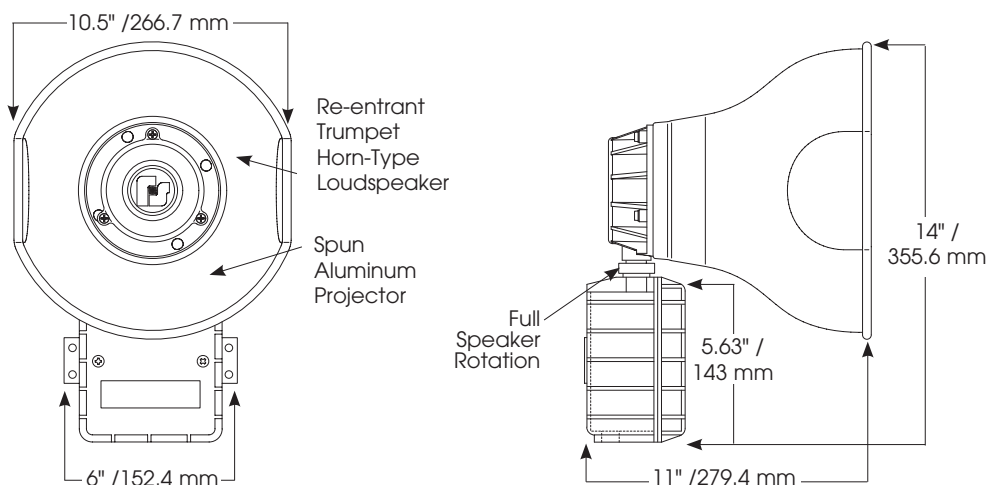


## PUBLIC ADDRESS SPEAKER (AM300GCX/AM302GCX)

### AM300GCX



### AM302GCX



## SPECIFICATIONS

### Net Weight:

AM300GCX	4.85 lbs.	2.2 kg
AM302GCX	7.2 lbs.	3.3 kg

### Shipping Weight:

AM300GCX	6.0 lbs.	2.72 kg
AM302GCX	8.1 lbs.	3.67 kg

### Height:

AM300GCX	12.25"	311.2 mm
AM302GCX	14.0"	355.6 mm

### Width:

AM300GCX	7.94"	201.7 mm
AM302GCX	10.5"	266.7 mm

### Depth:

AM300GCX	8.25"	209.6 mm
AM302GCX	11.0"	279.4 mm

## HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM300GCX/AM302GCX beginning on page 376



## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Eight ohm
- 25 watt
- Surface and flush mount
- Type 4X, IP66 enclosure
- UL Listed

# AudioMaster® Public Address Flush and Swivel Mount 25 Watt Speakers

Models AMSS-25 and AMSF-25

The Federal Signal Models AMSF-25 and AMSS-25 are heavy-duty, 8-ohm speakers for use in public address or paging systems. These speakers are designed to reproduce full-range voice communication. Both speakers are constructed of spun aluminum. The speaker wiring connections are enclosed in a dust-tight and moisture-proof, gasketed rear cover. All external surfaces are sealed with a metallic gray powder coat paint.

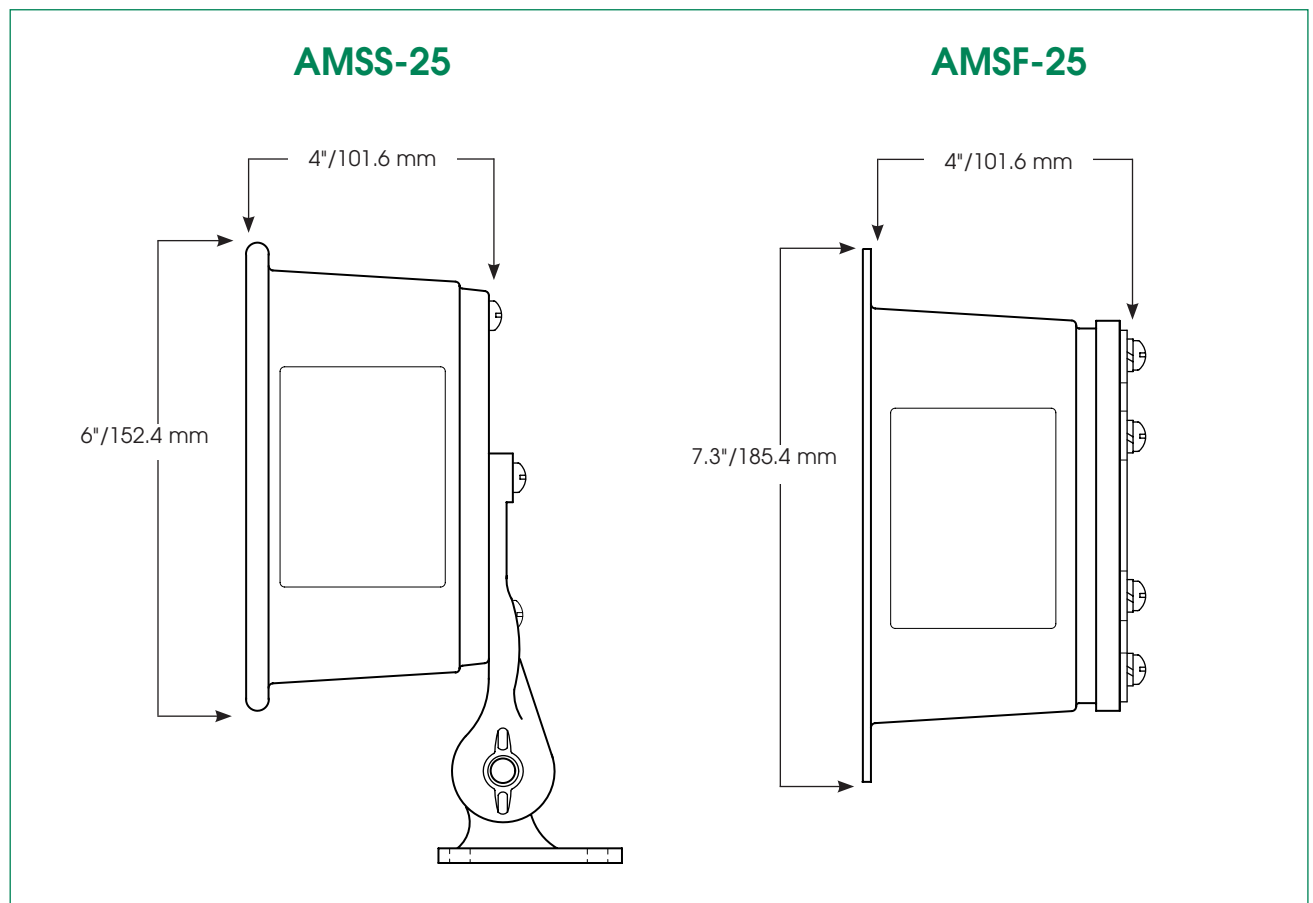
The AMSF-25 is a flush mount unit that is ideal for use in walls and cabinets. The AMSS-25 has an adjustable mounting bracket that pivots in a 90° arc for attaching to walls, cabinets or vehicle roofs. These speakers are appropriate for marine applications.

The AMSF-25 and the AMSS-25 can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Impedance	Beam Width	Decibels @	
					10'	1m
AMSF-25	25 watt	800-5000Hz	8 ohm	90°	107	117
AMSS-25	25 watt	800-5000Hz	8 ohm	90°	107	117



## PUBLIC ADDRESS SPEAKER (AMSS-25/AMSF-25)



### SPECIFICATIONS

Operating Temperature:	-50°F to 150°F	-46°C to 66°C
Net Weight:		
AMSF-25	4.6 lbs.	2.1 kg
AMSS-25	5.0 lbs.	2.27 kg
Shipping Weight:		
AMSF-25	5.1 lbs.	2.3 kg
AMSS-25	6.0 lbs.	2.72 kg
Depth:		
AMSF-25	4.0"	101.6 mm
AMSS-25	4.0"	101.6 mm
Diameter:		
AMSF-25	7.3"	185.4 mm
AMSS-25	6.0"	152.4 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AMSS-25/AMSF-25 beginning on page 376



## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Eight ohm
- 30 watt
- Constant directivity horn design
- Omni-directional swivel mount
- Type 3R enclosure

# AudioMaster® Public Address 30 Watt Speaker

## Models AM30

The Federal Signal AM30 is an 8 ohm constant directivity, re-entrant speaker that is ideal for most public address or paging applications. The constant directivity horn design provides excellent sound coverage throughout the typical frequency range of speech. The AM30 is molded from impact-resistant, beige acrylic-styrene-acrylonitrile (ASA). The unique omni-directional swivel mount of this speaker allows the unit to be pointed anywhere within a 360° half-sphere of area.

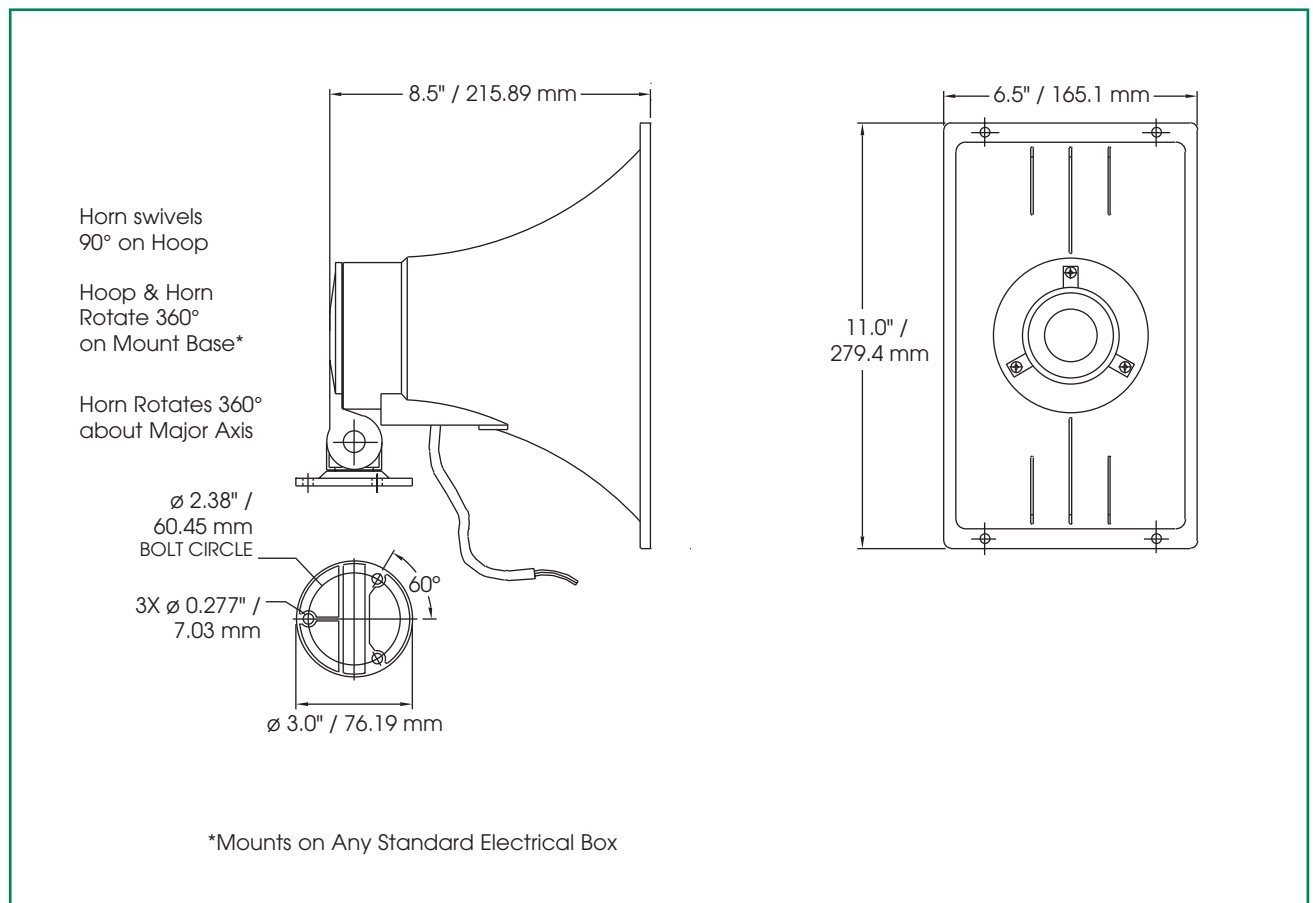
The driver of the AM30 employs a rugged phenolic diaphragm, a 1.5-inch diameter voice coil, and "rim centered" ferrite magnet structure for long life and durability under extreme operating conditions. A 12-inch connecting cable, phased and color coded, is provided for connecting the AM30.

The AM30 can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Impedance	Beam Width	Decibels @	
					10'	1m
AM30	30 watt	400-6500Hz	8 ohm	80° x 50°	112	122



## PUBLIC ADDRESS SPEAKER (AM30)



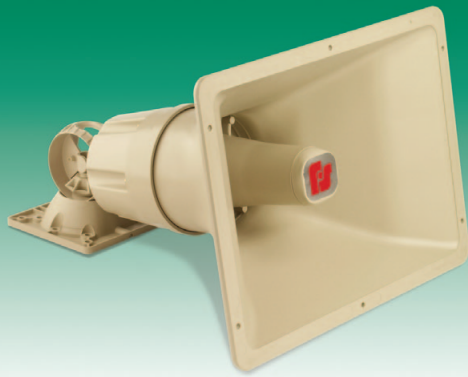
### SPECIFICATIONS

Net Weight:	4.1 lbs.	1.8 kg
Shipping Weight:	4.6 lbs.	2.1 kg
Height:	8.9"	22.6 cm
Width:	12.1"	30.7 cm
Depth:	12.2"	31.0 cm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM30 beginning on page 376





## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer Coupled
- 25, 70, or 100 Vrms
- 30 watt
- Omni-directional swivel mount
- Constant directivity horn design
- Type 3R enclosure

# AudioMaster® Public Address 30 Watt Speaker

Model AM30T

The Federal Signal AM30T is a transformer-coupled, constant directivity, re-entrant speaker ideal for most public address or paging applications. The constant directivity design provides excellent sound coverage throughout the frequency range of speech. The AM30T is molded from impact resistant, beige acrylic-styrene-acrylonitrile (ASA). The omni-directional swivel mount of this speaker allows the unit to be pointed anywhere within a 360° half-sphere of area.

Power handling for the AM30T is 30 watt with transformer taps of 30, 15, 7.5, 3.7, and 1.8. A screwdriver operated power switch is used to select the desired tap. This unit is designed for use in 25, 70, and 100 Vrms distributed systems.

The driver of the AM30T employs a rugged phenolic diaphragm, a 1.5-inch diameter voice coil, and "rim centered" ferrite magnet structure for long life and durability under extreme operating conditions. A 12-inch connecting cable, phased and color coded, is provided for connecting the AM30T.

The AM30T can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

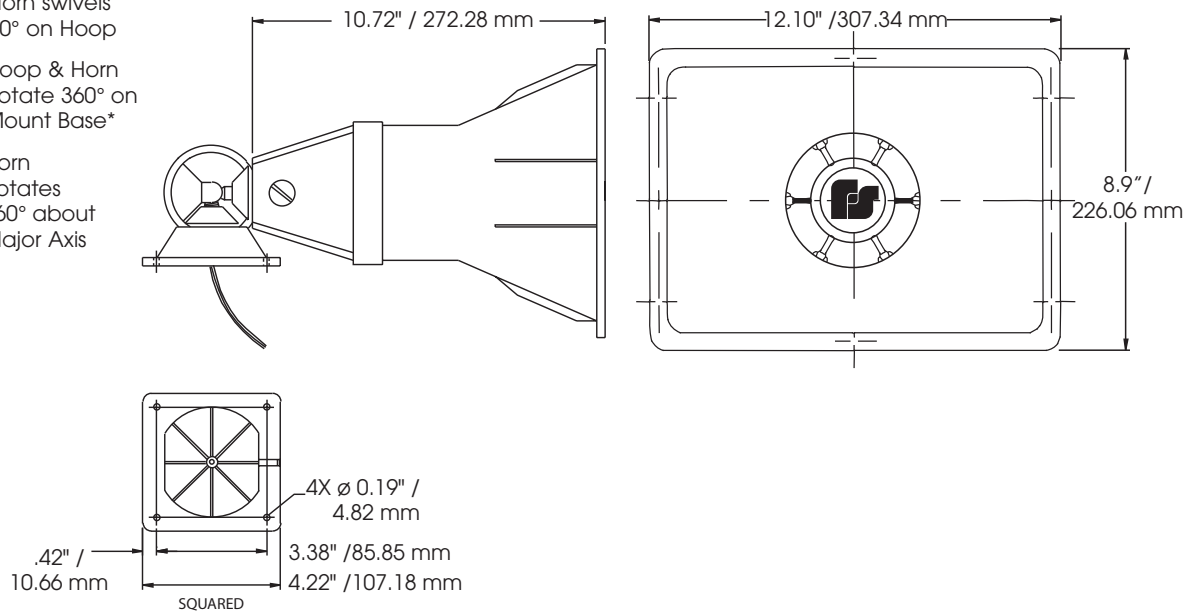
Model	Power Handling	Frequency Response	Transformer	Power Taps	Beam Width	Decibels @	
AM30T	30 watt	400-6500Hz	25 Vrms	15, 7.5, 3.7, 1.8	80° x 50°	112	122
			70 Vrms	30, 15, 7.5, 3.7, 1.8			
			100 Vrms	30, 15, 7.5, 3.7			



## PUBLIC ADDRESS SPEAKER (AM30T)

Horn swivels  
90° on Hoop  
Hoop & Horn  
Rotate 360° on  
Mount Base\*

Horn  
Rotates  
360° about  
Major Axis



\* Mounts on Any Standard Electrical Box

### SPECIFICATIONS

Net Weight:	5.3 lbs.	2.4 kg
Shipping Weight:	5.8 lbs.	2.6 kg
Height:	8.9"	22.6 cm
Width:	12.1"	30.7 cm
Depth:	12.2"	31.0 cm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM30T beginning on page 376



# AudioMaster® Public Address 30 Watt Speaker

Model AM302

## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer coupled
- 25 or 70 Vrms
- 30 watt
- Re-entrant horn design
- Wall mount
- Type 3R enclosure
- UL 1480 Approved

The AM302 is a rugged, transformer coupled, re-entrant speaker for use in a public address or paging application. This 30 watt speaker features a durable speaker cone and projector constructed of spun aluminum. The speaker wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum compartment. All external surfaces are sealed with a gray powder coat paint.

Two screws inserted through the back of the wiring compartment provide for a simple wall mount. The bottom of the AM302 contains two 1/2-inch conduit openings to accommodate inbound and outbound audio wiring. The unique shape of the AM302 projector provides a 60° sound dispersion. The projector is held in position with a Teflon coated lock ring that can be rotated 180° in order to obtain the desired sound distribution.

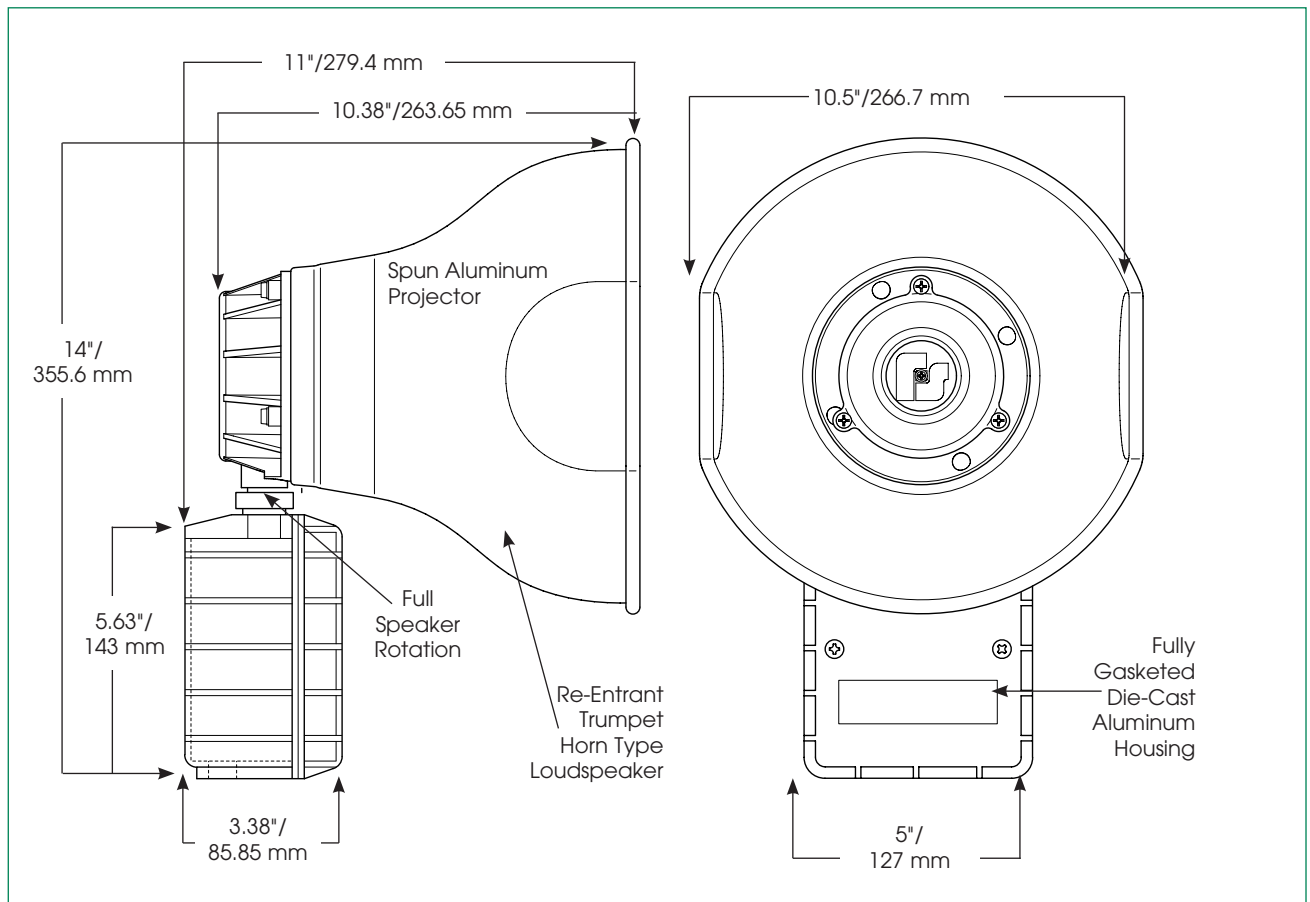
Power handling for the AM302 is 30 watt with transformer taps of 30, 15 and 7 watt. This unit is designed for use in 25 and 70 Vrms distributed systems.

The AM302 is rated for indoor and outdoor use. The AM302 can be used with the AudioMaster® CTS series amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Transformer	Power Taps	Beam Width	Decibels @	
						10'	1m
AM302	30 watt	400-4000Hz	25/70 Vrms	30, 15, 7	60°	114	124



## PUBLIC ADDRESS SPEAKER (AM302)



### SPECIFICATIONS

Net Weight:	7.2 lbs.	3.3 kg
Shipping Weight:	8.1 lbs.	3.67 kg
Height:	14.0"	355.6 mm
Width:	10.5"	266.7 mm
Depth:	11.0"	279.4 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM302 beginning on page 376



# AudioMaster® Public Address Explosion-Proof 15 and 30 Watt Speakers

Models AM300X and AM302X

## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Transformer coupled
- 15 watt (AM300X)
- 30 watt (AM302X)
- 25 or 70 Vrms
- Re-entrant horn design
- Swivel mount
- IP65, NEMA 4X Approved
- AM300X is UL Fire Listed and CSFM Approved
- UL 1480 Approved, CUL Listed

The Federal Signal Model AM300X and the AM302X are transformer coupled, re-entrant speakers for use in public address or paging applications. These speakers feature rugged cones and projectors constructed of spun aluminum. The speaker wiring connections are enclosed in a dust- and moisture-proof, die-cast aluminum compartment. All external surfaces are sealed with a gray powder coat paint.

Power handling for the AM300X is 15 watt and the AM302X is rated for 30 watt. There are transformer taps at 15, 7, 2 and 1 watt for the AM300X and 30, 15 and 8 watt for the AM302X. Both speakers are designed for use in 25 or 70 Vrms distributed systems. These speakers are UL and CUL Listed for Class 1, Division 1, Groups B, C, and D environments.

A heavy-duty U-bracket provides simple wall mounting. The unique shape of the speaker projectors provides a 60° sound dispersion. The entire speaker and can be swiveled 180° in order to direct sound effectively.

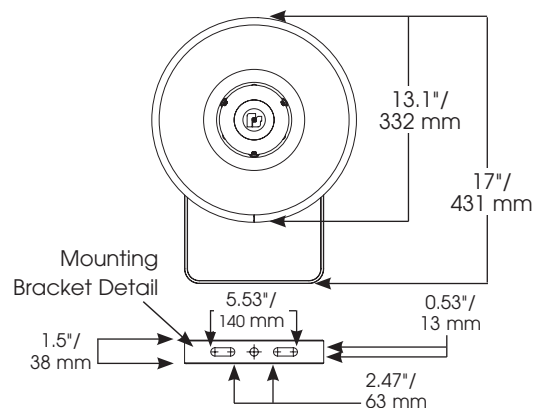
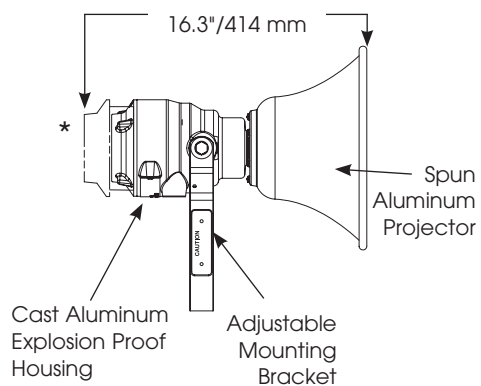
The AM300X and the AM302X can be used with the AudioMaster® amplifiers and the AudioRouter™ to complete an industrial grade public address system.

Model	Power Handling	Frequency Response	Transformer	Power Taps	dB per UL1480		Decibels on Axis	
					10'	1m	10'	1m
AM300X	15 watt	400-4000Hz	25/70 Vrms	15, 7, 2, 1	99	109	106	116
AM302X	30 watt	400-4000Hz	25/70 Vrms	30, 15, 8	103	114	112	124

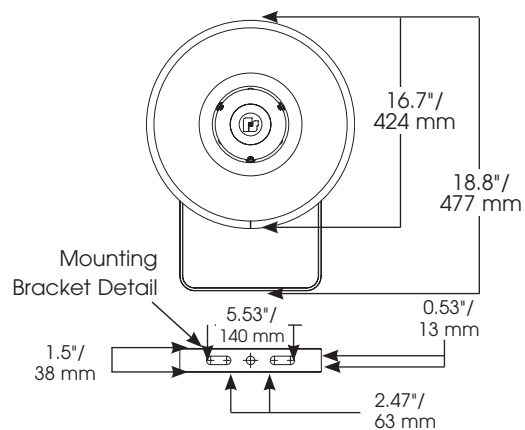
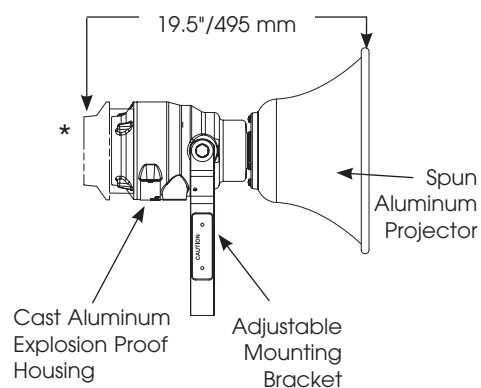


## EXPLOSION-PROOF PUBLIC ADDRESS SPEAKERS (AM300X/AM302X)

### AM300X



### AM302X



## SPECIFICATIONS

### Net Weight:

AM300X	15.7 lbs.	7.1 kg
AM302X	17.1 lbs.	7.8 kg

### Shipping Weight:

AM300X	23.1 lbs.	10.5 kg
AM302X	33.1 lbs.	15.0 kg

### Height:

AM300X	17.0"	431.80 mm
AM302X	18.8"	477.52 mm

### Width:

AM300X	13.1"	332.74 mm
AM302X	16.7"	424.17 mm

### Depth:

AM300X	16.3"	414.02 mm
AM302X	19.5"	495.30 mm

Ingress Protection: IP65 and NEMA 4X Approved

\*Additional 1.8" (44mm) required to remove rear cover

## HOW TO ORDER

- Specify model number
- Please refer to Model Number Index AM300X/AM302X beginning on page 376





## PUBLIC ADDRESS FOR INDUSTRIAL ENVIRONMENTS

- Eight ohm & transformer coupled versions
- 100 watt
- Re-entrant horn design
- Swivel mount
- Superb voice and tone reproduction
- Suitable for indoor or outdoor use
- AM100T meets IP67 design

# AudioMaster® 100 Watt High-Powered Driver/Horn

Models AM100H-SB, AM100D, AM100T

Federal Signal's Model AM100H-SB speaker and AM100 drivers provide high-powered tone and voice output. The directivity of the AM100H-SB combined with the power handling capability of the AM100 allows sound coverage to be concentrated into very specific areas as required. The impedance of the AM100 drivers also allows this speaker/driver combination to be used with existing central amplifiers or siren controls.

### AM100H-SB

The weather- and corrosion-resistant construction of the AM100H-SB makes it suitable for use in harsh industrial environments. Despite its rugged construction, the AM100H is light enough to allow for easy installation in hard to reach locations. The AM100H provides excellent sound dispersion and superb frequency response.

### AM100D

With a flat frequency response from 300-3000Hz, the AM100D provides excellent voice and alert tone reproduction. The compression driver provides long term continuous square wave power handling capacity of 100 watt, making this driver loud and reliable. The rugged die-cast housing features a weatherproof finish.

### AM100T

The AM100T is a 70 Vrms tappable 100 watt compression driver with a wide frequency response range. This gives it superior sound quality and the capability to be tuned for greater or lesser volume at each installation. This model has four preset tap settings— 12.5, 25, 50 and 100 watt. The AM100T incorporates a sealed design and has an IP67 rating making it ideal for heavy dust and wash down applications. Connections are provided via internal screw terminals and can be fitted with the appropriate cable gland connector to seal the product from the environment.

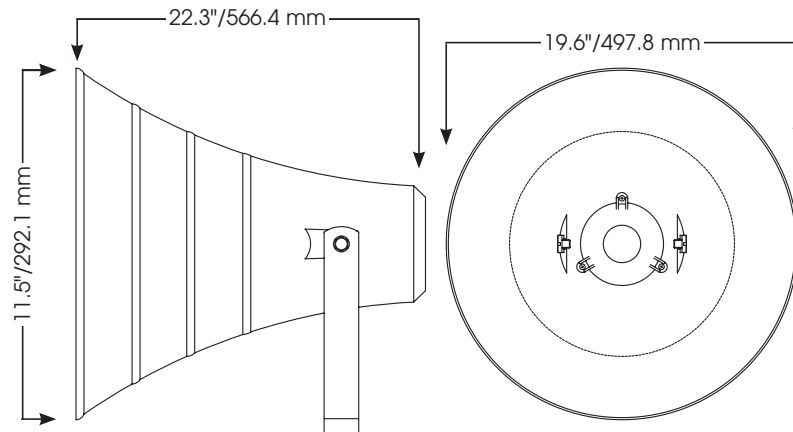
Model	Power Handling	Frequency Response	Impedance	Beam Width	Temperature	Decibels @	
						10'	1m
AM100H-SB with AM100D	100 watt	300-3000Hz	8 ohm	30°	-30°C to 50°C	120	130
AM100H-SB with AM100T	100 watt	200-5000Hz	Tappable*	50°	-50°C to 200°C	121	132

\* Preset tap settings 12.5, 25, 50 and 100 watt.

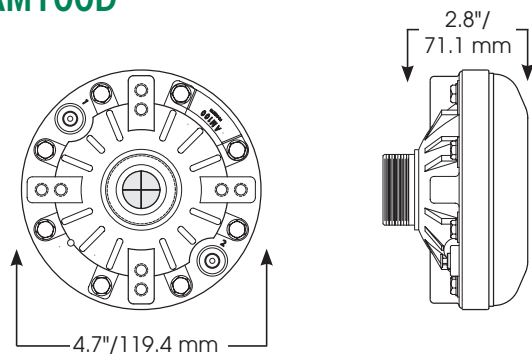


## HIGH POWERED HORN & DRIVER (AM100H-SB/AM100D/AM100T)

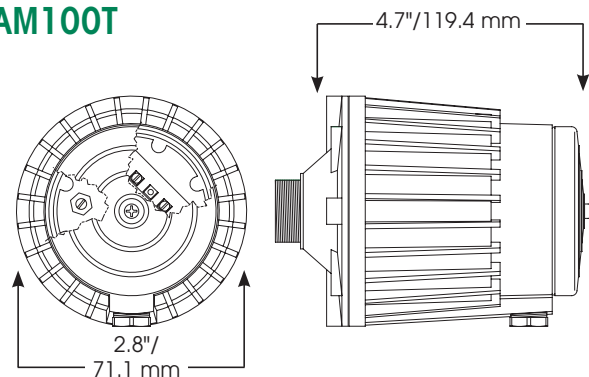
### AM100H-SB



### AM100D



### AM100T



## SPECIFICATIONS

### AM100H-SB

Net Weight:	4.6 lbs.	2.09 kg
Shipping Weight:	6.0 lbs.	2.72 kg
Width:	19.6"	497.8 mm
Height:	11.5"	292.1 mm
Depth:	22.3"	566.4 mm

### AM100D

Net Weight:	4.3 lbs.	1.95 kg
Shipping Weight:	5.0 lbs.	2.27 kg
Depth:	2.8"	71.1 mm
Diameter:	4.7"	119.4 mm

### AM100T

Net Weight:	5.5 lbs.	2.5 kg
Shipping Weight:	6.5 lbs.	2.96 kg
Depth:	4.7"	119.4 mm
Diameter:	2.8"	71.1 mm

## HOW TO ORDER

- Specify model numbers (driver and horn)
- Please refer to Model Number Index AM100H-SB/ AM100D/AM100T beginning on page 377



## POWERFUL, LIGHTWEIGHT ELECTRONIC MEGAPHONE

- Excellent sound quality
- Trouble-free solid-state design
- Battery operated

# Voice Gun® Portable Loudspeaker

Model A12SA

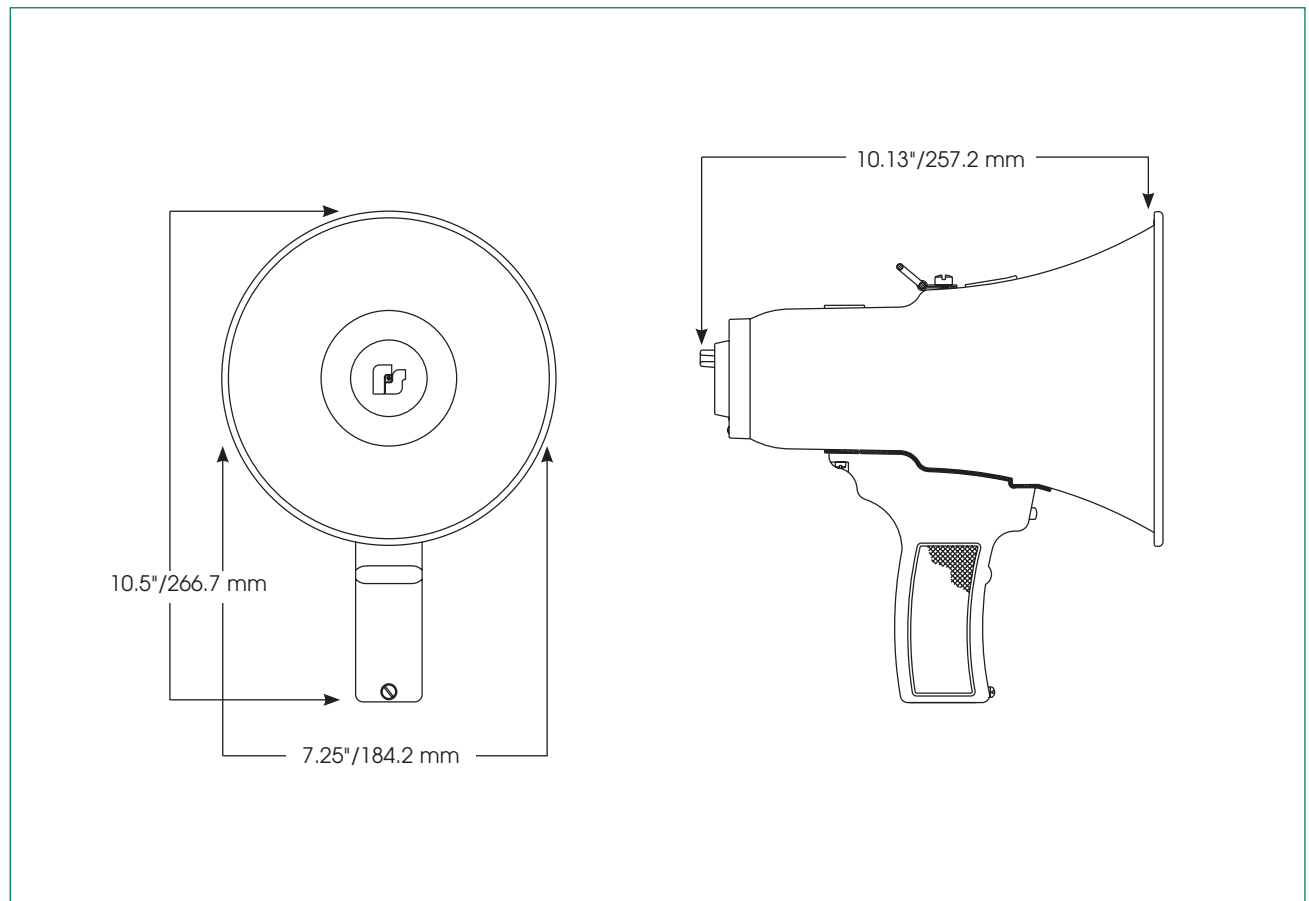
Take control of the situation with Federal Signal Voice Guns® — the most powerful lightweight electronic megaphones available. Specialized noise canceling microphones improve voice reproduction even at long distances. Rugged high-impact Cyclac™ parts are virtually indestructible for long service life. Ideal for industrial, fire, marine, athletics, law enforcement and many other applications.

Model A12SA is made of Lexan™ high-impact, self-extinguishing plastic. This benefit makes it appropriate for hazardous environments such as oil refineries and other industries where fire hazard is always present. The A12SA operates on eight “AA” batteries.

Model	Batteries Required	Power Output	Range
A12SA	(8) “AA”	16 watt	1/4 mile



## PORTABLE LOUDSPEAKER (A12SA)



### SPECIFICATIONS

Net Weight:	3.0 lbs.	1.36 kg
Length:	10.13"	257.2 mm
Height:	10.5"	266.7 mm
Diameter:	7.25"	184.2 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index A12SA beginning on page 377



## EXPLOSION-PROOF SERIES

- 8 watt, 110dBa output
- 15 watt, 116dBa output
- 25 watt, 123dBa output
- Approved for Zone 1 IIB and IIC
- CE Compliant
- ATEX certified
- Integrated Speaker Monitoring & remote Tapping (I.S.M.T.)
- IEC Certified (25 watt versions)

## MARINE/INDUSTRIAL SERIES

- 8 watt, 114dBa output
- 15 watt, 118dBa output
- 25 watt, 125dBa output
- CE-Compliant
- Integrated Speaker Monitoring & remote Tapping (I.S.M.T.)

# Marine/Industrial and Hazardous Area Loudspeakers

## Models 110-120 Loudspeakers

Federal Signal's model 110-120 Series Loudspeakers are designed for use in industrial public address and general alarm applications, where ATEX certification is required. The 110-120 Series Loudspeakers are available in either an ATEX Zone 1 explosion-proof version or a CE compliant, Marine-grade Industrial version.

Model 110-120 Series Loudspeakers are available in three different configurations, from 8 watt to 25 watt, to provide an appropriate amount of sound for the ambient environment. Each speaker is transformer coupled to fine tune the sound output for each application, and balance the audio load. Available audio inputs are 100 Vrms, 70 Vrms and 8-Ohm.

Mounting is provided by a stainless-steel ratcheted mounting bracket that locks the sounder in position at a specific angle without slipping. The bottom surface of the mounting bracket also contains three mounting holes, to adapt to a variety of surfaces.

The 110-120 Series Loudspeakers are rated for IP66/67 through the use of a neoprene "O" ring seal. All exterior cast aluminum surfaces are finished in powder coat paint and external hardware is manufactured from stainless steel to resist corrosion.

### FREQUENCY RANGE

<b>110 SERIES (8W)<sup>1</sup></b> 600-4000 Hz	<b>110 SERIES (15W)<sup>1</sup></b> 390-4500 Hz	<b>120 SERIES (25W)<sup>1</sup></b> 350-4000 Hz
<b>110 SERIES (8W)<sup>2</sup></b> 500-8000 Hz	<b>110 SERIES (15W)<sup>2</sup></b> 390-8500 Hz	<b>120 SERIES (25W)<sup>2</sup></b> 300-3700 Hz

<sup>1</sup> Explosion Proof    <sup>2</sup> Marine

### AMBIENT TEMPERATURE RANGE

<b>T4<sup>1</sup></b> -20°C to +70°C -20°C to +70°C <sup>2</sup>	<b>T5<sup>1</sup></b> -20°C to +55°C	<b>T6<sup>1</sup></b> -20°C to +40°C
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<sup>1</sup> Explosion Proof    <sup>2</sup> Marine

### EXPLOSION PROOF RATED

SPL@1kHz (Full power @ 1 meter)

<b>8W-IIB</b> 110dBa	<b>8W-IIC</b> 106dBa	<b>15W-IIB</b> 116dBa	<b>15W-IIC</b> 112dBa	<b>25W-IIB</b> 123dBa
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SPL@1kHz (1 watt @ 1 meter)

<b>8W-IIB</b> 110dBa	<b>8W-IIC</b> 106dBa	<b>15W-IIB</b> 116dBa	<b>15W-IIC</b> 112dBa	<b>25W-IIB</b> 123dBa
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### MARINE RATED POWER

SPL@1kHz @ (Full power @ 1 meter)

<b>8W</b> 114dBa	<b>15W</b> 118dBa	<b>25W</b> 125dBa
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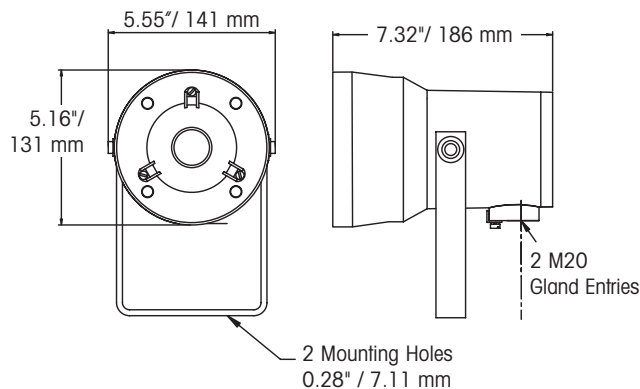
SPL@1kHz @ (1 watt @ 1 meter)

<b>8W</b> 104dBa	<b>15W</b> 106dBa	<b>25W</b> 107dBa
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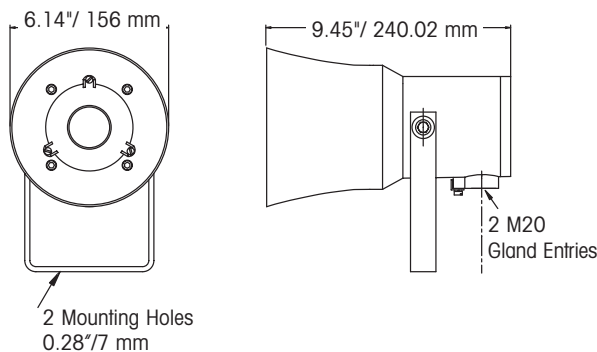


## LOUDSPEAKER SERIES (110-120)

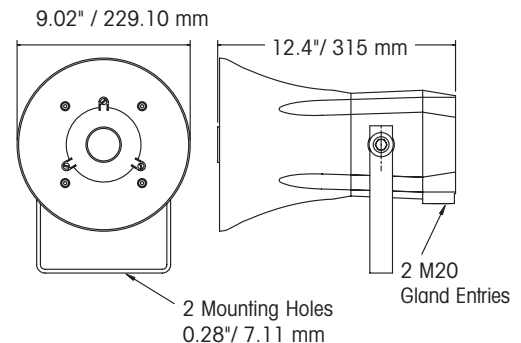
### 8W



### 15W



### 25W



## CERTIFICATION AND APPROVAL

### 110 SERIES-8 AND 15 WATT

Baseefa 03ATEX0688X II2G EExdIIBT4 (T6)

Baseefa 03ATEX0689X II2G EExdIICT4 (T6)

### 120 SERIES-25 WATT

Nemko 05ATEX1036 II2G EExd IIBT4 (T6)

IEC IEC ExNMO4.0002

### MARINE

Electromagnetic compatibility to EN 61000-6-1,2,3,4: 2001

## STANDARDS

EN50014:1997 + A1:1999 + A2 :1999

EN50018:2000 + A1, EN50019:2000

### CE

EMC to EN 61000-6-1,2,3,4:2001

LVD to EN 60065

## INGRESS PROTECTION EXPLOSION-PROOF

8 Watt/15 Watt IP66 & IP67-EN60529

25 Watt IP66 & IP67-EN60529

### MARINE

IP66 & IP67-EN60529

## SPECIFICATIONS

### Net Weight:

8 Watt Short horn Series	6.6 lbs.	3.0 kg
15 Watt Series	7.1 lbs.	3.2 kg
25 Watt Series	14.1 lbs.	6.4 kg

### Shipping Dimensions:

29 x 29 x 30 cm (8 Watt/15 Watt))	32 x 30 x 38 cm (25 Watt)
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### Dispersion Angle:

Short Horn Series, 8 Watt	180°
Standard Horn Series, 15 Watt	120°
120 Horn Series, 25 Watt	120°

### Type:

8/15/25 Watt dual entry

### Gland Entries:

2 x M20 x 1.5 mm

### Cable Terminations:

6A, 1.5 mm conductors

### Mounting:

Stainless steel bracket (not painted)

### Material:

Body & Horn-Marine Grade Aluminum Alloy

### Audio Input:

100Volt, 70 Volt and 8 ohms

## HOW TO ORDER

- Contact Factory for Specification Assistance





*Shown with swivel  
mounting bracket*

# Corrosion Resistant Zone 1 Loudspeaker

Model P-LS2B and P-LS2C

## FOR USE IN MARINE AND HAZARDOUS APPLICATIONS

- Corrosion-resistant Anti-Static GRP (Glass-Reinforced Polyester) Design
- Universal Mounting Bracket
- Stainless-Steel Hardware
- CE Compliant
- ATEX/IEC Zone 1 Gas Groups IIB and IIC
- Ingress rated IP66

Federal Signal's corrosion resistant loudspeakers, model P-LS2B and P-LS2C, are designed for use in industrial public address and general alarm applications, where corrosion resistance and ATEX/IEC Certification are required. P-LS2B and P-LS2C loudspeakers are available in an ATEX/IEC Zone 1 explosion-proof version certified IP66 for ingress of dust and combustible gas to either Group IIB or Group IIC.

P-LS2B and P-LS2C loudspeakers, designed to accept an audio input of 100 Vrms, are manufactured from corrosion-resistant, anti-static glass-reinforced polyester (GRP). Each speaker is transformer coupled with a maximum power output of 25 watts and is supplied with 10 preset taps (25, 20, 15, 10, 5, 2, 1.5, 1, 0.5 and 0.2 watts) to adjust sound output.

Mounting is provided by a "common template" stainless-steel ratcheted mounting bracket that locks the sounder in position at a specific angle without slipping. The bottom surface of the mounting bracket also contains four slotted mounting holes to further adjust speaker position and adapt to a variety of different surfaces.

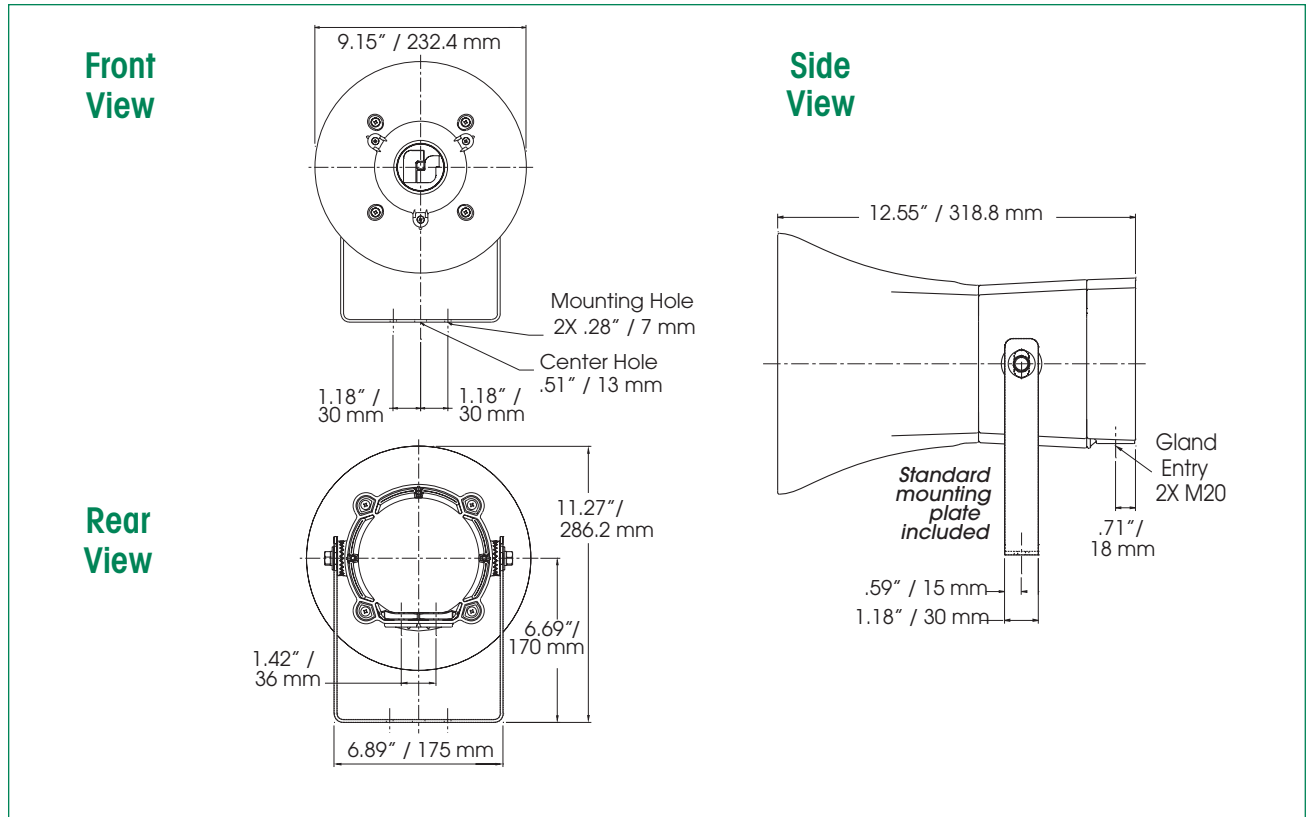
Connection for field wiring is provided by two M20 X 1.5 mm threaded openings in the bottom of the rear cover and terminated via internal terminal blocks. All external hardware is manufactured from stainless steel to resist corrosion and provide serviceability for years to come.

# ATEX IEC CE

Model	Power Handling	Frequency Response	Power Transformer	Taps	Decibels @	
					10'	1m
P-LS2B	25 watt	350 - 14kHz	100 Vrms	20, 15, 10, 5, 2 1.5, 1, 0.5, 0.2	114	124
P-LS2C	25watt	350 - 14kHz	100 Vrms	20, 15, 10, 5, 2 1.5, 1, 0.5, 0.2	113	123



## CORROSION RESISTANT ZONE 1 LOUDSPEAKER (P-LS2B AND P-LS2C)



### SPECIFICATIONS

Certificate Number:

ATEX

Baseefa10ATEX0096X

IECEX

IECEX BAS 10.0052X

P-LS2B

CE 0539 II 2G

Ex d e mb IIB + H2 T5 Gb (-50°C ≤ Ta +70°C)

T5 Gb (-50°C ≤ Ta +55°C)

P-LS2C

CE 0539 II 2GD

Ex d e mb IIC T5 Gb Ex tb IIIC IP66 T100°C Db (-50°C ≤ Ta +70°C)

T6 Gb Ex tb IIIC IP66 T85°C Db (-50°C ≤ Ta +55°C)

Gland Entries:

2 X M20 X 1.5 mm

Cable Terminations:

0.5 – 4 mm2 (12-22 AWG) Conductors

Size (P-LS2B & P-LS2C):

232.4 mm (9.15") Diameter

286.2 mm (11.27") Height

318.8 mm (12.55") Length

Material:

Glass-Reinforced Polyester (GRP)

Color:

Black

Audio Input:

100 Vrms

Audio Output (Peak):

(max.) 124dB @ 25 watts (1 meter)

Frequency Response:

350 – 14kHz

Net Weight: (P-LS2B & P-LS2C):

5.9 kg 13.0 lbs

Shipping Weight: (P-LS2B & P-LS2C):

6.9 kg 15.3 lbs

### HOW TO ORDER

- Specify model and voltage  
Corrosion Resistant Loudspeaker,  
ATEX Zone 1 Rated Gas Group 2B (P-LS2B)  
Corrosion Resistant Loudspeaker,  
ATEX Zone 1 Rated Gas Group 2C (P-LS2C)
- Optional Accessories  
Swivel Mounting Bracket (K8595172A)

### REPLACEMENT PARTS

Description	Part Number
Standard Mounting Bracket	K8595171
Swivel Mounting Bracket	K8595172A
Ratchet Fixing Kit	K8595194
Bracket Mounting Screws	K7002086-16
Outer Horn	K8595150
Rear Cover	K8595153
Rear Cover Gasket Kit	K8595195
Fuse Module	K8595177



## **PUBLIC ADDRESS & GENERAL ALARM SYSTEMS FOR SAFETY CRITICAL APPLICATIONS.**

- Stand-alone, Hot Standby, or Duplicated systems with Network Options
- Field configurable zones, I/O, and access panels
- Impedance monitoring of speaker circuits with optional Individual Intelligent Speaker Monitoring and remote Tapping system (ISMT)
- GUI, MIMIC and system diagnostics
- Modular Construction with Hot Swappable Amplifiers & Power Supplies
- Greater than 84% efficiency Class D (Digital) PWM amps
- UKOOA, PFEER, NORSOK, IMO, ABS, SOLAS, DNV
- PBX Interface & Feedback Eliminator (options)
- Full compliment of safe and hazardous area access panels and microphone stations
- Fiber Optic Ready
- IP-Networkable
- Custom tones and voice messages
- UL and cUL Listed; CSA-pending

# **Digital Public Address and General Alarm Systems with Networked Options**

## **Model PAGASYS**

Specifically developed for the stringent requirements of the offshore oil and gas markets, PAGASYS is ideally suited for offshore platforms, land based petro-chemical plants, military, and applications requiring the highest degree of reliability and functionality. Stand-alone or fully duplicated failsafe systems can be customized to meet the specific requirements of the application.

Pulse-width modulated, Class 'D' amplifiers operate with greater than 84% efficiency; minimizing heat generation; and preventing power surges upon start up. Also, these compact PA/GA systems require less space, a smaller UPS, and less cooling than conventional systems.

On-board digital signal processors (DSP) provide tone generation and pre-recorded voice messages. Analog audio inputs permit seamless integration of external tone generators and intercom systems. An expandable I/O card approach allows you to integrate third party alarm systems and auxiliary signals, such as fire & gas detection controls and beacons, for a completely integrated facility emergency notification system.

Each PAGASYS rack can be equipped with hot standby amplifiers that assume the load in the event of an individual amplifier failure. Failed amplifiers and power supplies can be replaced quickly without having to power down the system or disconnect wiring. User controls and fault reporting are easily accessed on the optional touch screen PC or remotely via a computer.

## **HOW TO ORDER**

*Contact our Federal Signal Sales Engineers to design a system that meets your specific requirements.*

Considerations for system configuration:

- Specify model (PAGASYS)





## DIGITAL PUBLIC ADDRESS AND GENERAL ALARM SYSTEMS (PAGASYS)

The PAGASYS system employs modular construction to offer a host of benefits. Key advantages include:

- Commonality of parts reduces system development costs, and minimizes spare part requirements.
- System standardization shortens design and manufacturing times.
- Reduced cabling promotes faster on-site installation.
- System configuration via user-friendly software enables users to bring systems on-line faster.
- Flexible network concept speeds and simplifies future system expansions and upgrades.
- Ethernet/Cobra-Net™ solutions are available for large-scale networked applications.

### System Functionality and Capacity

The PAGASYS system provides indoor and outdoor Public Address/General Alarm capabilities for virtually any application calling for safe, high integrity, critical communications. This includes oil and gas exploration and production facilities, petrochemical and industrial plants, and military installations.

At the PAGASYS system's core is the control frame containing the network processor, digital signal processing (DSP), amplifier control/monitoring, and input/output cards. The base configured control frame will accept up to 48 audio inputs, store up to 12 re-recordable tones or digital messages, 40 seconds each and is expandable using Federal Signal's digital storage processor. By connecting to a PC mimic, it is possible to configure the DSP's to:

- Configure external audio input signal monitoring by using 20 KHz, 30 Hz or wide band pilot tone monitoring.
- Select the preferred pre-announcement chime.
- Establish the input/output volume control.
- Set the 30Hz amplifier monitoring tone level.
- Download messages from a PC.

Each rack includes a control frame, amplifiers, power supplies, speaker loop monitoring units and input/output terminations, used to communicate with external systems such as fire and gas and then activate tones, messages or beacons. Test/access panels are also available. Modules are mounted into card-frames housed in one or more, 42U 19" rack. Up to 1,000 watts of amplification power can be fitted into 3U card-frame with a maximum 9,000 watts per control frame. A maximum 36 zones are available in a 9,000-watt rack expandable to 72 zones with an additional rack. Extra racks can be added for future site-wide expansion.

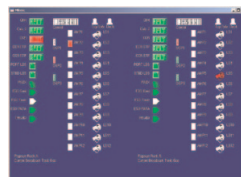
### Network and Redundancy

A PAGASYS system can be supplied as a single stand-alone rack, a fully duplicated dual redundant system, or a redundant network system. In the event of a system component failure (such as a DSP card or audio input for an access panel) in a dual redundant or network redundant system, audio is automatically re-routed to assure failsafe operation. Even if the control frame fails completely direct audio analog input will still be available at that rack. PAGASYS is compatible with a variety of network technologies and system topologies based on copper or fiber-optic transmission to meet the level of redundancy required for the application.

### System Fault Monitoring

To ensure integrity the PAGASYS system automatically incorporates extensive internal self-monitoring, covering:

- Audio input faults (30Hz, 20 KHz or wide band).
- Internal audio path faults.
- Internal communication path faults (i.e., control system to DSPs and control system to I/O cards).
- Network, amplifier speaker or speaker loop faults.
- Monitored alarm input faults for open and short circuit.
- Program and configuration checksum failures.
- Alarm message generators.



When a fault is detected a PC-connected system logs the fault. The system can also automatically e-mail a user or selected support group the instant a fault occurs. This group could include Federal Signal's Integrated Systems service department, which is able to provide remote support via the internet.

### Loudspeaker Loop Monitoring and Optimal Individual Loudspeaker Remote Monitoring and Tapping

A standard system feature is impedance monitoring of the speaker circuits to confirm that speaker circuit loadings remain within a calibrated tolerance band. The system detects loudspeaker shorts or open circuits and earth faults. Optionally, in the event of an amplifier failure, the system will automatically re-route the signal through a standby amplifier. The system employs a 45 Hz infrasonic monitoring signal, which (unlike 20Hz) is generally not affected by signal attenuation caused by cable capacitance, and is virtually immune to spurious readings caused by weather/temperature effects.

Each loudspeaker monitoring card monitors two amplifier loops. An optional individual 'Intelligent Speaker Monitoring and Tapping' (ISMT) module simplifies installation, and increases whole-life system integrity. The ISMT module checks each loudspeaker, for faults. The ISMT module allows for remote volume adjustment of each individual loudspeaker by reconfiguring internal transformer power tapping. Each ISMT module can handle up to 256 speakers per speaker circuit with up to 36 speaker circuits per rack.

### PAGASYS 'Power':

The PAGASYS system is powered by state-of-the-art "D" class amplifiers that provide significant performance improvements over traditional class "A" and "B" units. By comparison a typical A/B amplifier consumption at full power is 480VA, PAGASYS D amplifier only 300VA. Also, a typical lightweight class A/B amplifier weighs 10kg, the PAGASYS D amplifier only 3kg.

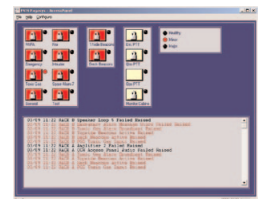
Federal Signal's 250/500 watt class D amplifiers also feature better than 84% efficiency, while eliminating power surges at start up. This level of efficiency combined with the smaller footprint dramatically reduce rack space requirements, often eliminate the need for auxiliary cooling fans, allowing for continuous operation for extended periods of time without fans and reduces the size of the UPS needed. The unique "super sleep" reduces the current draw to only 60mA when operating on battery backup. These amplifiers include self-monitoring making them suitable for conventional configurations and parallel bank arrangements. An integrated hot standby configuration is also available for backup should an amplifier fail.

### Interacting and Interfacing with PAGASYS:

Also available are a wide variety of Engineer's Test Panels. These panels provide direct interaction with the system, local fault indication, and an analog PTT microphone access which can be available in the event of a control frame failure. Standard configurations include a rack mounted field programmable panels, touch screen panels, intrinsically safe panels, safe area panels as well as microphone stations. Access panels can be located at the central rack or a variety of remote locations. PAGASYS offers several connection options to LAN or WAN systems as well as PABX interfaces to enable paging locally/live or via "store-and-forward" in order to avoid feedback.

The PAGASYS system interfaces with all Federal Signal products/systems, including ECHO digital intercom system, party paging systems and outdoor siren products.

Contact the factory for additional information on PAGASYS.







# Station Level Paging Adapter

Model 300PBX-SC

## LINKS TELEPHONE TO SELECTONE® OR PUBLIC ADDRESS SYSTEM

- Paging by calling a dedicated extension
- Powered by a phone line connection
- Type 1 enclosure
- FCC Approved

The 300PBX-SC telephone system interface allows access from a PABX (Private Automatic Branch Exchange) to a SelecTone® system or centrally amplified paging system. A single standard RJ11 modular jack is the only input required.

The 300PBX-SC is assigned a dedicated line in place of a telephone. By dialing the extension to which the 300PBX-SC is connected, direct paging access is made to the SelecTone command unit. When the connection is made, a tone is sounded both in the phone and the SelecTone® speaker amplifiers. The 300PBX-SC will automatically disconnect when the dial tone is heard or after the pre-determined time limit has expired.

The Model 300PBX-SC includes both an audio output and a double-throw relay circuit to activate the music mute or other function during page. The audio output is a 600 ohm balanced line for direct connection to an audio amplifier. A high impedance output with level adjust is also provided. The controls can adjust the Alert Tone Level, Paging Access Time, Dial Tone Sensitivity and Dial Tone Trip Time.

The cadmium-plated housing can be mounted to most surfaces by means of a #6 screw through the holes in the mounting flanges.

Federal Signal's 300PBX-SC Station Level Paging Adapter saves money by linking an existing phone system to a public address system or SelecTone system.



**TOP VIEW**

5.90" / 149.86 mm

**FRONT VIEW**

5.23" / 132.84 mm

**SIDE VIEW**

1.79" / 45.46 mm

**MODEL: 300PBX-SC**  
**SERIES C**  
**TELEPHONE**  
**STATION ACCESS**  
**PAGING ADAPTOR**

COMPLIES WITH PART 68, FCC RULES  
 FCC REGISTRATION NO. \_\_\_\_\_  
 RINGER EQUIVALENCE: 0.3B

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION OF THIS DEVICE IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

600W/300W 20-2 600 OHM 4 3 2 1 3 2 1

LINE IN LINE OUT ADJUST 20Ω 10Ω

**Diagram 1: 300PBX-SC to CENTRAL PA AMPLIFIER**

300PBX-SC → AUX IN (MIC) → CENTRAL PA AMPLIFIER → 25VRMS AUDIO LINES → AMR6 → AMR6 → AM25CK → 300GC → POWER

**Diagram 2: 300PBX-SC to MODEL 300MB**

300PBX-SC → CASCADE IN → MODEL 300MB → POWER → AM25CK → 300GC → POWER → AM25CK → 50GC → POWER

**Diagram 3: 300PBX-SC to MODEL 300SCW-1**

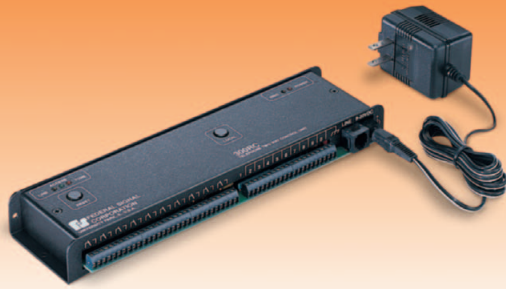
300PBX-SC → AUX IN (MIC) → MODEL 300SCW-1 → POWER → AM25CK → 300GC → POWER → AM25CK → 50GC-120 → POWER → TO ADDITIONAL SPEAKERS

\* 300PBX is also compatible with Models 300VSC-1 and 300SCW-1

<b>Input:</b>		<b>Output:</b>	
Connector:	RJ-11 or RJ-13	Connector:	RCA Unbalanced Screw Terminals
Ringer Equivalence:	1.3 B	Impedance:	Hi-Z (22W min.) 600W
Ring Detection:	15.3 Hz to 68 Hz @ 40-150 V	Level:	-5.0 dB w/ internal termination
Loop Current:	90mA max		-0.5 dB no termination
Alert Tone Frequency:	600Hz	Relay Ratings:	SPDT, 1A contacts
Dial Tone Frequency:	350Hz	Controls:	Output Levels, Alert Tone Level Dial
Page Access Time:	5 to 30 seconds		Tone Sensitivity, Dial Tone, Trip
Shipping Weight:	2.0 lbs.      0.9 kg		Delay, Page Access Time
Height:	6.125"      15.6 cm		
Width:	3.0"      7.6 cm		
Depth:	1.25"      3.2 cm		

- Specify model number
- Please refer to Model Number Index 300PBX-SC beginning on page 377





## ACTIVATES SIGNALS FROM A TOUCH-TONE PHONE

- Magnetic latching relays hold contact closure until reset
- User-selectable access code provides security
- LED status indicators
- Unique tones indicate status and prompt commands for remote access
- Terminal block connections
- UL Listed power supply

# Telephone Activated Remote Control

## Model 300RC

The Federal Signal 300RC provides remote control of ten single-pole/double-throw (SPDT) relays and remote monitoring of ten external switch contacts or logic levels. The 300RC is simple to understand, easy to install, secure and effective.

The Model 300RC is connected to a phone line with a standard 6-position modular cable. At the time of installation, a security access code is recorded directly into the 300RC via dip-switches. After the third ring on the line, the 300RC will answer and prompt the user to enter the user-defined access code. If the wrong code is entered four times, the device hangs up.

Entry of the access code is followed by a command prompt. The user can check the status of ten switch contact inputs through easily distinguishable audio tones. Once status is determined, the user can turn the switches on or off remotely via the touch-tone keypad of their telephone.

When the 300RC is wired directly to Federal Signal SelectTone® panels (300VSC-1 and 300SCW-1), it is possible to remotely activate the tone signals. The 300RC can also be used to activate messages from the 300MB pre-recorded message units.

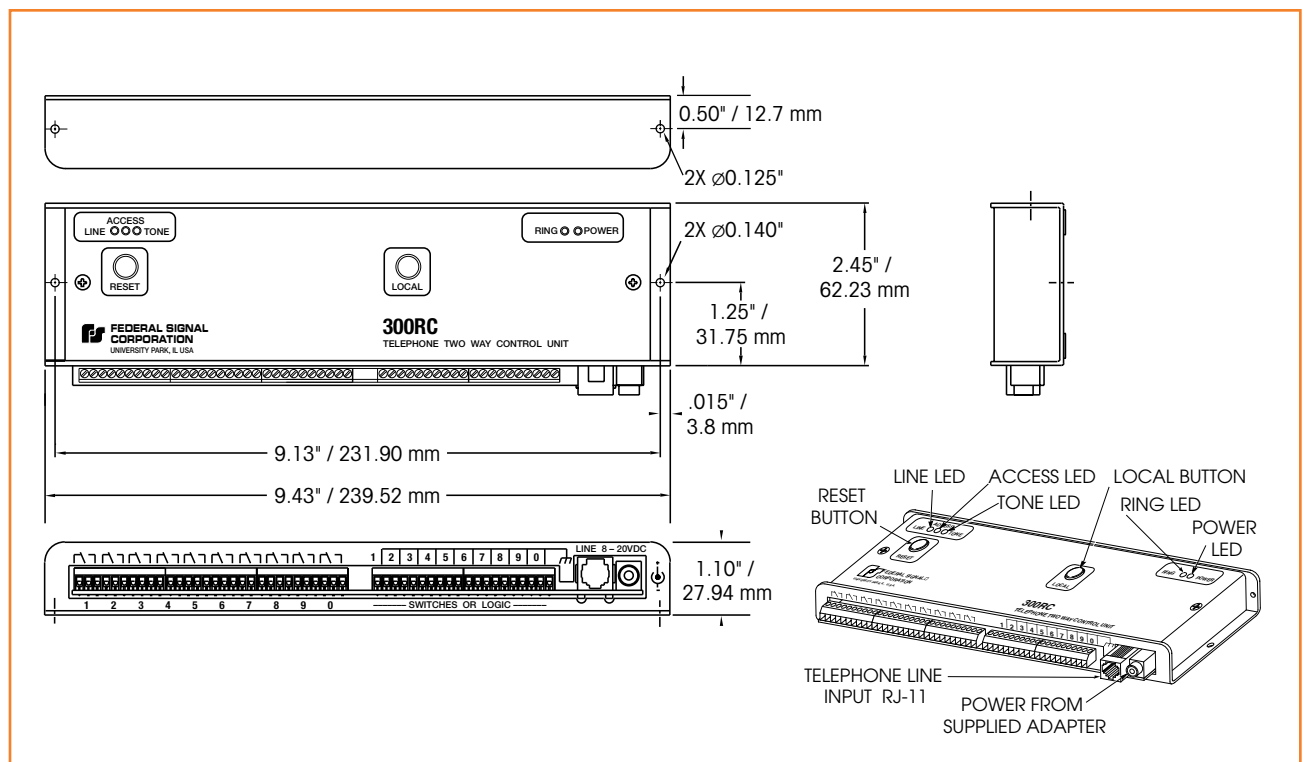
In addition to initiating control panel inputs, the 300RC can be used to activate relays which control the power to audible visual signals or other devices.

Mounting holes on the cover include two #8 holes on the end flanges or two holes on the narrow flanges for mounting on a 1<sup>3</sup>/<sub>4</sub>-inch rack panel.

The 300RC is ideal for applications where it is difficult or costly to run dedicated control wiring to remote devices, or where the convenience of telephone activation or monitoring is desired. For those facilities that have existing PBX wiring, the phone system can now be utilized as a means of signal activation and status monitoring.



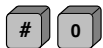
## TELEPHONE ACTIVATED REMOTE CONTROL (300RC)



### RELAY COMMANDS



Pressing keys 0 - 9 will turn on relays 0 - 9. As long as the key is pressed, the associated relay will stay on.



Pressing the pound sign key followed by the numeric key will latch the associated key on.

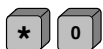


Pressing the pound sign key twice followed by the numeric key will latch the associated relay off.



Pressing the pound sign key three times will turn all relays off.

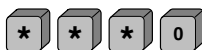
### STATUS REQUEST COMMANDS



Pressing the star sign key followed by a numeric key will poll the status of the associated input channel.



Pressing the star sign key twice followed by the numeric key will indicate if the status of an input has changed since the last call.



Pressing the star sign key three times followed by the numeric key will poll the status of the associated relay.

### MISC

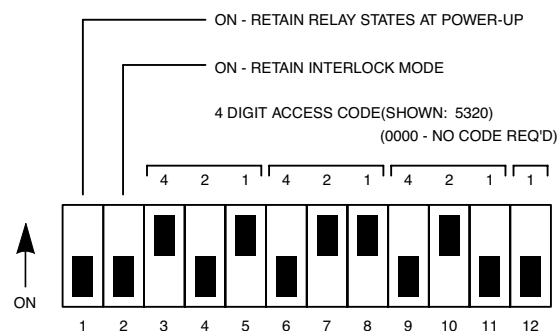


Pressing the star sign key four times will cancel a command.



Unconditionally hang up

### TOGGLE SWITCH FOR ACCESS CODE



### SPECIFICATIONS

Size:	9.5" x 2.5" x 1"	
	24.1 x 6.4 x 2.5 (cm)	
Relay Contact:	SPDT 2A Resistive 50VDC	
Power:	8-15VDC@50mA (110VAC adapter supplied)	
Net Weight:	1.20 lbs.	0.54 kg
Shipping Weight:	1.85 lbs.	0.84 kg

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index 300RC beginning on page 377



## DESIGNED FOR USE WITH A TELEPHONE

- Available in 120VAC
- Bell signals an incoming call
- Activated by ringing voltage (analog telephone only)
- Type 1 enclosure
- CSA Certified
- FCC Approved
- UL Listed for indoor use

# TelCom® Telephone Extension Ringer Device

## Model TELB

Federal Signal's TELB TelCom® Extension Ringer Device is a vibrating bell which is activated by the ringing signal of a telephone system. The TELB is specifically designed for use with an analog telephone. The ringing signal of 40-150VAC, 16-60Hz and local 120VAC power is all that is required to activate a TelCom signal.

This TelCom device is intended to be mounted on a vertical surface such as a rigid wall or post. The TELB has a three-conductor six-foot, 120VAC power cord extending from the unit. Connecting the TelCom device to the telephone network is done by running a modular telephone line cord (RJ11) to an existing jack or a duplex jack (customer supplied) into an existing modular jack. The TELB is designed with a durable zinc die-cast housing painted with gray powder coat enamel, and features an internal solid-state relay.

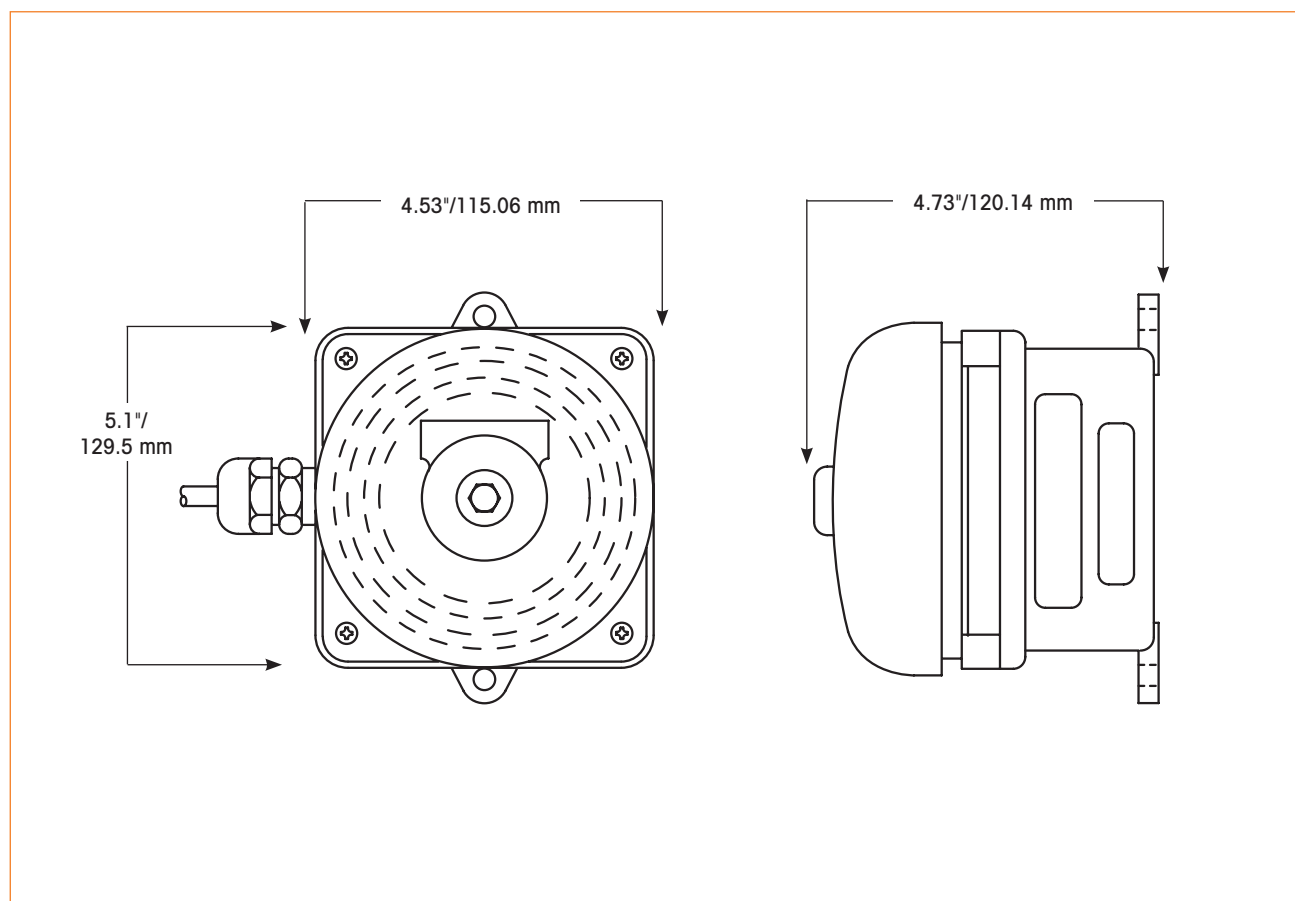
Telcom devices are designed for high ambient noise areas such as manufacturing facilities, machine and sheet metal shops. They are also useful in large open areas such as a warehouse, loading dock, or a large office.

This four-inch bell produces a 98dB signal @ 10' (108dB @ 1m).

Model	Voltage	Operating Current	Decibels @	
			10'	1m
TELB	120VAC	0.08 amps	98	108



## TELEPHONE EXTENSION RINGER DEVICE (TELB)



### SPECIFICATIONS

Operating Temperature:	32°F to 112°F	0°C to 44°C
Ringing Signal:	90VAC, 20Hz	90VAC, 20Hz
Ring Detection:	15.8-60Hz, 40-150VAC	
Humidity Range		
(Storage and Operating):	0 to 85% R.H, noncondensing	
FCC Ringer Equivalence Number (REN):	1.0B	
Net Weight:	2.6 lbs.	1.18 kg
Shipping Weight:	3.2 lbs.	1.45 kg
Height:	5.1"	129.5 mm
Width:	4.53"	115.06 mm
Depth:	4.73"	120.14 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index TELB beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCBA, TelCom	K200C1047D



## DESIGNED FOR USE WITH A TELEPHONE

- Available in 120VAC
- Horn and strobe signals an incoming call
- Activated by ringing voltage (analog telephone only)
- Type 1 enclosure
- CSA Certified
- FCC Approved
- UL Listed for indoor use

# TelCom® Telephone Extension Ringer Device

## Model TELC

Federal Signal's Model TELC Extension Ringer Device is a horn and strobe combination signal which is activated by the ringing signal of a telephone system. The TELC is specifically designed for use with an analog telephone. The ringing signal of 40-150VAC, 16-60Hz and local 120VAC power is all that is required to activate a TelCom signal.

This TelCom® device is intended to be mounted on a vertical surface such as a rigid wall or post. The TELC has a three-conductor, six-foot, 120VAC power cord extending from the unit. Connecting the TelCom device to the telephone network is accomplished by running a modular telephone line cord (RJ11) to an existing jack or a duplex jack (customer supplied) into an existing modular jack. The TELC is designed with a durable zinc die-cast housing painted with gray powder coat enamel, and feature an internal solid-state relay.

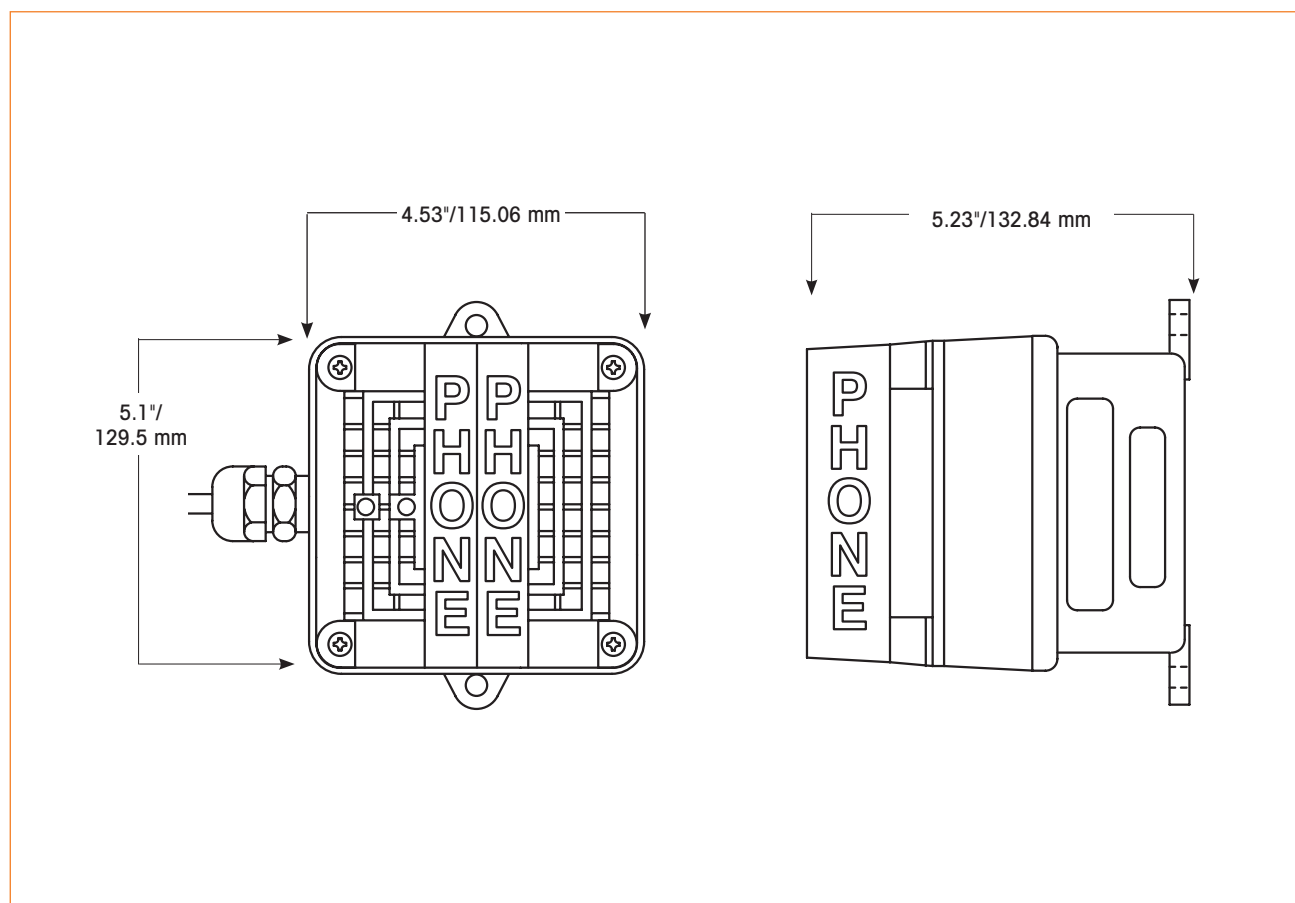
This combination audible/visual signal features the Vibratone horn and a three-dimensional strobe to notify when the telephone rings.

Telcom devices are designed for high ambient noise areas such as manufacturing facilities, machine and sheet metal shops. They are also useful in large open areas such as a warehouse, loading dock or a large office.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
TELC	120VAC	0.24 amps	100	110



## TELEPHONE EXTENSION RINGER DEVICE (TELC)



### SPECIFICATIONS

Operating Temperature:	32°F to 112°F	0°C to 44°C
Ringing Signal:	90VAC, 20Hz	90VAC, 20Hz
Ring Detection:	15.8-60Hz, 40-150VAC	
Humidity Range		
(Storage and Operating):	0 to 85% R.H, noncondensing	
FCC Ringer Equivalence Number (REN):	1.0B	
Net Weight:	3.0 lbs.	1.36 kg
Shipping Weight:	3.4 lbs.	1.54 kg
Height:	5.1"	129.5 mm
Width:	4.53"	115.06 mm
Depth:	5.23"	132.84 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index TELC beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCBA, TelCom	K200C1047D





## DESIGNED FOR USE WITH A TELEPHONE

- Available in 120VAC
- Horn signals incoming calls
- Activated by ringing voltage (analog telephone only)
- Type 1 enclosure
- CSA Certified
- FCC Approved
- UL Listed for indoor use

# TelCom® Telephone Extension Ringer Device

Model TELH

Federal Signal's TELH Extension Ringer Device is a vibrating horn which is activated by the ringing signal of a telephone system. This device is specifically designed for use with an analog telephone. The ringing signal of 40-150VAC, 16-60Hz and local 120VAC power is all that is required to activate a TelCom® signal.

This TelCom device is intended to be mounted on a vertical surface such as a rigid wall or post. The TELH ringer has a three-conductor six-foot, 120VAC power cord extending from the unit. Connecting the TelCom device to the telephone network is accomplished by running a modular telephone line cord (RJ11) to an existing jack or a duplex jack (customer supplied) into an existing modular jack. The TELH is designed with a durable zinc die-cast housing painted with gray powder coat enamel, and features an internal solid-state relay.

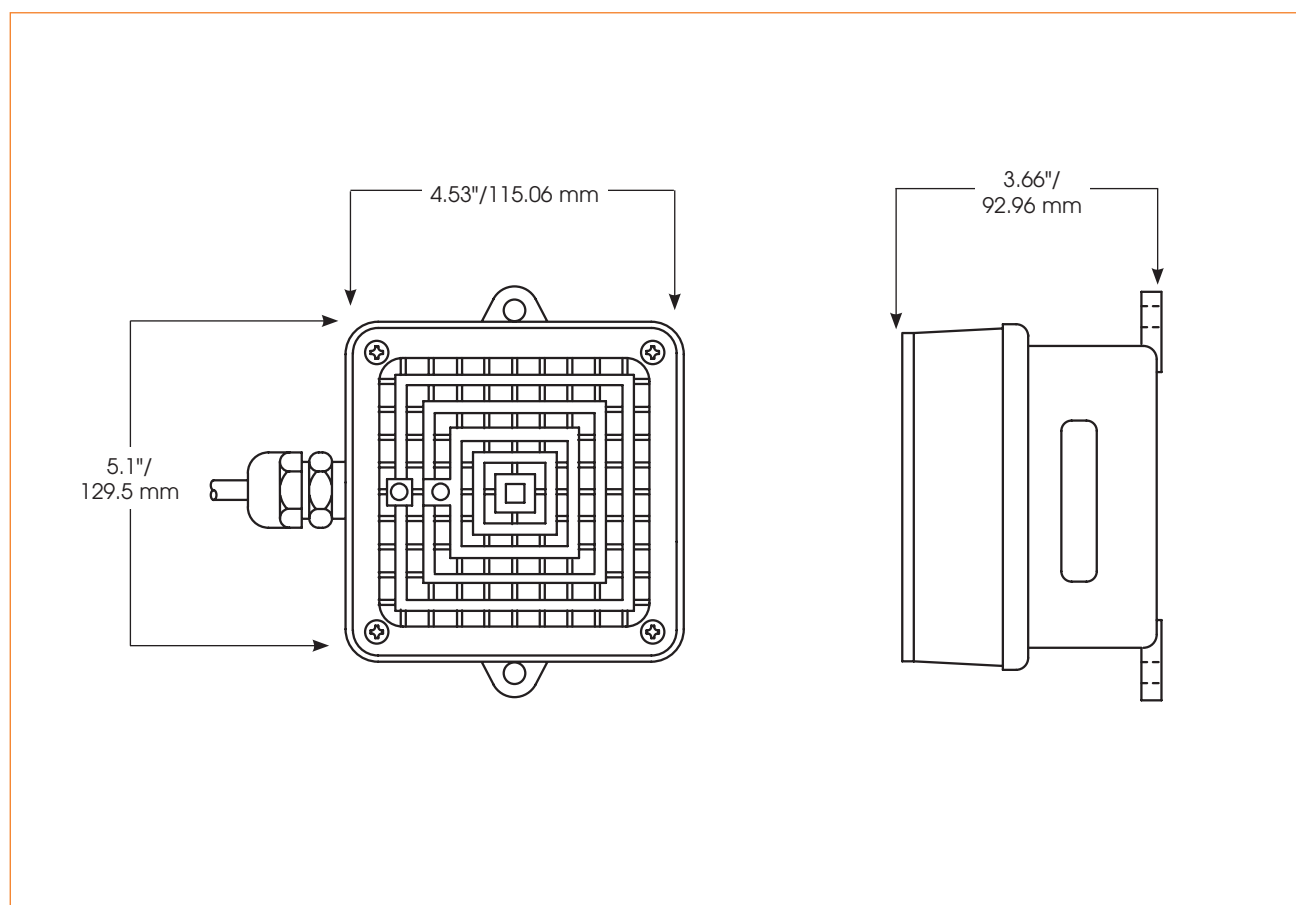
Telcom devices are designed for high ambient noise areas such as manufacturing facilities, machine and sheet metal shops. They are also useful in large open areas such as a warehouse, loading dock or a large office.

This four-inch Vibratone horn has a decibel output of 100dB @ 10' (110dB @ 1m). When an incoming call activates the TELH, it produces an electro-mechanical signal by vibrating a diaphragm.

Model	Voltage	Operating Current	Decibels @	
			10'	1m
TELH	120VAC	0.18 amps	100	110



## TELEPHONE EXTENSION RINGER DEVICE (TELH)



### SPECIFICATIONS

Operating Temperature:	32°F to 112°F	0°C to 44°C
Ringing Signal:	90VAC, 20Hz	90VAC, 20Hz
Ring Detection:	15.8-60Hz, 40-150VAC	
Humidity Range		
(Storage and Operating):	0 to 85% R.H, noncondensing	
FCC Ringer Equivalence Number (REN):	1.0B	
Net Weight:	2.8 lbs.	1.27 kg
Shipping Weight:	3.3 lbs.	1.5 kg
Height:	5.1"	129.5 mm
Width:	4.53"	115.06 mm
Depth:	3.66"	92.96 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index TELH beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCBA, TelCom	K200C1047D



## DESIGNED FOR USE WITH A TELEPHONE

- Available in 120VAC
- Strobe signals incoming calls
- Activated by ringing voltage (analog telephone only)
- Type 1 enclosure
- CSA Certified
- FCC Approved
- UL Listed for indoor use

# TelCom® Telephone Extension Ringer Device

## Model TELS

Federal Signal's TELS Extension Ringer Device is a compact strobe light which is activated by the ringing signal of a telephone system. The TELS is specifically designed for use with an analog telephone. The ringing signal of 40-150VAC, 16-60Hz and local 120VAC power is all that is required to activate a TelCom® signal.

The TelCom device is intended to be mounted on a vertical surface such as a rigid wall or post. TelCom has a three-conductor, six-foot, 120VAC power cord extending from the unit.

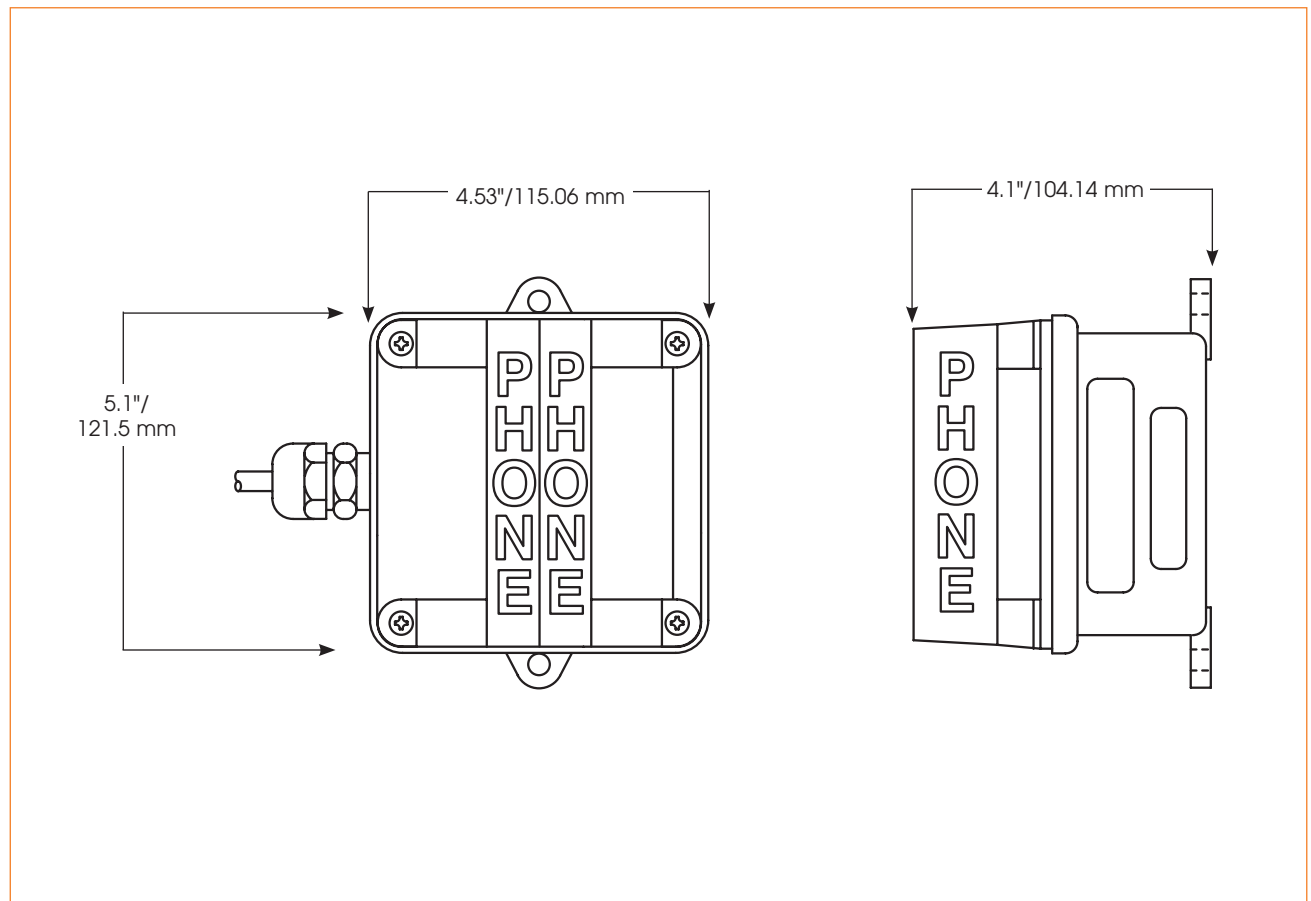
Connecting the TelCom device to the telephone network is accomplished by running a modular telephone line cord (RJ11) to an existing jack or a duplex jack (customer supplied) into an existing modular jack. The TELS is designed with a durable zinc die-cast housing painted with gray powder coat enamel, and features an internal solid-state relay.

This visual signaling device features a three-dimensional triangular strobe light with the word "PHONE" on each visible surface. The strobe flashes when the telephone rings.

Model	Voltage	Operating Current
TELS	120VAC	0.06 amps



## TELEPHONE EXTENSION RINGER DEVICE (TELS)



### SPECIFICATIONS

Operating Temperature:	32°F to 112°F	0°C to 44°C
Ringing Signal:	90VAC, 20Hz	90VAC, 20Hz
Ring Detection:	15.8-60Hz, 40-150VAC	
Humidity Range		
(Storage and Operating):	0 to 85% R.H, noncondensing	
FCC Ringer Equivalence Number (REN):	1.0B	
Net Weight:	1.6 lbs.	0.73 kg
Shipping Weight:	2.2 lbs.	1.0 kg
Height:	5.1"	129.5 mm
Width:	4.53"	115.06 mm
Depth:	4.1"	104.14 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index TELS beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PCBA, TelCom	K200C1047D



## FOR VANDAL-RESISTANT ACTIVATION OF EMERGENCY SYSTEMS

- “Evacuation” and “Emergency” stations available
- Quick reset
- Cover with alarm discourages tampering
- ADA Compliant
- UL and cUL Listed and CSFM Approved

# Push Button Stations

## Model PS Series

These multi-purpose, initiating devices cover a wide range of industrial and commercial applications. The Federal Signal push-button stations function like a traditional fire alarm “pull station”, providing a simple contact closure to activate emergency equipment, audible and visual signals and alarm panels.

The push button stations are available in two colors — Red or Yellow. The red “Emergency” and yellow “Evacuation” units have a “Push and Turn” reset button.

Each unit is available with or without a tamper-resistant polycarbonate cover. Covered units work to protect against physical damage to the station and to prevent false alarms without restricting use in emergency situations. When the cover is lifted to gain access to the alarm, a piercing tone sounds, calling immediate attention to the area. The piezo horn is quiet once the cover is closed. Power to the piezo alarm is provided by a 9VDC battery (included). The sounder cover mounts easily over the station with four anchor screws.

The terminal block provides easy installation and maintenance. Units mount on existing single-gang electrical boxes or 4" x 4" electrical boxes with plaster ring adapters (customer supplied).

Units are UL and cUL Listed, meeting Type 3R specifications for outdoor use with the cover and gasket (gasket not included). They are also ADA Compliant (requiring less than five foot pounds for activation).

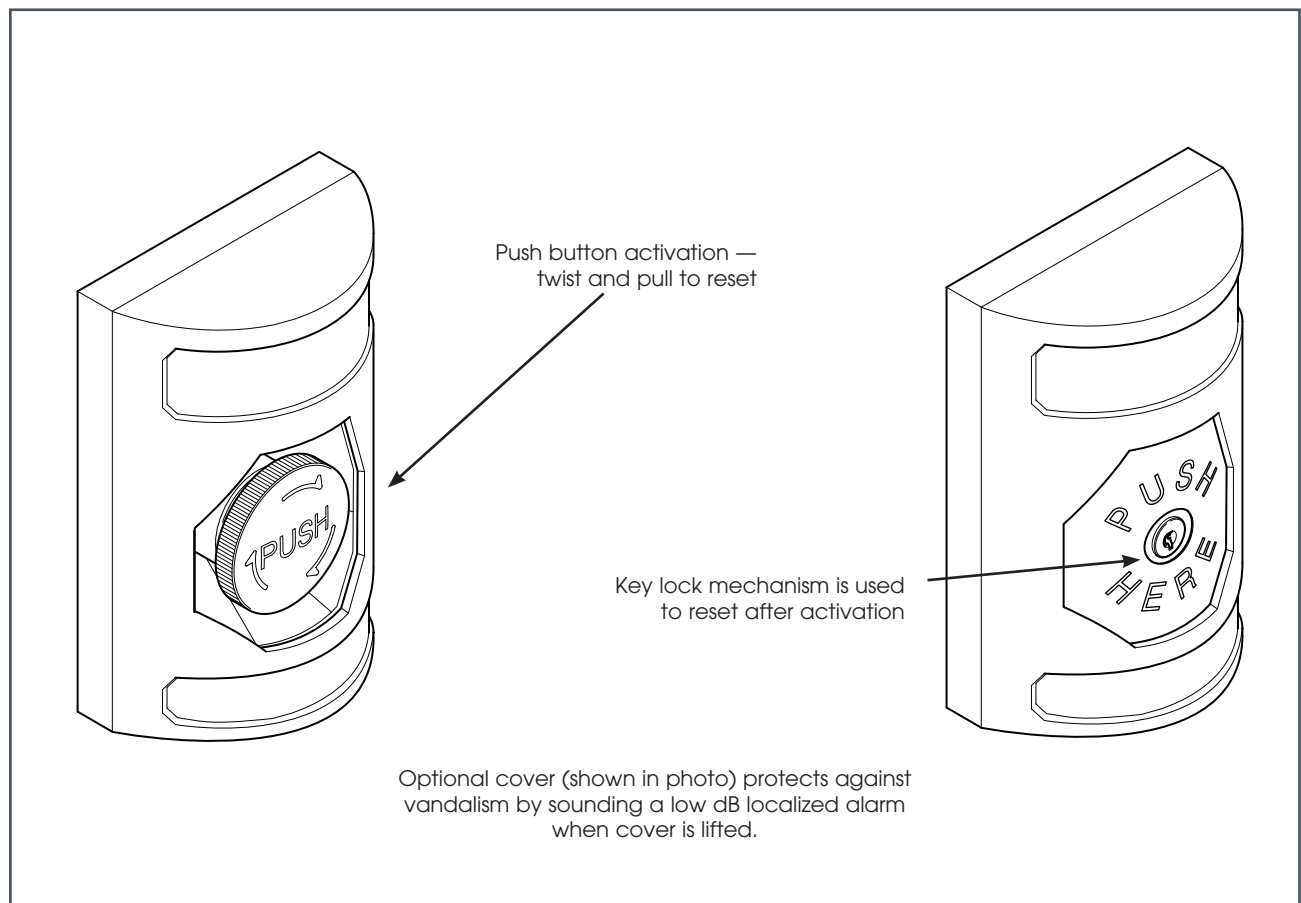
Contact ratings for the Push Button Stations are 600VAC @ 3 amps and 250VDC @ 1 amp.

MODEL	DESCRIPTION
<b>PUSH BUTTON STATION (Shown At Top)</b>	
PSEV-Y	Yellow Station with Push & Turn Reset Button — “EVACUATION”
PSEM-R	Red Station with Push & Turn Reset Button — “EMERGENCY”
<b>PUSH BUTTON STATION WITH SOUNDER COVER (Shown At Bottom)</b>	
PSEVSC-Y	Yellow Station with Push & Turn Reset Button & Sounder Cover — “EVACUATION”
PSEMSC-R	Red Station with Push & Turn Reset Button & Sounder Cover — “EMERGENCY”

**Note:** Other colors and text available upon request.



## PUSH BUTTON STATIONS (PS SERIES)



### SPECIFICATIONS

Net Weight:	3.3 lbs.	1.5 kg
Shipping Weight:	4.2 lbs.	5.94 kg
Height		
without Cover:	4.9"	124.5 mm
with Cover:	8.4"	213.4 mm
Width		
without Cover:	3.25"	82.6 mm
with Cover:	5.5"	139.7 mm
Depth		
without Cover:	2.0"	50.8 mm
with Cover:	2.4"	61.0 mm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index PS beginning on page 377

### ACCESSORIES

<u>Description</u>	<u>Part Number</u>
Cover Only, Evacuation, Yellow	PSCE-Y
Cover Only, Emergency, Red	PSCE-R
Contact, normally open	K229277A
Contact, normally closed	K229277A-01





## **TWO-STEP OPERATION PREVENTS ACCIDENTAL ACTIVATION**

- Available in 120VAC
- Highly visible red enclosure
- Lift cover and pull down ring to activate
- Approved for Class I, Division 1 explosion-proof applications
- UL and ULC Listed, CSFM Approved and CSA Certified

# **Explosion-Proof Fire Alarm Pull Station**

## **Model MPEX**

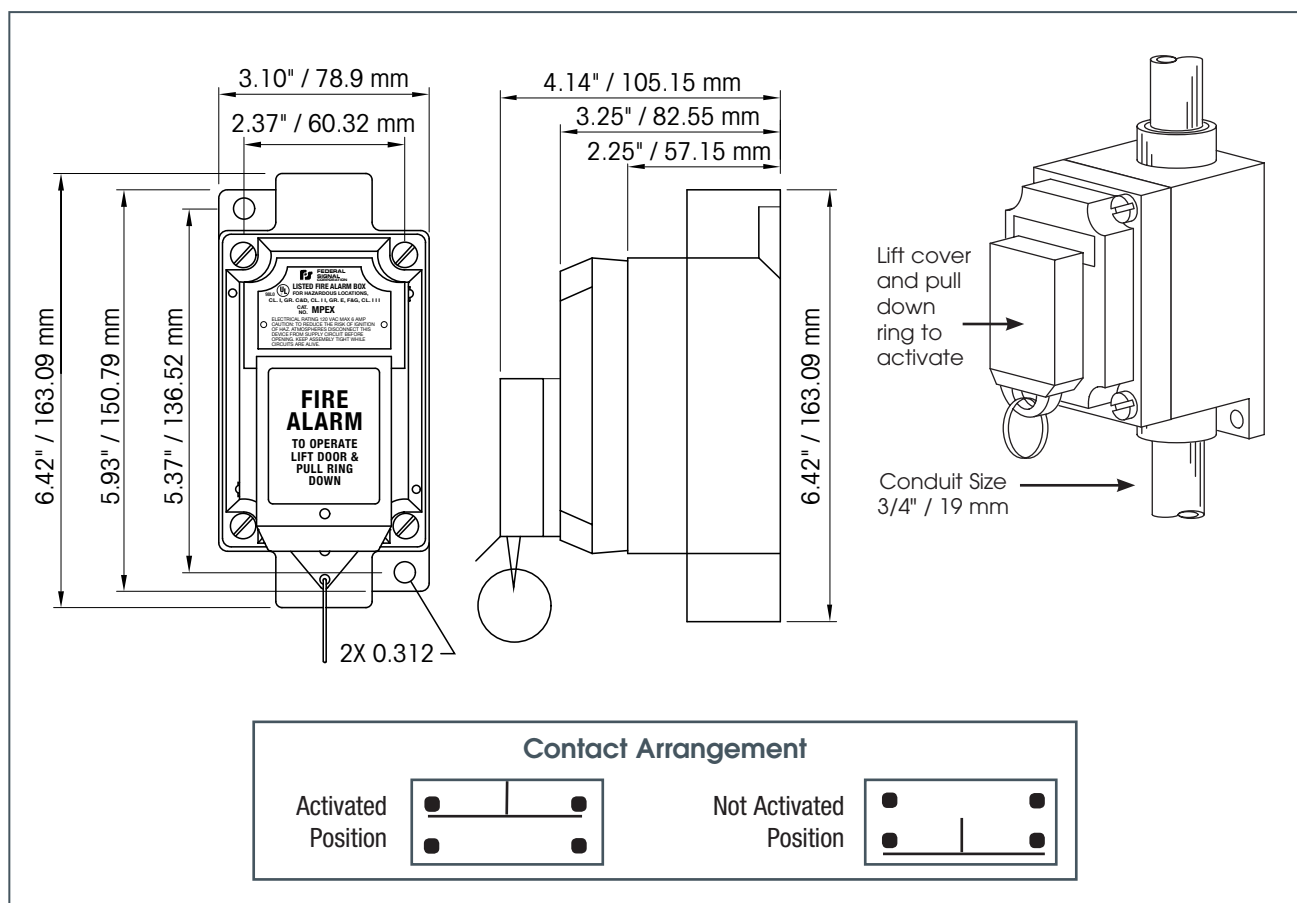
The Model MPEX Explosion-Proof Pull Station is designed for harsh environments. The unit is rated for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F and G; and Class III. MPEX is rated NEMA 7 for Groups C & D and NEMA 9 for Groups E, F and G.

The Model MPEX Explosion-Proof Pull Station is designed for hazardous locations where flammable gases, vapors, combustible dusts or easily ignitable fibers are present. The unique swing-up front cover exposes a pull-down ring which activates the alarm; this two-step process prevents accidental activation. The MPEX is reset by depressing the shaft and returning the plate to its original position. Contacts on the unit are rated 120VAC, 60Hz at six amps continuous.

The enclosure is made of copper-free cast aluminum alloy. Installation is made easy via the feed through  $\frac{3}{4}$ " conduit openings found on either end of the MPEX. It is painted bright red for high visibility and has clearly marked operating instructions on the face plate.



## EXPLOSION-PROOF PULL STATION (MPEX)



### SPECIFICATIONS

Net Weight:	2.4 lbs.	1.09 kg
Shipping Weight:	2.7 lbs.	1.23 kg
Height:	6.4"	16.26 cm
Width:	3.1"	7.87 cm
Depth:	4.1"	10.41 cm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index MPEX beginning on page 377



# ATEX Call Point-Break Glass

## Model WCP-BG

### FEATURES:

- Zone 1, 2, 21 and 22 hazardous area approved
- Works as a control for fire and gas alarm systems
- Manufactured from corrosion proof, marine grade, copper free LM6 aluminum
- Certified to ATEX and IECEx Standards

Model WCP-BG break glass manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The WCP-BG features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.

### APPROVALS:

- ATEX certificate: Sira10ATEX3103X
- IECEx certificate: IECEx SIR 10.0047X

EN 60079-0:2006/IEC 60079-0:2007  
 EN 60079-1:2004/IEC 60079-1:2003  
 EN 60079-7:2007/IEC 60079-7:2006  
 EN 60079-18:2004/IEC 60079-18:2006

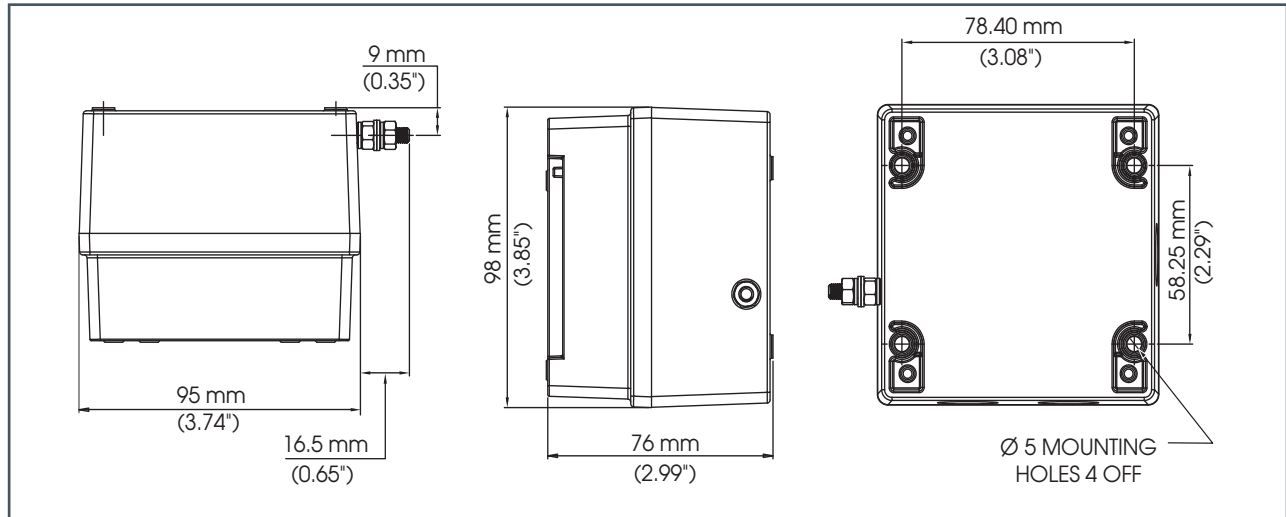
EN 61241-0:2006/IEC 61241-0:2004  
 EN 61241-1:2004/IEC 61241-1:2004



Model:	Category:	Voltage:	Switch Rating:			Monitoring Resistors:	Terminals:	Cable Entries:	Weight:
WCP-BG	II 2G Ex e d IIC T6 Gb II 2D Ex tb IIIC T60°C Db IP66 Ta = -40°C to +55°C	250V ac Max.	5.0A Max.			N	6 x 4mm²	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
		50V dc Max.	1.0A Max.						
WCP-BG-XXX*	II 2G Ex e d mb IIC T4 Gb II 2D Ex tb IIIC T75°C Db IP66 Ta = -40°C to +50°C	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A	Nominal Voltage:	Maximum Voltage:	Min. EOL / Series Value:	Y	6 x 4mm² or 8 x 2.5mm² DIN rail	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
			48V	56V	1K8				
			24V	28V	470R				
			12V	15V	120R				
			6V	9V	47R				

\*XXX is a placeholder for end-of-line and/or series resistor that must be included at time of order.

## ATEX CALL POINT BREAK GLASS (WCP-BG)



### SPECIFICATIONS

WCP-BG:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66	Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
WCP-BG-XXX:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T75°C Db IP66	Stopping plugs:	2 x Exe nylon plugs as standard Brass and stainless steel plugs optional
Ambient:	Ta = -40°C to +55°C (+50°C for WCP-BG-XXX)	Terminals:	6 x 4.0mm <sup>2</sup> cables
Housing material:	Marine grade copper free LM6 Aluminium	Product Weight:	0.8 kg.
Ingress protection:	IP66	Shipping Weight:	0.9 kg
Housing finish:	Phosphated & powder coated finish: anti- corrosion.	Optional DIN rail terminal blocks:	8 x 2.5mm
Color:	RAL3000 Red (others available on request)	Optional duty label:	Metalized polyester

### SERVICE PARTS

<u>Description</u>	<u>Part Number</u>
Replacement Glass (10pk)	KGL4076215
Test Key	KAKSA07

### HOW TO ORDER

#### Standard Model

MODEL	TYPE
WCP-BG ATEX Call Point Break Glass	<b>S</b> - Standard Terminal <b>SF</b> - Standard w/Lift Flap <b>SL</b> - Standard Duty Label <b>SFL</b> - Standard w/Lift Flap and Duty Label

#### Resistor Model

MODEL	TYPE		
WCP-BG ATEX Call Point Break Glass	<b>D</b> - DIN Rail Terminal <b>DF</b> - DIN Rail w/Lift Flap <b>DL</b> - DIN Rail Duty Label <b>DFL</b> - DIN Rail w/Lift Flap and Duty Label	Specify End-of- the-Line Resistor*	Specify Series Resistor*

259364A Rev A

\*End-of-line and/or series resistor that must be included at time of order.

2645 Federal Signal Dr., University Park, IL 60484 Tel: 708.534.4756 Fax: 708.534.4852 www.federal-signal-indust.com

Courtesy of Steven Engineering, Inc.-230 Ryan Way, South San Francisco, CA 94080-6370-Main Office: (650) 588-9200-Outside Local Area: (800) 258-9200-www.stevenengineering.com



# ATEX Call Point-Push Button

## Model WCP-PB

Model WCP-PB push button manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

### FEATURES:

- Zone 1, 2, 21 and 22 hazardous area approved
- Works as a control for fire and gas alarm systems
- Spring loaded cover protects push button
- Requires two-action activation
- User resettable
- Manufactured from corrosion proof, marine grade, copper free LM6 aluminum
- Certified to ATEX and IECEx Standards

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The product is user resettable by rotating the push button.

The WCP-PB range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.

### APPROVALS:

- ATEX certificate: Sira10ATEX3103X
- IECEx certificate: IECEx SIR 10.0047X

EN 60079-0:2006/IEC 60079-0:2007  
 EN 60079-1:2004/IEC 60079-1:2003  
 EN 60079-7:2007/IEC 60079-7:2006  
 EN 60079-18:2004/IEC 60079-18:2006

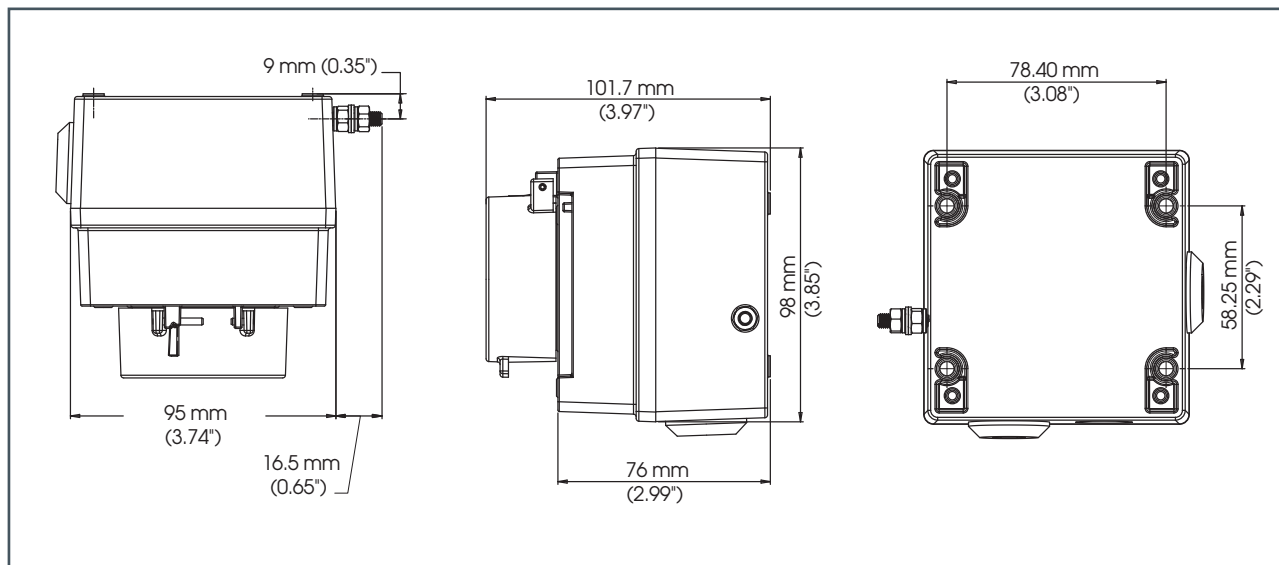
EN 61241-0:2006/IEC 61241-0:2004  
 EN 61241-1:2004/IEC 61241-1:2004



Model:	Category:	Voltage:	Switch Rating:			Monitoring Resistors:	Terminals:	Cable Entries:	Weight:
WCP-PB	II 2G Ex e d IIC T6 Gb II 2D Ex tb IIIC T60°C Db IP66 Ta = -40°C to +55°C	250V ac Max.	5.0A Max.			N	6 x 4mm²	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
		50V dc Max.	1.0A Max.						
WCP-PB-XXX*	II 2G Ex e d mb IIC T4 Gb II 2D Ex tb IIIC T75°C Db IP66 Ta = -40°C to +50°C	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A	Nominal Voltage:	Maximum Voltage:	Min. EOL / Series Value:	Y	6 x 4mm² or 8 x 2.5mm² DIN rail	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
			48V 24V 12V 6V	56V 28V 15V 9V	1K8 470R 120R 47R				

\*XXX is a placeholder for end-of-line and/or series resistor that must be included at time of order.

## ATEX CALL POINT PUSH BUTTON (WCP-PB)



### SPECIFICATIONS

WCP-PB:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66	Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
WCP-PB-XXX:	II 2G Ex e d m b IIC T4 Gb II 2D Ex t IIIC T75°C Db IP66	Stopping plugs:	2 x Exe nylon plugs as standard Brass and stainless steel plugs optional
Ambient:	Ta = -40°C to +55°C (+50°C for WCP-BG-XXX)	Terminals:	6 x 4.0mm <sup>2</sup> cables
Housing material:	Marine grade copper free LM6 Aluminium	Weight:	0.8 kg.
Ingress protection:	IP66	Optional DIN rail terminal blocks:	8 x 2.5mm
Housing finish:	Phosphated & powder coated finish: anti-corrosion.	Optional duty label:	Metalized polyester
Color:	RAL3000 Red (others available on request)		

### HOW TO ORDER

#### Standard Model

WCP-PB - S	
MODEL	TYPE
WCP-PB ATEX Call Point Push Button	<b>S</b> - Standard Terminal <b>SL</b> - Standard Duty Label <b>D</b> - DIN Rail <b>DL</b> - DIN Rail w/ Duty Label

#### Resistor Model

WCP-PB - S - - -			
MODEL	TYPE		
WCP-PB ATEX Call Point Push Button	<b>S</b> - Standard Terminal <b>SL</b> - Standard Duty Label <b>D</b> - DIN Rail <b>DL</b> - DIN Rail w/ Duty Label	Specify End-of- the-Line Resistor*	Specify Series Resistor*

\*End-of-line and/or series resistor that must be included at time of order.





# ATEX Call Point- Tool Reset

## Model WCP-TR

Model WCP-TR push button, tool resettable manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The push button is user resettable via the use of the special key supplied with the unit.

The WCP-TR features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.

### FEATURES:

- Zone 1, 2, 21 and 22 hazardous area approved
- Works as a control for fire and gas alarm systems
- Spring loaded cover protects push button
- Requires two-action activation
- Manufactured from corrosion proof, marine grade, copper free LM6 aluminum
- Certified to ATEX and IECEx Standards

### APPROVALS:

- ATEX certificate: Sira10ATEX3103X
- IECEx certificate: IECEx SIR 10.0047X

EN 60079-0:2006/IEC 60079-0:2007  
 EN 60079-1:2004/IEC 60079-1:2003  
 EN 60079-7:2007/IEC 60079-7:2006  
 EN 60079-18:2004/IEC 60079-18:2006

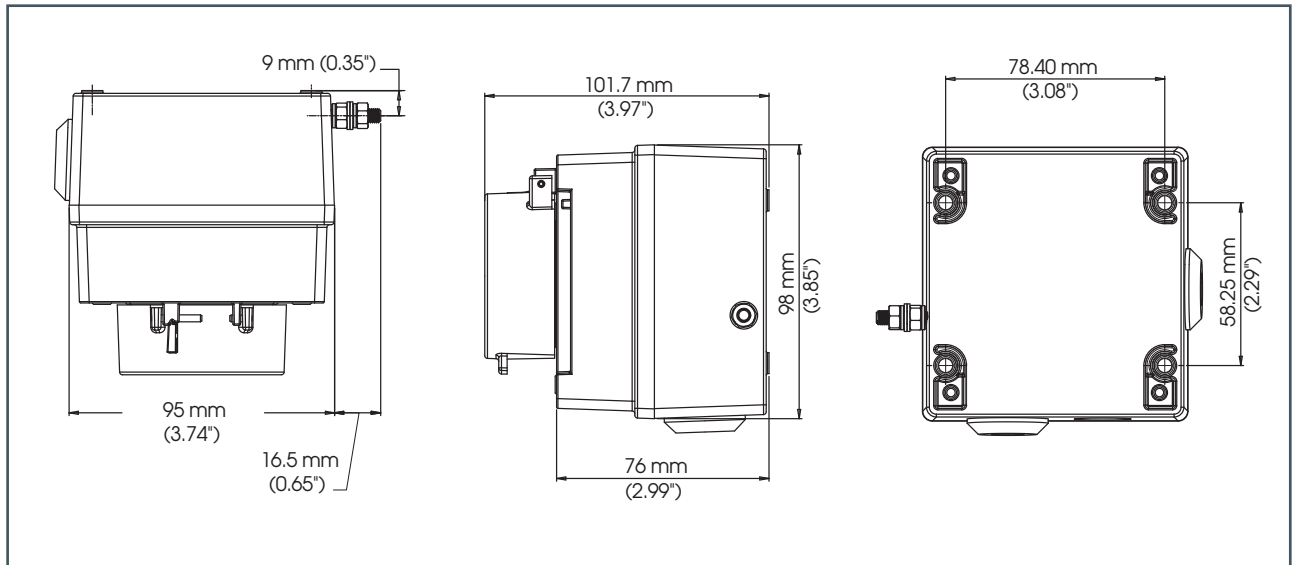
EN 61241-0:2006/IEC 61241-0:2004  
 EN 61241-1:2004/IEC 61241-1:2004  
 EN 61241-1:2004/IEC 61241-1:2004



Model:	Category:	Voltage:	Switch Rating:			Monitoring Resistors:	Terminals:	Cable Entries:	Weight:
WCP-TR	II 2G Ex e d IIC T6 Gb II 2D Ex tb IIIC T60°C Db IP66 Ta = -40°C to +55°C	250V ac Max.	5.0A Max.			N	6 x 4mm²	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
		50V dc Max.	1.0A Max.						
WCP-TR-XXX*	II 2G Ex e d mb IIC T4 Gb II 2D Ex tb IIIC T75°C Db IP66 Ta = -40°C to +50°C	56V dc Max. Rating: <50V: 1.0A >50V: 0.75A	Nominal Voltage:	Maximum Voltage:	Min. EOL / Series Value:	Y	6 x 4mm² or 8 x 2.5mm² DIN rail	2 x M20 Top/Bottom 1 x M20 Left/Right	0.8Kg
			48V	56V	1K8				
			24V	28V	470R				
			12V	15V	120R				
			6V	9V	47R				

\*XXX is a placeholder for end-of-line and/or series resistor that must be included at time of order.

## ATEX CALL POINT TOOL RESET (WCP-TR)



### SPECIFICATIONS

WCP-TR:	II 2G Ex e d IIC T6 Gb II 2D Ex tb IIIC T60°C Db IP66	Stopping plugs:	2 x Exe nylon plugs as standard Brass and stainless steel plugs optional
WCP-TR-XXX:	II 2G Ex e d mb IIC T4 Gb II 2D Ex tb IIIC T75°C Db IP66	Terminals:	6 x 4.0mm <sup>2</sup> cables
Ambient:	Ta = -40°C to +55°C (+50°C for WCP-TR-XXX)	Weight:	0.8 kg
Housing material:	Marine grade copper free LM6 Aluminium	Optional DIN rail terminal blocks:	8 x 2.5mm
Ingress protection:	IP66	Optional duty label:	Metalized polyester
Housing finish:	Phosphated & powder coated finish: anti-corrosion.		
Color:	RAL3000 Red (others available on request)		
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.		

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
Tool Reset	KAK15095001

### HOW TO ORDER

#### Standard Model

MODEL	TYPE
WCP-TR ATEX Call Point Tool Reset	<b>S</b> - Standard Terminal <b>SL</b> - Standard Duty Label <b>D</b> - DIN Rail <b>DL</b> - DIN Rail w/ Duty Label

#### Resistor Model

MODEL	TYPE		
WCP-TR ATEX Call Point Tool Reset	<b>S</b> - Standard Terminal <b>SL</b> - Standard Duty Label <b>D</b> - DIN Rail <b>DL</b> - DIN Rail w/ Duty Label	Specify End-of-the-Line Resistor*	Specify Series Resistor*

259366A Rev A

\*End-of-line and/or series resistor that must be included at time of order.



## **TWO-STEP OPERATION PREVENTS ACCIDENTAL ACTIVATION**

- Available in 120VAC
- Highly visible red enclosure
- Lift cover and pull down ring to activate
- Approved for Class I, Division 1 explosion-proof applications
- UL and ULC Listed
- CSFM Approved
- CSA Certified

# **Explosion-Proof Fire Alarm Pull Station**

## **Model MPEX**

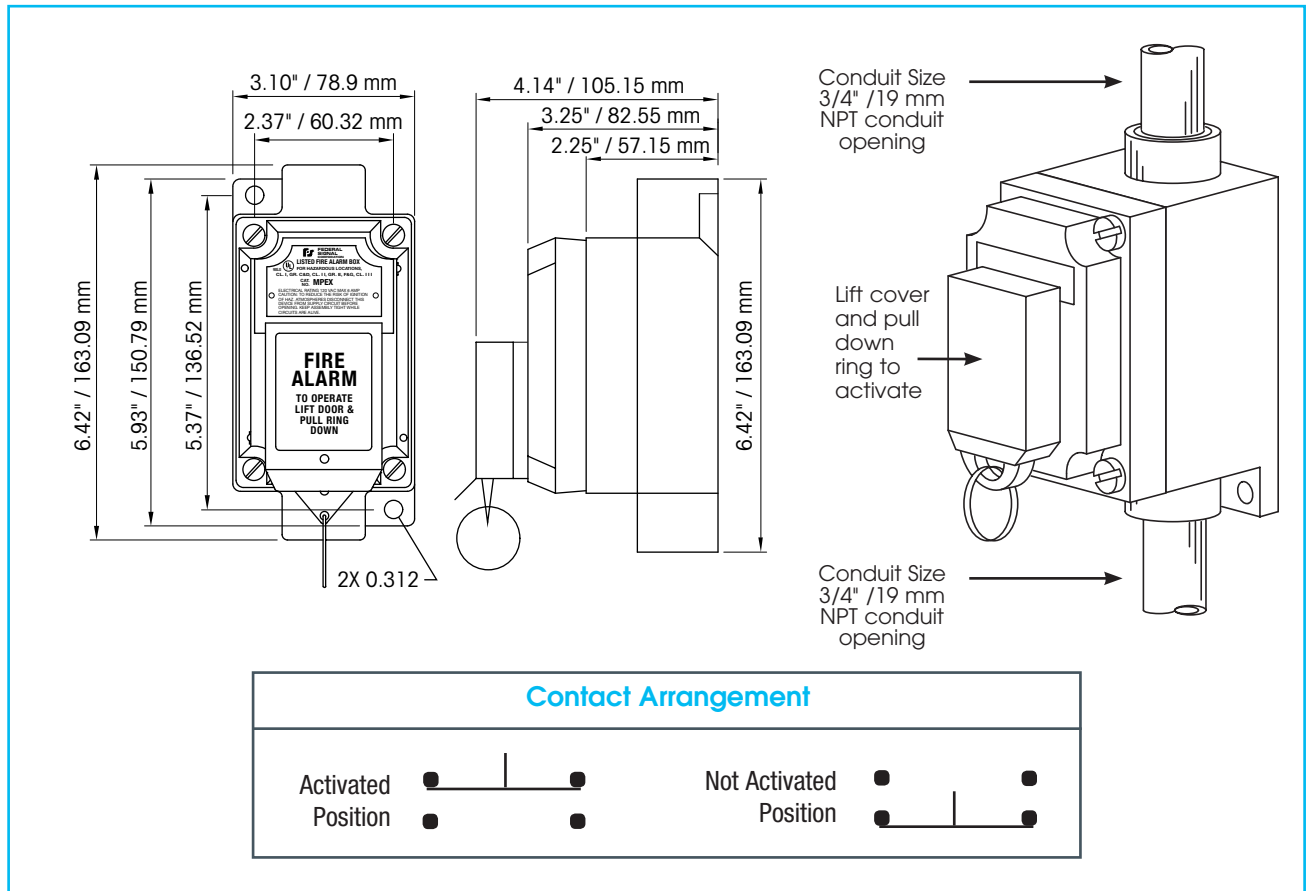
The Model MPEX Explosion-Proof Pull Station is designed for harsh environments. The unit is rated for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F and G; and Class III. MPEX is rated NEMA 7 for Groups C & D and NEMA 9 for Groups E, F and G.

The Model MPEX Explosion-Proof Pull Station is designed for hazardous locations where flammable gases, vapors, combustible dusts or easily ignitable fibers are present. The unique swing-up front cover exposes a pull-down ring which activates the alarm; this two-step process prevents accidental activation. The MPEX is reset by depressing the shaft and returning the plate to its original position. Contacts on the unit are rated 120VAC, 60Hz at six amps continuous.

The enclosure is made of copper-free cast aluminum alloy. Installation is made easy via the feed through  $\frac{3}{4}$ " NPT conduit openings found on either end of the MPEX. It is painted bright red for high visibility and has clearly marked operating instructions on the face plate.



## EXPLOSION-PROOF PULL STATION (MPEX)



### SPECIFICATIONS

Net Weight:	2.4 lbs.	1.09 kg
Shipping Weight:	2.7 lbs.	1.23 kg
Height:	6.4"	16.26 cm
Width:	3.1"	7.87 cm
Depth:	4.1"	10.41 cm

### HOW TO ORDER

- Specify model number
- Please refer to Model Number Index MPEX beginning on page 377



# Fireball® Supervised Strobe Warning Light

Model FB24ST

## LIGHT DUTY STROBE LIGHT

- Available in 24VDC
- Four wires and supervisory diode
- Six dome colors
- 10,000 hour strobe tube
- Integrated 1/2-inch NPT pipe and surface mount
- Type 4X, IP66 enclosure
- CSFM Approved
- CSA Certified
- UL and cUL Listed

Federal Signal's brightest and most compact strobe light, the Fireball® Supervised Warning Light emits a powerful "lightning bolt" flash of light. Approximately five inches tall and four inches in diameter and rated at 300 effective candela, the FB24ST is an economical solution to a wide variety of stationary requirements. The Fireball is available in 24VDC. All models are UL and cUL Listed, CSA Certified and CSFM Approved.

The 24VDC FB24ST features a voltage in-rush limiting PCB design that provides greater compatibility with control systems and less electrical interference with in-rush sensitive devices.

The FB24ST features a unique dome that twists off easily for quick dome and lamp replacements. The newly redesigned base features an integrated 1/2-inch NPT pipe mount boss as well as the three holes required for surface mount configurations. Black epoxy paint is electrostatically applied to the base for superior corrosion resistance. The Fireball dome and base design provides a watertight, dust-tight and corrosion resistant Type 4X rating.

The FB24ST contains a supervisory diode and four wire leads, for use in fire alarm applications.

The FB24ST can be used in any application where a superior visual signal is needed. It is especially effective in the warning of industrial hazards, process control, status indication and in areas with high ambient noise levels.

Federal Signal's Fireball Supervised Strobe is a very low-maintenance warning light for industrial applications where a vibration-resistant light is required to signal an emergency or process status.

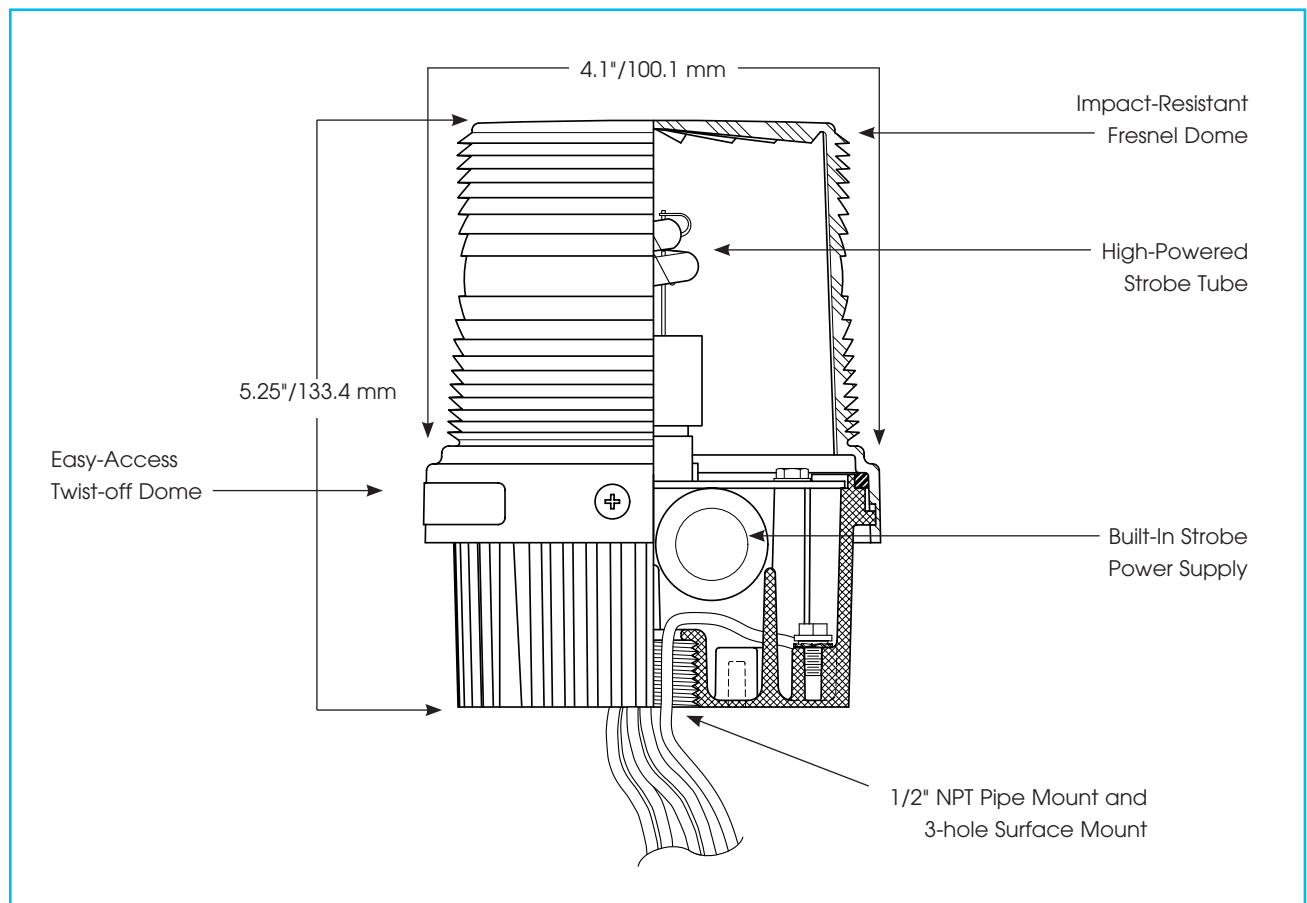
Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
FB24ST	24VDC	0.7 amps (2.0 amp, in-rush)	80	1,000,000	300	1/2" NPT Pipe/Surface

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## FIREBALL® STROBE WARNING LIGHT (FB24ST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source:	Strobe	Strobe
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.45 lbs.	0.7 kg
Shipping Weight:	1.7 lbs.	0.8 kg
Height:	5.25"	133.4 mm
Diameter:	4.1"	100.1 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)\*  
Wall Bracket (LWMB2)\*
- Please refer to Model Number Index FB24ST beginning on page 377

\* Brackets not Type 4X rated.

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Dome, Amber	K8550320A	PC Assembly, 24VDC	K2001202C
Dome, Blue	K8550320A-01	Strobe Tube, Series A4, A5, B	K8107177A
Dome, Clear	K8550320A-02		
Dome, Green	K8550320A-03		
Dome, Magenta	K8550320A-05		
Dome, Red	K8550320A-04		





## LIGHT DUTY STROBE LIGHT

- Available in 24VDC
- Four wires and supervisory diode
- Clear dome
- 10,000 hour strobe tube
- Integrated 1/2-inch NPT pipe mount and surface mount
- Type 4X, IP66 enclosure
- In-rush protected
- UL1971 Listed
- UL Listed and CSFM Approved

# Fireball® Supervised Hearing Impaired Strobe Warning Light

Model FB24STHI

Federal Signal's brightest and most compact strobe light, this supervised FireBall® emits a powerful "lightning bolt" flash of light. Approximately five inches tall and four inches in diameter and rated at 300 effective candela, the FB24STHI is economical and effective. The Fireball is available in 24VDC, this model is UL Listed and CSFM Approved.

The FB24PSTHI features a voltage in-rush limiting PCB design that provides greater compatibility with control systems and panels and less electrical interference with in-rush sensitive devices.

The FB24STHI features a clear dome that twists off easily for quick dome and lamp replacements. The newly redesigned base features an integrated 1/2-inch NPT pipe mount boss as well as the three holes required for surface mount configurations. Black epoxy paint is electrostatically applied to the base for superior corrosion resistance. The Fireball dome and base design provides a watertight, dust-tight and corrosion resistant Type 4X rating.

The Fireball FB24STHI contains a supervisory diode and four wire leads, for use in fire alarm applications. This strobe is UL 1971 listed, for hearing impaired applications.

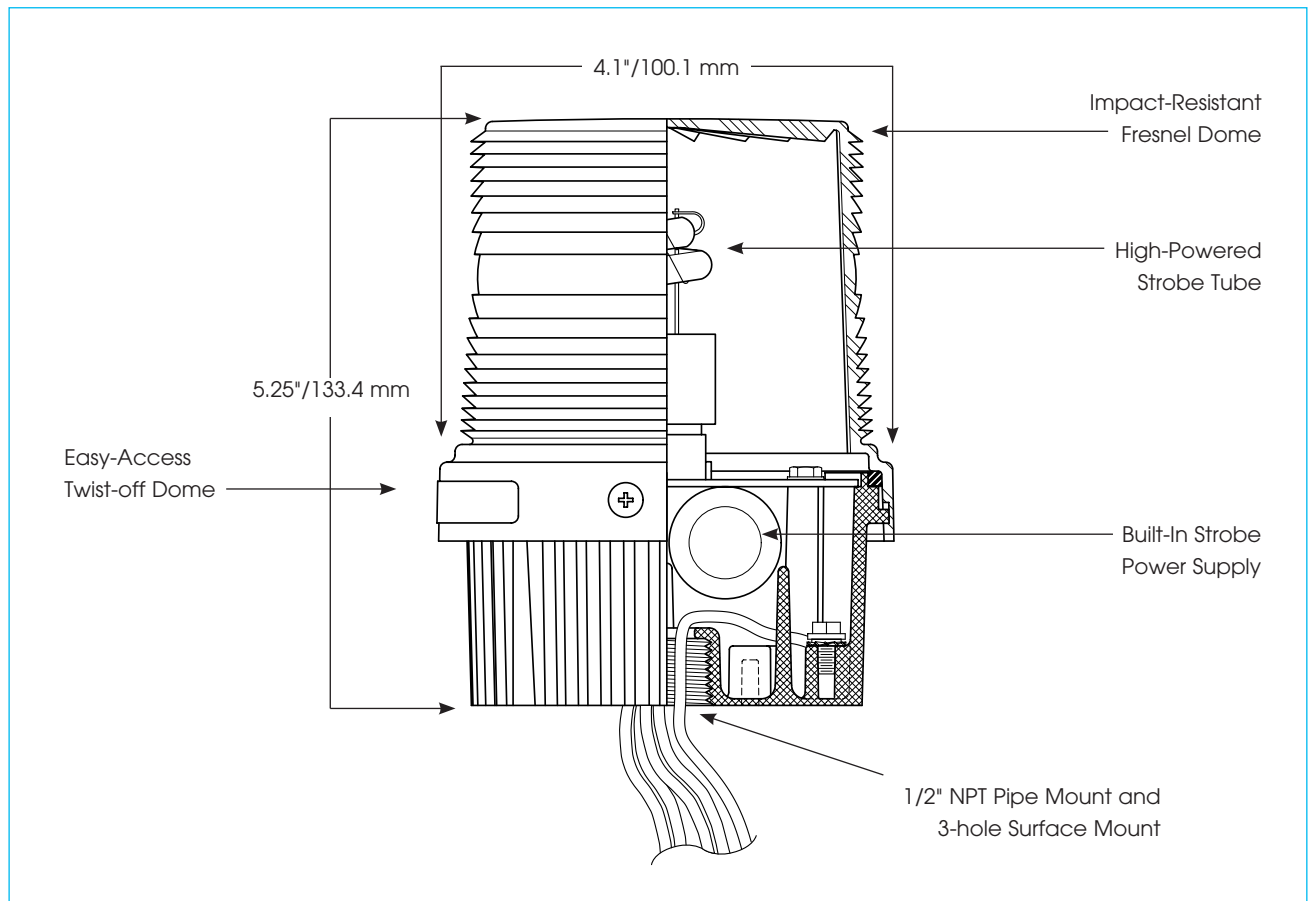
Model	Voltage	Operating Current	Flash Rate/ Minute	Candela		Mount
				Peak <sup>1</sup>	ECP <sup>2</sup>	
FB24STHI	24VDC	0.7 amps (2.0 amp, in-rush)	80	1,000,000	300	1/2" Pipe NPT/Surface

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## FIREBALL® STROBE WARNING LIGHT (FB24STHI)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source:	Strobe	Strobe
Operating Temperature:	-31°F to 150°F	-35°C to 66°C
Net Weight:	1.45 lbs.	0.7 kg
Shipping Weight:	1.7 lbs.	0.8 kg
Height:	5.25"	133.4 mm
Diameter:	4.1"	100.1 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:  
Corner Bracket (LCMB2)\*  
Wall Bracket (LWMB2)\*
- Please refer to Model Number Index FS24STHI beginning on page 377

\* Brackets not Type 4X rated.

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
PC Assembly, 24VDC	K2001202C
Dome, Clear	K8550320A-02
Strobe Tube	K8107177A

# Electraray® Supervised Hazardous Location Strobe Warning Light

## Model 224XST

### DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- 24VDC
- Four wires and supervisory diode
- Six lens colors
- 10,000 hour, high-intensity strobe tube
- 1/2-inch NPT pipe mount
- Type 4X, IP66 enclosure
- CSFM Approved
- CSA Certified
- UL and cUL Listed

Federal Signal's Electraray® Model 224XST hazardous location strobe light provides 80 high-intensity flashes per minute. This warning light is available in 24VDC.

The Model 224XST has been certified by UL as meeting Type 4X water-tight and corrosion resistant requirements, constructed to IP66. This hazardous location warning light has a black polyurethane coated base and the inner fresnel lens is available in six colors (including magenta). The clear polycarbonate outer dome can be quickly removed for easy access to inspect the unit or change the lamp. The 224XST has an effective candela of 240 and a 580,000 peak candela.

The 224XST is UL Listed, CSA Certified and CSFM Approved for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III.

The 24VDC 224XST features a voltage in-rush limiting PCB design that provides greater compatibility control systems and less electrical interference with in-rush sensitive devices.

The Electraray 224XST contains a supervisory diode and four wire leads, for fire alarm applications.

Model 224XST is ideal for wet, corrosive atmospheres like those found in food processing industries, or anywhere a visual signal is needed.

Federal Signal's affordable Electraray Strobe Warning Light is specifically designed for use in hazardous locations or where corrosive materials are present.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
224XST	24VDC	0.7 amps (2.0 amp, in-rush)	80	580,000	240	1/2" NPT Pipe

### Hazardous Location Rating:

#### T-Code at Maximum Ambient Temperature, °C

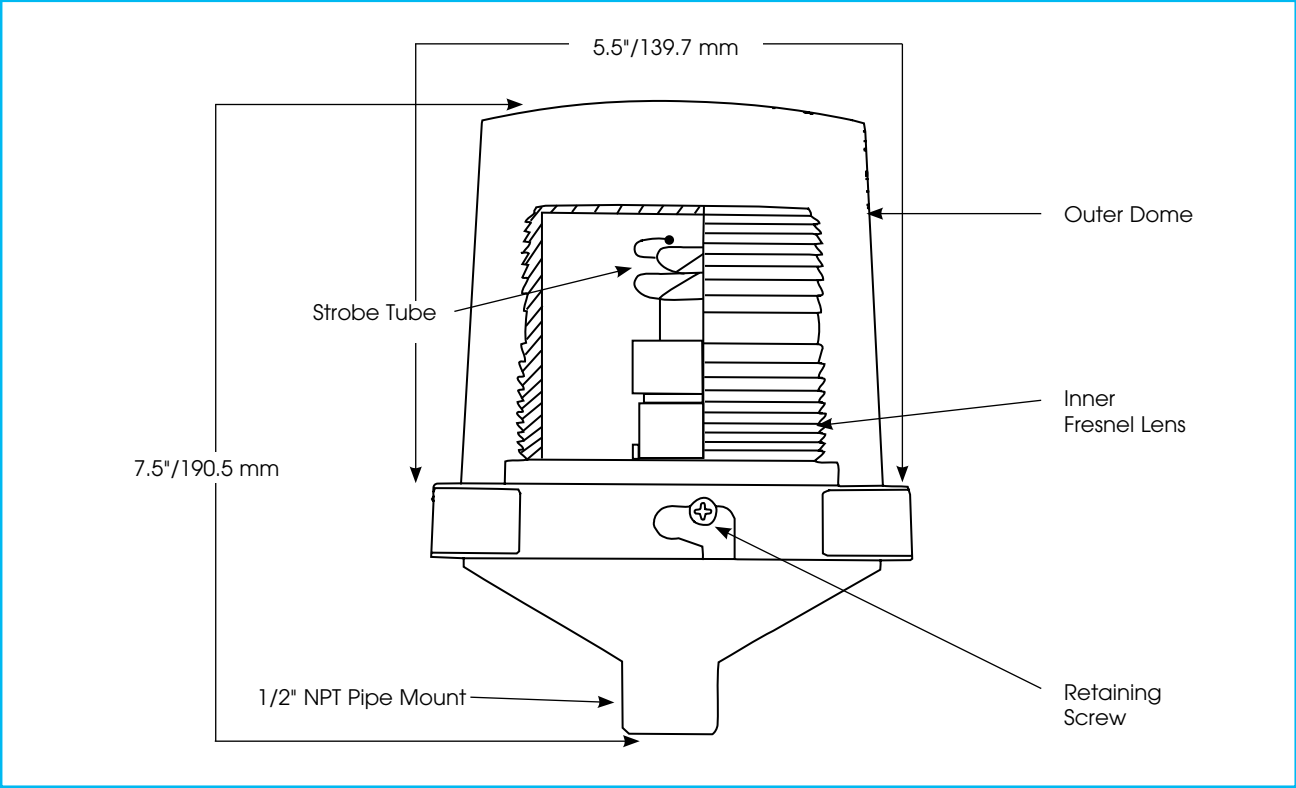
Hazardous Location	40°C
Class I, Div 2, Groups A, B, C, D	T2A/280
Class II, Div 2, Groups F, G	T5/100
Class III	T5/100

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



ELECTRARAY® HAZARDOUS LOCATION WARNING LIGHT (224XST)



SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source:	Strobe	Strobe
Operating Temperature:	-40°F to 104°F	-40°C to 40°C
Net Weight:	1.5 lbs.	0.68 kg
Shipping Weight:	2.0 lbs.	0.9 kg
Height:	7.5"	190.5 mm
Diameter:	5.5"	139.7 mm

HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index 224XST beginning on page 377

REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
<b>Interior Lens</b>		<b>Exterior Dome, Clear</b>	K8444D219C-04
Amber	K8550C095A-02	PC Assembly, 24VDC	K2001202C-01
Blue	K8550C095A-01	Strobe Tube	K8107177A
Clear	K8550C095A		
Green	K8550C095A-04		
Magenta	K8550C095A-07		
Red	K8550C095A-03		



## DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 24VDC
- Four wires and supervisory diodes
- Clear lens
- 10,000 hour, high-intensity strobe tube
- 1/2-inch NPT pipe mount
- Type 4X, IP66 enclosure
- UL Listed and CSFM Approved

# Electraray® Supervised Hearing Impaired Hazardous Location Strobe Warning Light

## Model 224XSTHI

Federal Signal's Electraray® Model 224XSTHI hazardous location strobe light provides 80 high-intensity flashes per minute. This warning light is available in 24VDC.

The Model 224XSTHI has been certified by UL as meeting Type 4X water tight and corrosion resistant requirements, constructed to IP66. This hazardous location warning light has a black polyurethane-coated base and a clear inner fresnel lens to meet the requirements of Hearing Impaired Signals. The clear polycarbonate outer dome can be quickly removed for easy access to inspect the unit or change the lamp. The 224XSTHI has an effective candela of 240 and a 580,000 peak candela.

The 224XSTHI features a voltage in-rush limiting PCB design that provides greater compatibility with control systems and fire alarm panels and less electrical interference with in-rush sensitive devices.

The 224XSTHI warning light is UL Listed for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III. The 224XSTHI is also CSFM Approved.

The Electraray 224XSTHI contains a supervisory diode and four wire leads for fire alarm applications. This strobe is UL 1971 Listed for hearing impaired applications.

Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
224XST-HI	24VDC	0.7 amps (2.0 amp, in-rush)	80	580,000	240	1/2" NPT Pipe

## Hazardous Location Rating:

### T-Code at Maximum Ambient Temperature, °C

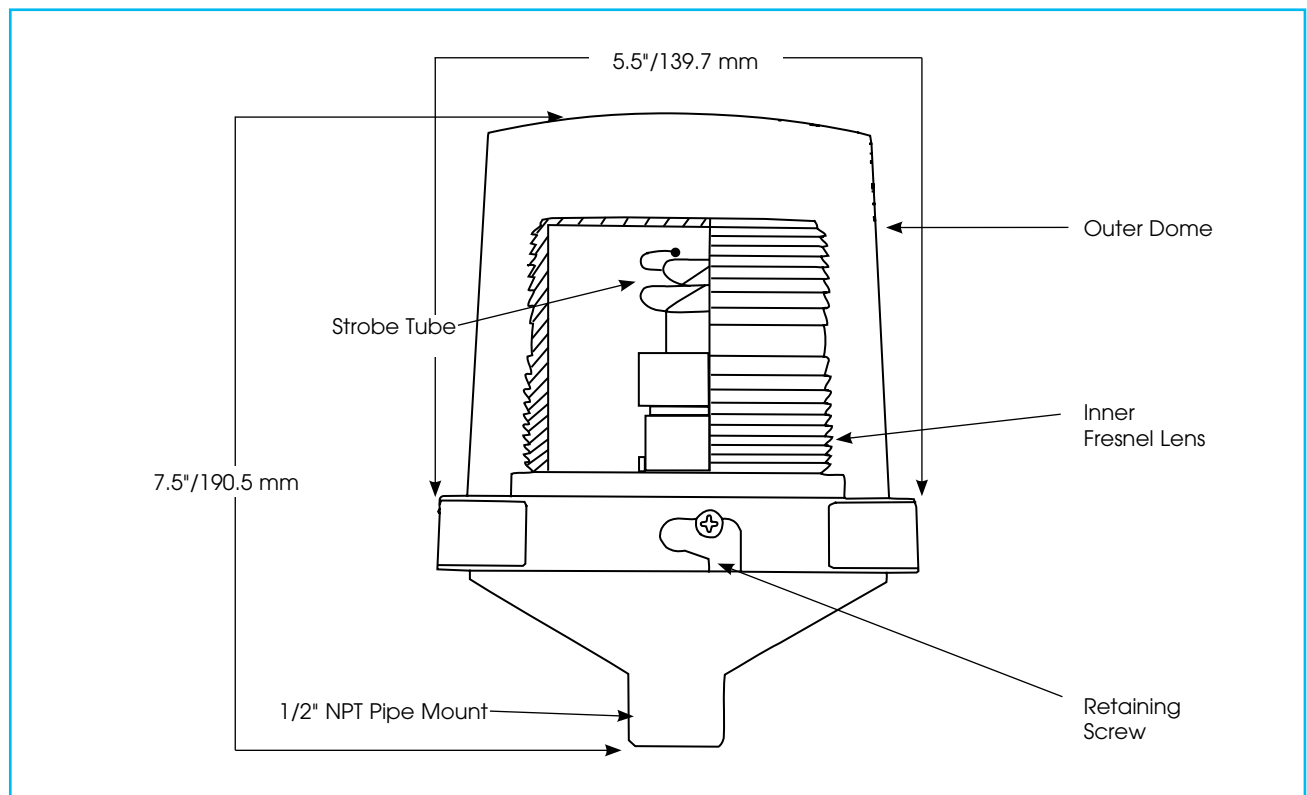
Hazardous Location	40°C
Class I, Div 2, Groups A, B, C, D	T2A/280
Class II, Div 2, Groups F, G	T5/100
Class III	T5/100

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## ELECTRARAY® HAZARDOUS LOCATION WARNING LIGHT (224XSTHI)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source:	Strobe	Strobe
Operating Temperature:	-40°F to 104°F	-40°C to 40°C
Net Weight:	1.5 lbs.	0.68 kg
Shipping Weight:	2.0 lbs.	0.9 kg
Height:	7.5"	190.5 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index 224XSTHI beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Exterior Dome, Clear	K8444D219C-04	PC Assembly, 24VDC	K2001202C-01
Interior Lens, Clear	K8550C095A		
Strobe Tube	K8107177A		





## RUGGED DESIGN FOR USE IN HAZARDOUS LOCATIONS

- Available in 24VDC
- Four wires and supervisory diode
- Six dome colors
- 10,000-hour high-intensity strobe
- 3/4-inch NPT pipe mount
- Dome guard included
- Type 4X, IP66 enclosure
- Marine Rated
- Supervisable 4-wire power circuit
- CSFM Approved
- CSA Certified for indoor/outdoor use
- UL and cUL Listed

# Hazardous Location Supervised Warning Light

## Model 154XST

Federal Signal's Model 154XST hazardous location strobe light provides 80 high-intensity flashes per minute. This warning light is available in 24VDC with a 4-wire supervisable power circuit for fire alarm and suppression supervised control panels.

The Model 154XST strobe light is UL and cUL Listed and CSA Certified for Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; and Class III.

The 154XST meets Type 4X water-tight, dust-tight, and corrosion-resistant requirements; constructed to IP66. This hazardous location warning light has an aluminum base, coated for corrosion-resistance that is ready for mounting on a 3/4-inch pipe. The Dome Guard (included) fits over the glass dome to protect it against accidental collision with moving equipment, such as forklifts. The 154XST contains a diode and four wire leads for use in fire alarm applications.

The 154XST has an effective candela (ECP) of 165 and a 520,000 peak candela. It is available in six dome colors, including amber, blue, clear, green and red (magenta upon request).

Federal Signal's rugged 154XST strobe warning light is specifically designed for hazardous locations or corrosive environments where a very bright visual signal is required. This warning light can be used for plant evacuation or other communication needs.

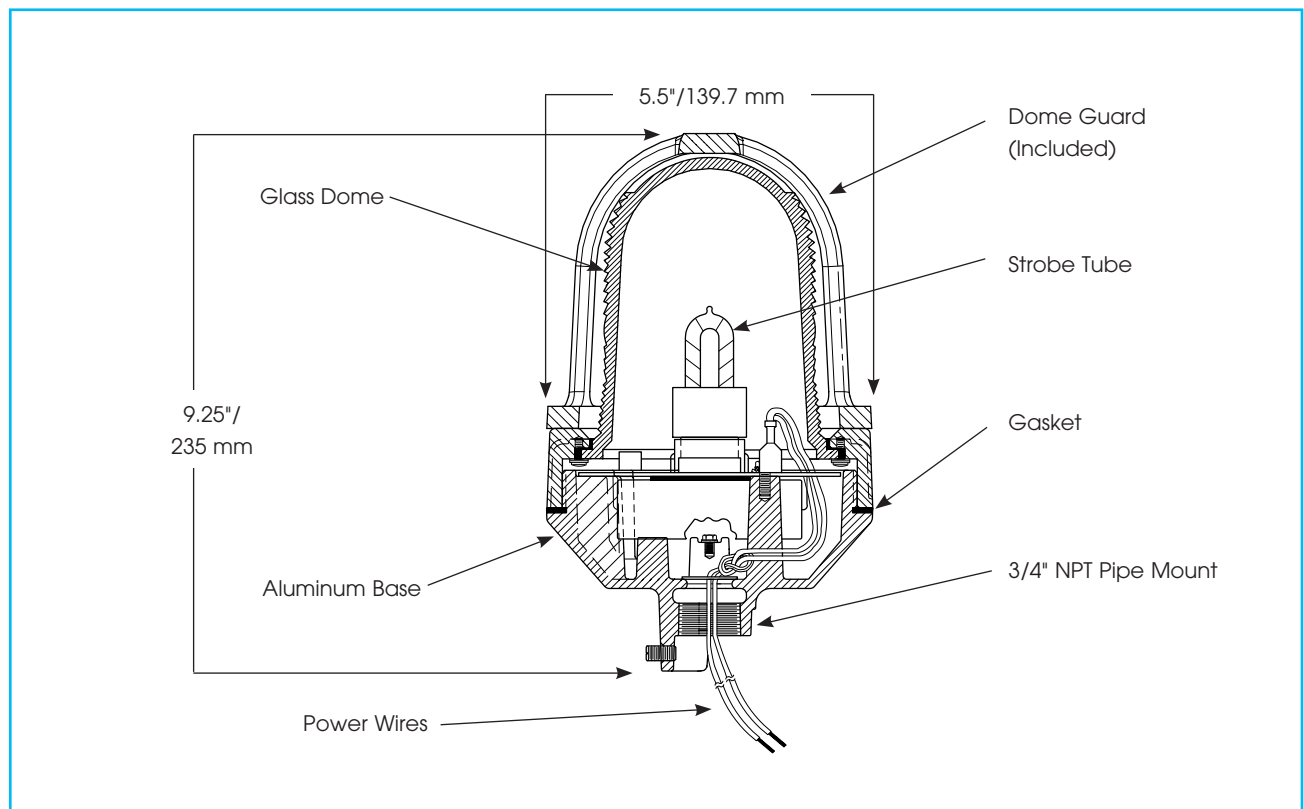
Model	Voltage	Current Draw	Flash Rate/Minute	Candela Peak	Mount
154XST	24VDC	0.60 amps	80	520,000	3/4" NPT pipe

<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily



## HAZARDOUS LOCATION STROBE LIGHT (154XST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source	Strobe	Strobe
Operating Ambient Temperature:	-67°F to 150°F	-55°C to 66°C
Net Weight:	3.8 lbs.	1.7 kg
Shipping Weight:	4.5 lbs.	2.0 kg
Height:	9.25"	235 mm
Diameter:	5.5"	139.7 mm

### HOW TO ORDER

- Specify model, voltage and color
- Please refer to Model Number Index 154XST beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
<u>Series C Dome and Ring Assembly*</u>			
Dome & Ring Assembly, Amber	K8449078C-01	PC Assembly, 24VDC	K2001173A
Dome & Ring Assembly, Blue	K8449078C-02	Strobe Tube	K149122B
Dome & Ring Assembly, Clear	K8449078C-04	Dome Gaskets	K8449080B
Dome & Ring Assembly, Green	K8449078C-03	Guard	K8449090B
Dome & Ring Assembly, Magenta	K8449078C-05		
Dome & Ring Assembly, Red	K8449078C		

\* Call the factory for Series A and B part numbers.



## DESIGNED FOR USE IN EXPLOSION-PROOF ATMOSPHERES

- Available in 24VDC
- Six lens colors
- 10,000 hour strobe tube
- 3/4-inch NPT pendant mount standard; other options available
- Dome guard optional
- Type 4X, IP66 enclosure
- Supervisable power and low in-rush circuit
- Marine Rated
- CSFM Approved
- CSA Certified
- UL and cUL Listed

# Explosion-Proof Strobe Light

## Model 27XST

Federal Signal's Model 27XST explosion-proof strobe light produces 80 high-intensity flashes per minute. This warning light operates on 24VDC only.

The 27XST is UL Listed for Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G; Class I, Division 2, Groups A, B; and Class III. The 27XST is CSA Certified and Marine Rated.

The 24VDC 27XST features a voltage in-rush limiting PCB design that provides greater compatibility with factory automation control systems and less electrical interference with in-rush sensitive devices. It's diode polarized power circuit also makes it ideal for fire alarm and suppression supervised control panels.

The 27XST is Type 4X rated; constructed to IP66. Corrosion resistance is achieved with a powder epoxy finish applied over the copper-free aluminum housing. All exposed hardware is 316 grade stainless steel.

Federal Signal's Model 27XST has an effective candela (ECP) of 850 and a two million peak candela. A pendant mount is supplied and a ceiling mount and 90° wall mount are available options. For easy installation, the mounting box is first installed and the fixture is then threaded onto the mounting box, making the electrical connection. Electrical continuity is made when five threads are engaged.

Federal Signal's Model 27XST is specifically designed for explosion-proof atmospheres and/or corrosive environments. Because it is easy to install and requires very low maintenance, it is ideal for use in areas such as oil rigs, mines, refineries, and chemical plants.

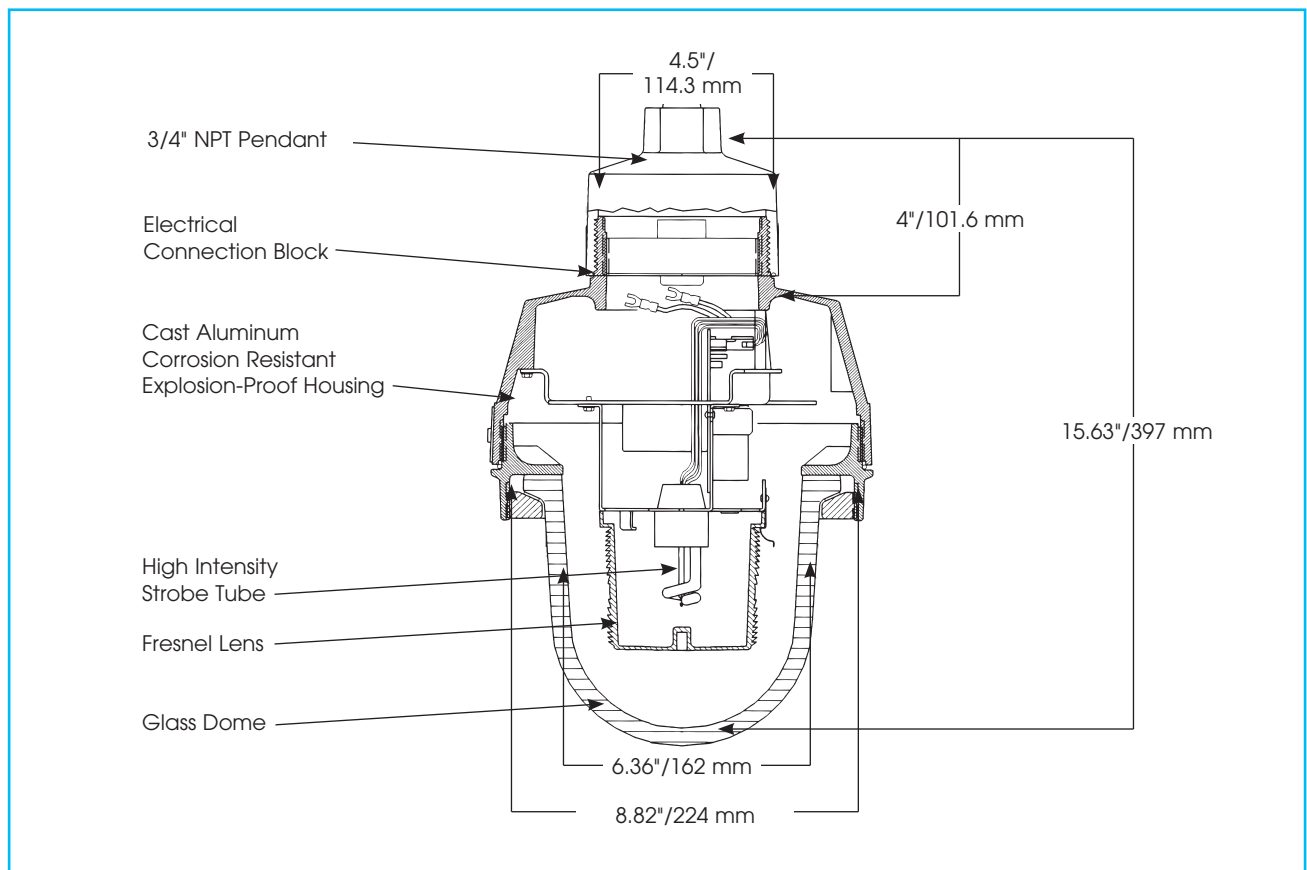
Model	Voltage	Operating Current	Flash Rate/Minute	Candela Peak <sup>1</sup>	ECP <sup>2</sup>	Mount
27XST	24VDC	1.9 amps (3.0 amp, in-rush)	80	2,000,000	850	3/4" NPT Pendant



<sup>1</sup> Peak candela is the maximum light intensity generated by a flashing light during its light pulse

<sup>2</sup> ECP (Effective Candela) is the intensity that would appear to an observer if the light were burning steadily

## EXPLOSION-PROOF STROBE LIGHT (27XST)



### SPECIFICATIONS

Lamp Life:	10,000 Hours	10,000 Hours
Lamp Source:	Strobe	Strobe
Net Weight:	14 lbs.	6.4 kg
Shipping Weight:	18.1 lbs.	8.2 kg
Height:	15.63"	397.0 mm
Diameter:	8.82"	224.0 mm

### HOW TO ORDER

- Specify model, voltage and color
- Optional Accessories:
  - Dome Guard (DGXC)
  - Ceiling Mount (CMXC)
  - Wall Mount (WMXC)
- Please refer to Model Number Index 27XST beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>	<u>Description</u>	<u>Part Number</u>
Exterior Dome Assembly, Clear	K8444C271A-01	24VDC Mechanism	K8436107F-03
Interior Lens Assembly, Amber	K8550C095A-02	Strobe Tube	K8107159A
Interior Lens Assembly, Blue	K8550C095A-01		
Interior Lens Assembly, Clear	K8550C095A		
Interior Lens Assembly, Green	K8550C095A-04		
Interior Lens Assembly, Magenta	K8550C095A-07		
Interior Lens Assembly, Red	K8550C095A-03		

# SelecTone® Audible Signaling Devices

Models 54GC and 54GCB



## DESIGNED FOR INDOOR AND OUTDOOR USE

- Available in 24VDC
- Solid-state circuitry
- Built-in gain control
- Produces 0dBc to 86dBc @ 10' (0dBc to 96dBc @ 1m)
- Flush or surface mount
- Type 3R enclosure
- 4-wire supervisable power circuit
- UL Listed and CSFM Approved

Federal Signal's Model 54GC and 54GCB SelecTone Speaker Amplifiers are designed to provide crisp, clear tones in supervised alarm notification systems.

In the Models 54GC, a short, folded re-entrant horn is interposed between the diaphragm and surrounding air space. This design provides optimal dB output and very good frequency response.

The 54GC is UL Listed. It has been designed, tested and approved for use in Type 3R applications. When installed with the Model WB Weatherproof Backbox, the 54GC is suitable for use outdoors. The compact size and attractive appearance of the Model 54GC makes it ideal for use in offices, hallways, reception and plant areas where ambient noise levels are not exceedingly high, and even sound dispersal is desired.

The 54GCB is designed for areas without high ambient noise levels, such as offices, hallways and reception areas. The baffle allows the four-inch speaker to be installed easily in any suspended ceiling plenum with a Model R4NB backbox. The white grill of the 54GCB is attractive in most decors.

Internal gain control allows output adjustment from 0dBc to a maximum of 86dBc at 10 feet.

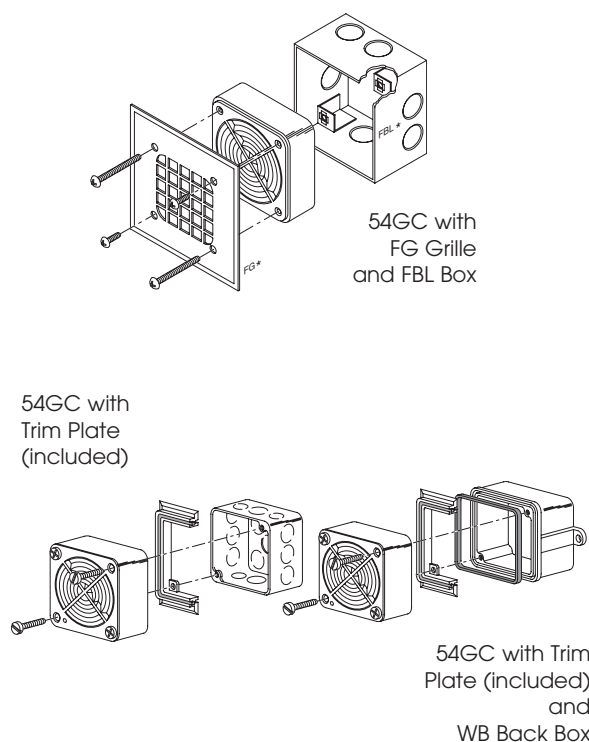
SelecTone Speaker Amplifiers are used individually or as part of a plant-wide emergency notification system. The Model UTM Universal Tone Module, with 32 tones is plugged into a single SelecTone Speaker Amplifier for stand-alone use or into a SelecTone Command Unit for plant-wide signaling.

Model	Voltage	Operating Current	Standby Current	Decibels per UL1480		Decibels on Axis	
				10'	1m	10'	1m
<b>54GC</b>	24VDC	0.071 amps	0.025 amps	71	81	86	96
<b>54GCB</b>	24VDC	0.071 amps	0.025 amps	71	81	84	94

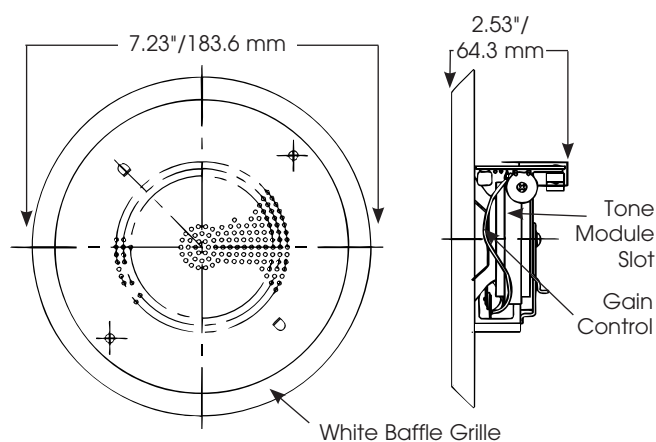


## SELECTONE® AUDIBLE SIGNALING DEVICE (54GC/54GCB)

### 54GC



### 54GCB



## SPECIFICATIONS

### 54GC

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	1.7 lbs.	0.8 kg
Shipping Weight:	2.2 lbs.	1.0 kg
Height :	4.5"	114.0 mm
Width:	4.50"	114.0 mm
Depth:	3.44"	87.0 mm

### 54GCB

Operating Temperature:	-31°F to 161°F	-35°C to 72°C
Net Weight:	1.6 lbs.	0.73 kg
Shipping Weight:	2.3 lbs.	1.04 kg
Depth :	2.53"	64.3 mm
Diameter:	7.23"	183.6 mm

## HOW TO ORDER

- Specify Model
- Specify Tone Module for stand alone operation Universal Tone Module (UTM)
- Specify Connector Kit for use in systems. (Call factory for system design assistance.)  
Supervised Connector Kit (300CKS) 25 Vrms Connector Kit (AM25CK)
- Optional Accessories:  
Knock-out Back Box (NBL)  
Weatherproof Back Box (WB) Grille (FG)  
Flush Mount Back Box (FBL)  
Ceiling Back Box (R4NB)
- Please refer to Model Number Index 54GC/54GCB beginning on page 377





# SelecTone® Audible Signaling Device

Models 304GC and 314GC

## PLANT-WIDE WARNING AND VOICE COMMUNICATION

- Available in 24VDC
- Built-in gain control
- Digital signal amplification
- Fused input and output
- Type 3R enclosure
- 4-wire supervisable power circuit
- UL Listed and CSFM Approved

The Federal Signal Models 304GC and 314GC Amplified Speakers are designed to produce crisp, clear tones in supervised alarm notification systems. These amplified speakers can broadcast tones generated by a tone card installed into the speaker (the plug-in 32-tone UTM) or by a central tone source in a voice evacuation or paging system. When live public address or voice messages are required, plug-in Connector Cards (AM25CK or AM70CK) interface with the Vrms of the EVAC panel.

Both speaker amplifiers are compatible with fire alarm and suppression supervised control panels and power boosters.

The speaker cone and projector are constructed of rugged spun aluminum. The solid-state amplifier circuit is protected in a die-cast aluminum housing. Dust- and moisture-proof gaskets provide protection from the elements. All external surfaces are sealed with gray powder coat paint. The 304GC is easily installed on any flat surface.

Both the 304GC and 314GC are UL Listed for use indoors and out.

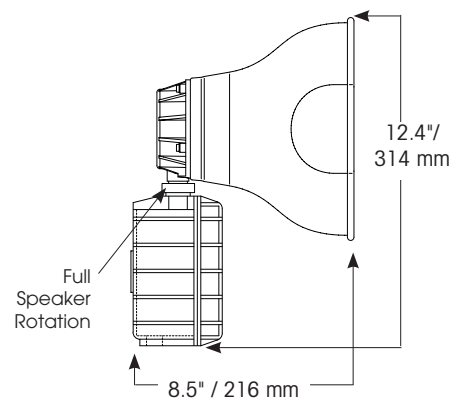
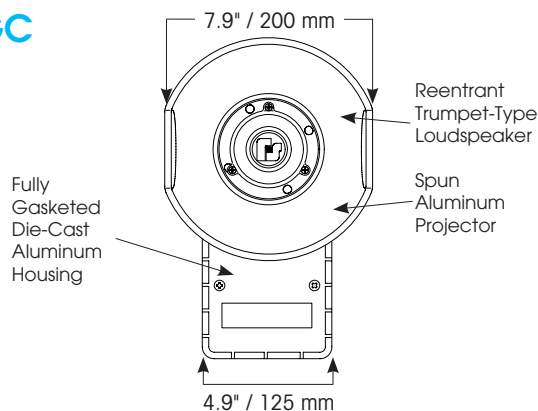
The rugged construction and high output of the Models 304GC and 314GC make it ideal for use in harsh environments with high ambient noise levels. Both models feature an internal gain control for adjustment to the suit area.

Model	Voltage	Operating Current	Standby Current	Decibels per UL1480		Decibels on Axis	
				10'	1m	10'	1m
<b>304GC</b>	24VDC	0.7 amps	0.15 amps	95	105	108	118
<b>314GC</b>	24VDC	1.3 amps	0.15 amps	100	110	112	122

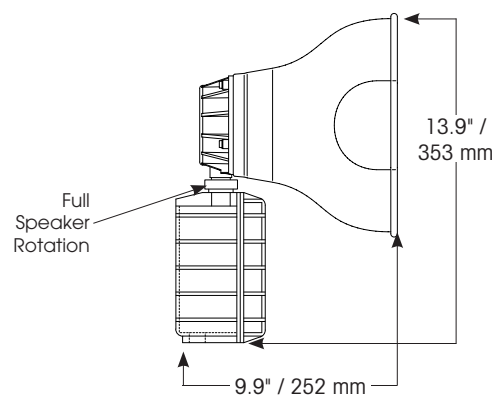
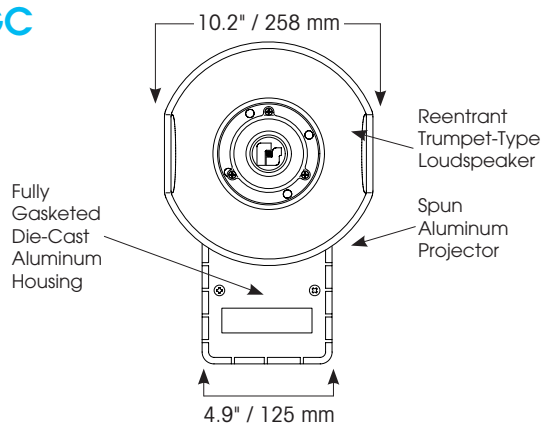


## SELECTONE® AUDIBLE SIGNALING DEVICE (304GC/314GC)

### 304GC



### 314GC



## SPECIFICATIONS

### 304GC

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	4.5 lbs.	2.0 kg
Shipping Weight:	5.7 lbs.	2.6 kg
Height:	12.4"	314.0 mm
Width:	7.9"	200.0 mm
Depth:	8.5"	216.0 mm

### 314GC

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	6.1 lbs.	2.8 kg
Shipping Weight:	7.5 lbs.	3.4 kg
Height:	13.9"	353.0 mm
Width:	10.2"	258.0 mm
Depth:	9.9"	252.0 mm

## HOW TO ORDER

- Specify model number and voltage
- Universal Tone Module (UTM)
- Specify Connector Kit for use in systems  
Supervised Connector Kit (300CKS)  
25 Vrms Connector Kit (AM25CK)
- Please refer to Model Number Index  
304GC/314GC beginning on page 377

## REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
<b>304GC</b>	
Amplifier Assembly	K2005356A
Voice Coil Series B	K8593035A
Speaker Assembly	K8593082A
4 Pos connector	K140340B
<b>314GC</b>	
Amplifier Assembly	K2005356A-01
Voice Coil Series B	K8593036A
Speaker Assembly	K8593103A
4 Pos connector	K140340B



## DESIGNED FOR USE IN HAZARDOUS LOCATIONS

- Available in 24VDC
- Reliable, solid-state circuitry
- Built-in gain control
- Digital signal amplification
- Fused input and output
- Type 4X enclosure
- External mounting tabs
- 4-wire supervisable power circuit
- UL Listed and CSFM Approved

# SelecTone® Hazardous Location Audible Signaling Device

Models 304GCX and 314GCX

Federal Signal Models 304GCX and 314GCX Hazardous Location Amplified Speakers are designed to produce crisp, clear tones in supervised alarm notification systems. Both speakers amplifiers are compatible with fire alarm, voice evacuation, suppression supervised control panels and power boosters.

These amplified speakers can broadcast tones generated by a Tone Card installed into the speaker (the plug-in 32-tone UTM) or by a central tone source in a voice evacuation or paging system. When live public address or voice messages are required, plug-in Connector Cards (AM25CK or AM70CK) interface with the audio output of the EVAC panel.

The speaker cone and projector are constructed of rugged spun aluminum. The solid-state amplifier circuit is protected in a die-cast aluminum housing. Dust and moisture-proof gaskets provide protection from the elements. All external surfaces are sealed with gray powder coat paint. The 304GCX and 314GCX are easily installed with external mounting tabs.

The 304GCX and 314GCX are UL Listed for Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F & G; and Class III.

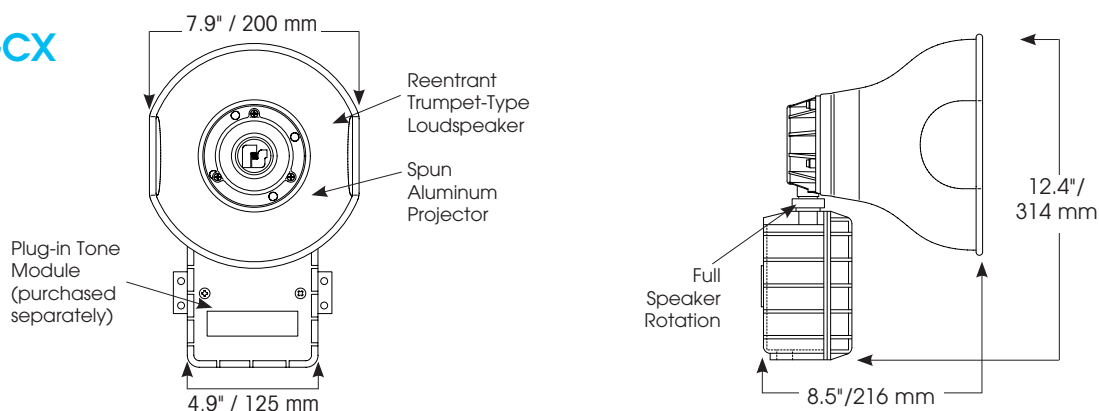
The rugged construction and high output of the Model 304GCX and 314GCX make it ideal for use in harsh environments with high ambient noise levels. Both models feature an internal gain control for adjustment to suit area.

Model	Voltage	Operating Current	Standby Current	Decibels per UL1480		Decibels on Axis	
				10'	1m	10'	1m
<b>304GCX</b>	24VDC	0.7 amps	0.15 amps	95	105	108	118
<b>314GCX</b>	24VDC	1.3 amps	0.15 amps	100	110	112	122

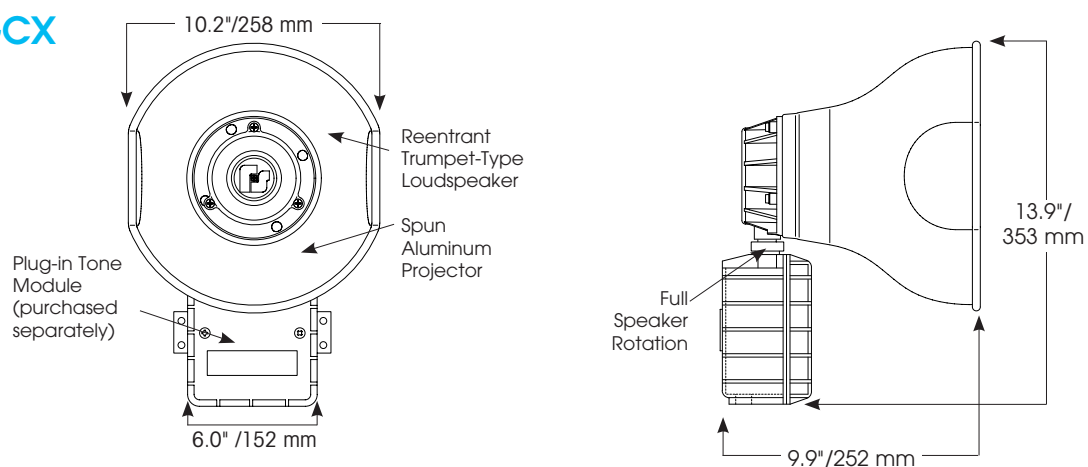


## HAZARDOUS LOCATION AUDIBLE SIGNALING DEVICE (304GCX/314GCX)

### 304GCX



### 314GCX



## SPECIFICATIONS

### 304GCX

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	4.5 lbs.	2.0 kg
Shipping Weight:	5.7 lbs.	2.6 kg
Height:	12.4"	314.0 mm
Width:	7.9"	200.0 mm
Depth:	8.5"	216.0 mm

### 314GCX

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	6.1 lbs.	2.8 kg
Shipping Weight:	7.5 lbs.	3.4 kg
Height:	13.9"	353.0 mm
Width:	10.2"	258.0 mm
Depth:	9.9"	252.0 mm

## HOW TO ORDER

- Specify model number and voltage
- Universal Tone Module (UTM)
- Specify Connector Kit for use in systems:  
Supervised Connector Kit (300CKS) 25 Vrms  
Connector Kit (AM25CK)
- Please refer to Model Number Index  
304GCX/314GCX beginning on page 377

## REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
<b>304GCX</b>	
Amplifier Assembly	K2005356A
Voice Coil, Series B	K8593035A
Speaker Assembly	K8593082A
4 Pos connector	K140340B
<b>314GCX</b>	
Amplifier Assembly	K2005356A-01
Voice Coil, Series B	K8593036A
Speaker Assembly	K8593103A
4 Pos connector	K140340B



## DESIGNED FOR EXPLOSION-PROOF ENVIRONMENTS

- Available in 24VDC
- Built-in gain control
- 4-wire supervisable power circuit
- IP65, NEMA 4X Approved
- UL Listed and CSFM Approved

# SelecTone® Explosion-Proof Audible Signaling Device

## Models 304X and 314X

The Federal Signal Model 304X and 314X Explosion Proof Amplified Speakers are designed to produce crisp, clear tones in supervised alarm notification systems. Both models are compatible with fire alarm, voice evacuation, suppression supervised control panels, and power boosters.

These amplified speakers can broadcast tones generated by a Tone Card installed into the speaker (the plug-in 32-tone UTM) or by a central tone source in a voice evacuation or paging system. When live public address or voice messages are required, plug-in Connector Cards (AM25CK or AM70CK) interface with the Vrms of the EVAC panel.

The speaker cone and projector are constructed of rugged spun aluminum. The solid-state amplifier circuit is protected in a die-cast aluminum housing. Dust- and moisture-proof gaskets provide protection from the elements. All external surfaces are sealed with gray powder coat paint. A heavy-duty swivel mount bracket allows the installer to direct the output effectively.

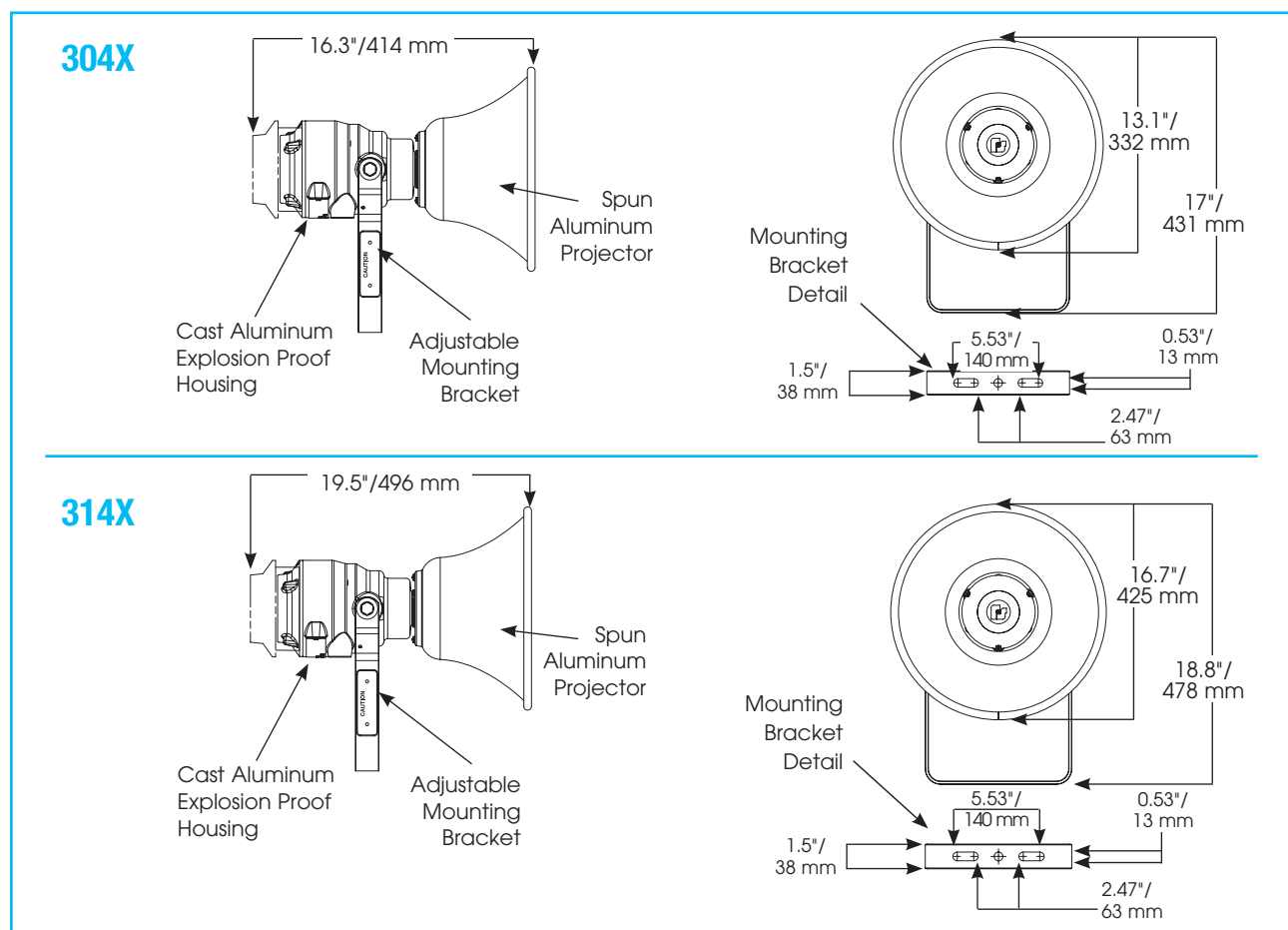
The 304X and 314X are UL Listed for Class I, Division 1, Groups B, C & D.

The rugged construction and high output of the Model 304X and 314X make them ideal for use in harsh environments with high ambient noise levels. Both models feature an internal gain control for adjustment to suit area.

Model	Voltage	Operating Current	Standby Current	Decibels per UL1480		Decibels on Axis	
				10'	1m	10'	1m
<b>304X</b>	24VDC	0.7 amps	0.13 amps	91	101	110	120
<b>314X</b>	24VDC	1.0 amps	0.13 amps	97	107	114	124



## EXPLOSION-PROOF AUDIBLE SIGNALING DEVICE (304X/314X)



### SPECIFICATIONS

#### 304X

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	15.4 lbs.	7.0 kg
Shipping Weight:	22.8 lbs.	10.4 kg
Height:	17.0"	431.80 mm
Width:	13.1"	332.73 mm
Depth:	16.3"	414.02 mm

#### 314X

Operating Temperature:	-40°F to 150°F	-40°C to 66°C
Net Weight:	16.4 lbs.	7.4 kg
Shipping Weight:	32.4 lbs.	14.7 kg
Height:	18.8"	477.52 mm
Width:	16.7"	424.17 mm
Depth:	19.5"	495.30 mm
Ingress Protection:	IP65 and NEMA 4X Approved	

### HOW TO ORDER

- Specify model number
- Universal Tone Module (UTM)
- Specify Connector Kit for use in systems  
Supervised Connector Kit (300CKS)  
25 Vrms Connector Kit (AM25CK)
- Please refer to Model Number Index  
304X/314X beginning on page 377

### REPLACEMENT PARTS

<u>Description</u>	<u>Part Number</u>
<b>304X</b>	
Amplifier Assembly	K2005355A-01
Horn Assembly	K8593100A
Driver Assembly	K8593097A
Cover Assembly	K8593098A
Mounting Bracket Assembly	K8593071A
4 Pos connector	K140340B
<b>314X</b>	
Amplifier Assembly	K2005355A-02
Horn Assembly	K8593101A
4 Pos connector	K140340B