Signaling Lights

IDEC

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Selection Guide

Series	SignaLight Towers		Surface Mount Indicators	
	LD6A	LT7	LH1D	Jumbo Dome Pilot Lights
Appearance				
Page	844	853	856	861
Description	LED Steady or Flashing Light with Buzzer	LED Steady or Flashing Light with Buzzer	LED One-color, Two-color, or Three-color Alternate Illumination	Incandescent or LED
Features	• Unique oval lens shape provides clear distinction between LED colors • Color coded wires	• Ultra bright LEDs • Fast and easy assembly • Optional adjustable alarm • Color-coded wiring terminals • LED strobe modules	• Flat lens, dome, or jumbo dome lenses	• Large dome lens
Nominal Voltage	24V AC/DC	24V DC, 90-250V AC	24V AC/DC	24V AC/DC
Lamp Style	Lens LED Modules	Lens LED modules	LED	LED or Incandescent
Lens Colors	Red, Yellow, Blue, Green, White	Red, Amber, Green, Blue, White, Lemon Yellow	Cool White, Blue, Green, Yellow, Warm White, Amber, Red	Amber, Green, Red, Blue, White, Yellow
Degree of Protection	IP65, IP54, IP23	IP65, Type 4, 4X, 13	IP67, Type 4X	IP65
Mounting	Frame mount Wall mount Direct mount Pole mount with base Pole mount with L-shaped bracket	Base-mounting with stud L-angle bracket with pole Base-mount with pole Wall mount bracket	Direct mount Surface mount	22mm panel cut-out
Lens Shape/Size	Oval / 40mm x 60mm	Round / 70mm (2.75")	Dome / ø37mm Flat / 35mm x 34mm Jumbo Dome / ø66mm	Dome / ø66mm
Ratings/Approvals				Certificate No. 2005010305145656 TÜV Rheinland

SLC Series — Panel Mount Annunciators

Series	SLC30 1.18" (30mm)	SLC30-IPS 1.18" (30mm)	SLC40 1.57" (40mm)
Appearance	Full Voltage  Transformer 	Available with integrated control unit pushbuttons and key switches 	Full Voltage  Transformer 
Page	862	870	878
Features	• Custom-built, multiple combination windows • Custom illumination color combinations • Optional legend engraving		
Illumination Face Size	Style F: 1.181" x 1.181" (30 x 30mm) Style H: 1.181" x 2.362" (30 x 60mm) Style L: 1.181" x 3.543" (30 x 90mm) Style V: 2.362" x 1.181" (60 x 30mm) Style G: 2.362" x 2.362" (60 x 60mm)		Style F: 1.575" x 1.575" (40 x 40mm) Style H: 1.575" x 3.150" (40 x 80mm) Style L: 1.575" x 4.724" (40 x 120mm) Style V: 3.150" x 1.575" (80 x 40mm) Style G: 3.150" x 3.150" (80 x 80mm)
Light Source	LED cluster or bayonet base incandescent (1W)		LED cluster or screw base incandescent (2W)
Illumination Colors	LED: Amber, Blue, Green, Red, Yellow, White, Red/Green 2-color alternate* Incandescent: Amber, Blue, Green, Red, Yellow, White		

Input Type/Voltage			
	LED	Full voltage	6, 12, 24V DC
		Transformer	120V, 240V AC
		DC-DC converter	110V DC
	Incandescent	Full voltage	6.3, 18, 24, 30V DC
		Transformer	120V, 240V AC (50/60Hz)

Terminations	M3.5 screw with captive sems plate (M3 screw check terminals on applicable units) LED models feature M3.5 spring-up terminals
Approvals	TÜV Cert No. B970213332375 · cULus UL Recognized File No. E68961 · CE · CSA Certified File No. LR48366 · ABS American Bureau of Shipping

*Red/Green 2-color alternate available in 24V LED only.

LD6A LED SignaLight Towers

Unique Striped Design Improves Visibility

Key features of the LD6A LED SignaLight Towers include:

- The striped design with non-illuminated area between the lenses makes the illuminated color very visible.
- Unique oval lens shape provides high-visibility from different directions.
- Five different mounting styles available: frame mount, wall mount, direct mount and pole mount (round or L-shaped bracket).
- Clear lens models available to clearly distinguish between illuminated and non-illuminated lenses.
- Custom configuration is possible.
- Flashing cycle: 1.75Hz (approx. 105 flashes per minute) conforms to international standard IEC 60073.
- Alarm (3.3kHz, 2 different styles) can be heard in 360° degrees. Adjustable volume (70 to 90dB).
- Degree of protection: IP65 Steady units and IP54 Flashing units (using frame, wall, direct and pole mount with round base), IP23 Steady and Flashing units using pole mount with L-shaped bracket.

Assembled Products

Mounting Style	Tiers	LED Color Code	Steady		Steady/Flashing/Alarm	
			Part Number	Weight (approx.)	Part Number	Weight (approx.)
G: Frame Mount	1	R, Y, S, G, W	LD6A-1GQ*-□	220g	LD6A-1GZQ*-□	310g
	2	RY, RG	LD6A-2GQ*-□□	260g	LD6A-2GZQ*-□□	350g
	3	RYS, RYG	LD6A-3GQ*-□□□	300g	LD6A-3GZQ*-□□□	390g
	4	RYSG	LD6A-4GQ*-□□□□	340g	LD6A-4GZQ*-□□□□	430g
	5	RYSGW	LD6A-5GQ*-□□□□□	380g	LD6A-5GZQ*-□□□□□	470g
W: Wall Mount	1	R, Y, S, G, W	LD6A-1WQ*-□	225g	LD6A-1WZQ*-□	315g
	2	RY, RG	LD6A-2WQ*-□□	265g	LD6A-2WZQ*-□□	355g
	3	RYS, RYG	LD6A-3WQ*-□□□	305g	LD6A-3WZQ*-□□□	395g
	4	RYSG	LD6A-4WQ*-□□□□	345g	LD6A-4WZQ*-□□□□	435g
	5	RYSGW	LD6A-5WQ*-□□□□□	385g	LD6A-5WZQ*-□□□□□	475g
D: Direct Mount	1	R, Y, S, G, W	LD6A-1DQ*-□	185g	LD6A-1DZQ*-□	275g
	2	RY, RG	LD6A-2DQ*-□□	225g	LD6A-2DZQ*-□□	315g
	3	RYS, RYG	LD6A-3DQ*-□□□	265g	LD6A-3DZQ*-□□□	355g
	4	RYSG	LD6A-4DQ*-□□□□	305g	LD6A-4DZQ*-□□□□	395g
	5	RYSGW	LD6A-5DQ*-□□□□□	345g	LD6A-5DZQ*-□□□□□	435g
P: Pole Mount (with base)	1	R, Y, S, G, W	LD6A-1PQ*-□	645g	LD6A-1PZQ*-□	735g
	2	RY, RG	LD6A-2PQ*-□□	685g	LD6A-2PZQ*-□□	775g
	3	RYS, RYG	LD6A-3PQ*-□□□	725g	LD6A-3PZQ*-□□□	815g
	4	RYSG	LD6A-4PQ*-□□□□	765g	LD6A-4PZQ*-□□□□	855g
	5	RYSGW	LD6A-5PQ*-□□□□□	805g	LD6A-5PZQ*-□□□□□	895g
K: Pole Mount (with L-shaped bracket)	1	R, Y, S, G, W	LD6A-1KQ*-□	640g	LD6A-1KZQ*-□	730g
	2	RY, RG	LD6A-2KQ*-□□	680g	LD6A-2KZQ*-□□	770g
	3	RYS, RYG	LD6A-3KQ*-□□□	720g	LD6A-3KZQ*-□□□	810g
	4	RYSG	LD6A-4KQ*-□□□□	760g	LD6A-4KZQ*-□□□□	850g
	5	RYSGW	LD6A-5KQ*-□□□□□	800g	LD6A-5KZQ*-□□□□□	890g

Specify housing color code in place of *: B (black), W (light gray)
Specify illumination color in place of □ starting with the top tier. State the LED color code from the left.
R (red), Y (yellow), S (blue), G (green), W (pure white)
Example: When the LED color is RYGSW => **LD6A-5GQW-RYGSW**
Clear lens type also available. Specify "C" after the LED color code.
Example:
LD6A-5GQW-RYSGW => **LD6A-5GQW-RYSGWC**

Combination of LED Color and Lens Color

LED Color	Color Lens Type	Clear Lens Type
R: Red	Red lens	Clear lens
Y: Yellow	Yellow lens	Clear lens
S: Blue	Blue lens	Clear lens
G: Green	Green lens	Clear lens
W: White	Clear lens	

For white (W) LED, a clear lens is used in both color and clear lens configurations.

Mounting Parts Included

Mounting Style	Supplied Parts
G: Frame mount	M4 screw (4 pcs)*, M4 spring washer (4 pcs)*, M4 plain washer (4 pcs)*, M5 screw (2 pcs), M5 spring washer (2 pcs), M5 plain washer (2 pcs), bracket (1 pc)
W: Wall mount	M4 screw (20 mm) (4 pcs), M4 screw (8 mm) (4 pcs)*, M4 spring washer (8 pcs)* M4 plain washer (8 pcs)*, M4 nut (4 pcs), bracket (1 pc), gasket (1 pc)
D: Direct mount	M5 screw (4 pcs)*, M5 spring washer (4 pcs)*, M5 plain washer (4 pcs)*, M5 nut (4 pcs)*, O-ring (4 pcs), gasket (1 pc)
P: Pole mount (with base)	M5 screw (4 pcs), M5 spring washer (4 pcs), M5 plain washer (4 pcs), M5 nut (4 pcs), O-ring (4 pcs), gasket (1 pc)
K: Pole mount (with L-shaped bracket)	M22 plain washer 2 (pcs), M22 nut (2 pcs), bracket (1 pc)

*For black housing, black screws and washers are supplied. For light gray housing, silver screws and washers are supplied.

Base Module

Style	Mounting Style	Part Number		Notes
		Steady	Steady/Flashing/Alarm	
	Frame Mount	LD6A-0GQ*	LD6A-0GZQ*	A top cap is supplied.
	Wall Mount	LD6A-0WQ*	LD6A-0WZQ*	
	Direct Mount	LD6A-0DQ*	LD6A-0DZQ*	
	Pole Mount (with base)	LD6A-0PQ*	LD6A-0PZQ*	
	Pole Mount (with L-shaped bracket)	LD6A-0KQ*	LD6A-0KZQ*	

Specify a housing color code in place of *: B (black), W (light gray)
Do not supply power to the base module without connecting LED modules.

LED Module

Style		Lens	Part Number	LED Color Code
	Black	Color lens	LD9Z-6ALB-☐	R, Y, S, G, W
		Clear lens	LD9Z-6ALB-☐C	R, Y, S, G
	Light gray	Color lens	LD9Z-6ALW-☐	R, Y, S, G, W
		Clear lens	LD9Z-6ALW-☐C	R, Y, S, G

Specify an LED color code in place of ☐: R (red), Y (yellow), S (blue), G (green), W (white)
When using white (W) with a clear lens, order LD9Z-6ALB-W (black housing) or LD9Z-6ALW-W (light gray housing).

Center Set Screw

Item		Part Number	Notes
	1 tier	LD9Z-6AC1	A plain washer and spring washer are supplied.
	2 tiers	LD9Z-6AC2	
	3 tiers	LD9Z-6AC3	
	4 tiers	LD9Z-6AC4	
	5 tiers	LD9Z-6AC5	

Ordering Examples

[Ex. 1] When ordering LD6A-3PQW-RYG as sub-component parts, specify the following:

Pole mount (with base), steady, light gray housing, 3 tiers, color lens LED modules with Red, Yellow, and Green LED

Base module (pole mount with base, steady, light gray housing)	LD6A-0PQW	1 piece
LED module (red LED with color lens, light gray housing)	LD9Z-6ALW-R	1 piece
LED module (yellow LED with color lens, light gray housing)	LD9Z-6ALW-Y	1 piece
LED module (green LED with color lens, light gray housing)	LD9Z-6ALW-G	1 piece
Center screw set (3 tiers)	LD9Z-6AC3	1 piece

[Ex. 2] When ordering LD6A-5WZQB-RYSGWC as sub-component parts, specify the following:

Wall mount, steady/flashing/alarm, black housing, 5 tiers, clear lens LED modules with Red, Yellow, Blue, Green, and Pure white LED

Base module (wall mount, steady/flashing/alarm, black housing)	LD6A-0WZQB	1 piece
LED module (red LED with clear lens, black housing)	LD9Z-6ALB-RC	1 piece
LED module (yellow LED with clear lens, black housing)	LD9Z-6ALB-YC	1 piece
LED module (blue LED with clear lens, black housing)	LD9Z-6ALB-SC	1 piece
LED module (green LED with clear lens, black housing)	LD9Z-6ALB-GC	1 piece
LED module (pure white LED with clear lens, black housing)	LD9Z-6ALB-W	1 piece
Center screw set (5 tiers)	LD9Z-6AC5	1 piece

Replacement Parts

Item	Description		Part Number	Notes
	Top Cap	Black	LD9Z-6ATB	A top cap is supplied with a base module.
		Light gray	LD9Z-6ATW	
	L-shaped Bracket	Metal (chrome-plated)	LD9Z-6AK	Two plain washers and two nuts are supplied.

Specifications

Specifications

Safety Standards	IEC60947-5-1, EN60947-5-1, UL508, CSA C22.2 No.14		
Operating Temperature	–25 to +55°C (no freezing)		
Operating Humidity	45 to 85% RH (no condensation)		
Storage Temperature	–40 to +75°C (no freezing)		
Overvoltage Category	III (IEC60664-1)		
Impulse Withstand Voltage	800V (IEC60947-1)		
Insulation Resistance	100 MΩ minimum (500V DC megger)		
Dielectric Strength	Between live and dead parts: 1000V AC, 1 minute		
Pollution Degree	3		
Corrosion Immunity	Atmosphere free from corrosive gases		
Vibration Resistance	Operating extremes: 10 to 55Hz, amplitude 0.5 mm		
Shock Resistance	Operating extremes: 147 m/s², 6 shocks each in 6 axes		
Degree of Protection (IEC60529)	Steady	frame mount, wall mount, direct mount, pole mount with base	IP65
	Steady	pole mount with L-shaped bracket	IP23
	Flashing/ Alarm	frame mount, wall mount, direct mount, pole mount with base	IP54
	Flashing/ Alarm	pole mount with L-shaped bracket	IP23
Housing Color	Black, Light gray		
Material	Housing: ABS resin Lens: AS resin Pole: Steel (nickel-chrome plated) Pole base: Diecast aluminum		
Wire	22AWG		

Functional Specifications

Rated Insulation Voltage		60V		
Operating Voltage		24V AC/DC ±10%		
Rated Voltage (Ue)		24V AC/DC		
LED Color Code		R (red), Y (yellow), S (blue), G (green), W (white)		
LED	Illumination Color	R, Y	S, G	W
	Rated Current (per tier)	25mA	30mA	20mA
	Power Consumption (per tier)	0.6W	0.75W	0.5W
LED Life (Note)		Approx. 30,000 hours (until brightness is reduced to 50% of the initial value in a 25°C operating environment)		
Flashing Cycle (IEC60073)		Approx. 105 flashes per minute (1.75 Hz)		
Alarm	Alarm Cycle	Alarm 1: approx. 700 times per minute Alarm 2: approx. 35 times per minute		
	Current Draw	110mA max.		
	Inrush Current	AC: 400mA max. DC: 250mA max.		
	Alarm Volume	70 to 90dB, at 1m (volume adjustable)		
	Acoustic Frequency	Approx. 3.3kHz		

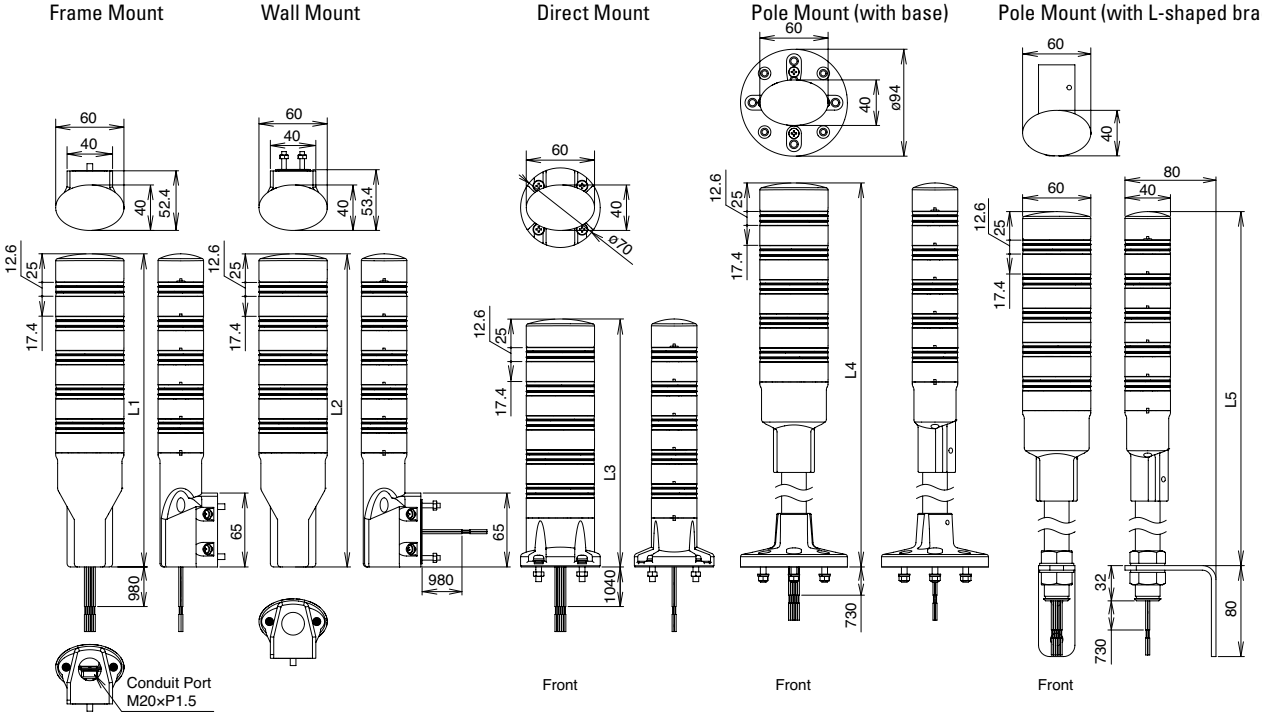
Note: Life of the LED varies according to operating conditions and environment.

External Contact Ratings

LED	AC Contact Capacity (per tier)	Current Capacity	100mA min.
		Dielectric Strength	35V AC min.
	DC Contact Capacity, Transistor Capacity (per tier)	Current Capacity	100mA min.
		Dielectric Strength	35V min.
		Leakage Current	0.1mA max.
Alarm	AC Contact Capacity (per alarm)	Current Capacity	400mA min.
		Dielectric Strength	35V AC min.
	DC Contact Capacity, Transistor Capacity (per alarm)	Current Capacity	300mA min.
		Dielectric Strength	35V min.
		Leakage Current	0.1mA max.

Dimensions (Steady Light)

Frame Mount | Wall Mount | Direct Mount | Pole Mount (with base) | Pole Mount (with L-shaped bracket)

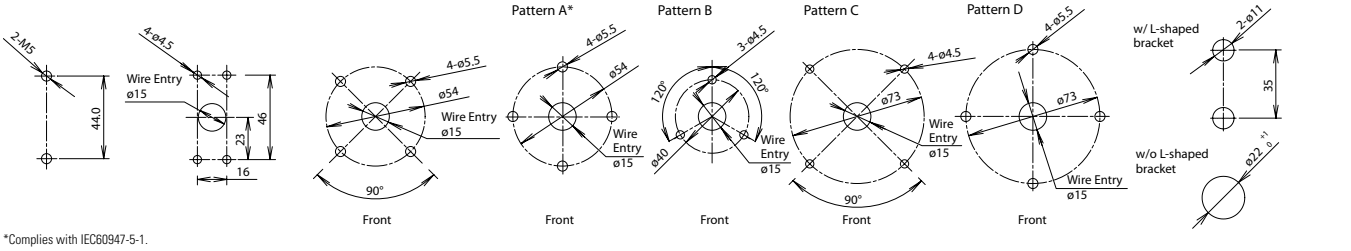


Dimension Table

Tiers	Frame Mount (L1)	Wall Mount (L2)	Direct Mount (L3)	Pole Mount	
				w/ base (L4)	w/ L-shaped bracket (L5)
1	156	156	98	408	372
2	186	186	128	438	402
3	216	216	158	468	432
4	246	246	188	498	462
5	276	276	218	528	492

Panel Cut-Out

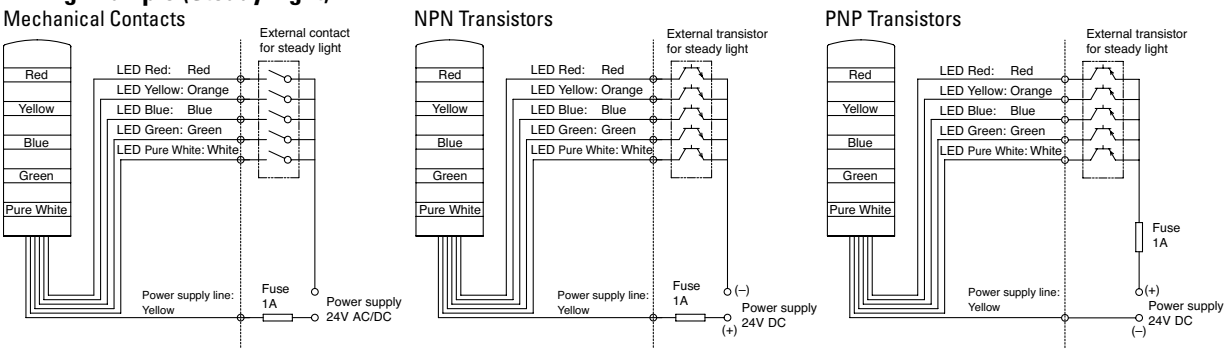
Frame Mount | Wall Mount | Direct Mount* | Pole Mount (with base) | Pole Mount (with L-shaped bracket)



*Complies with IEC60947-5-1.

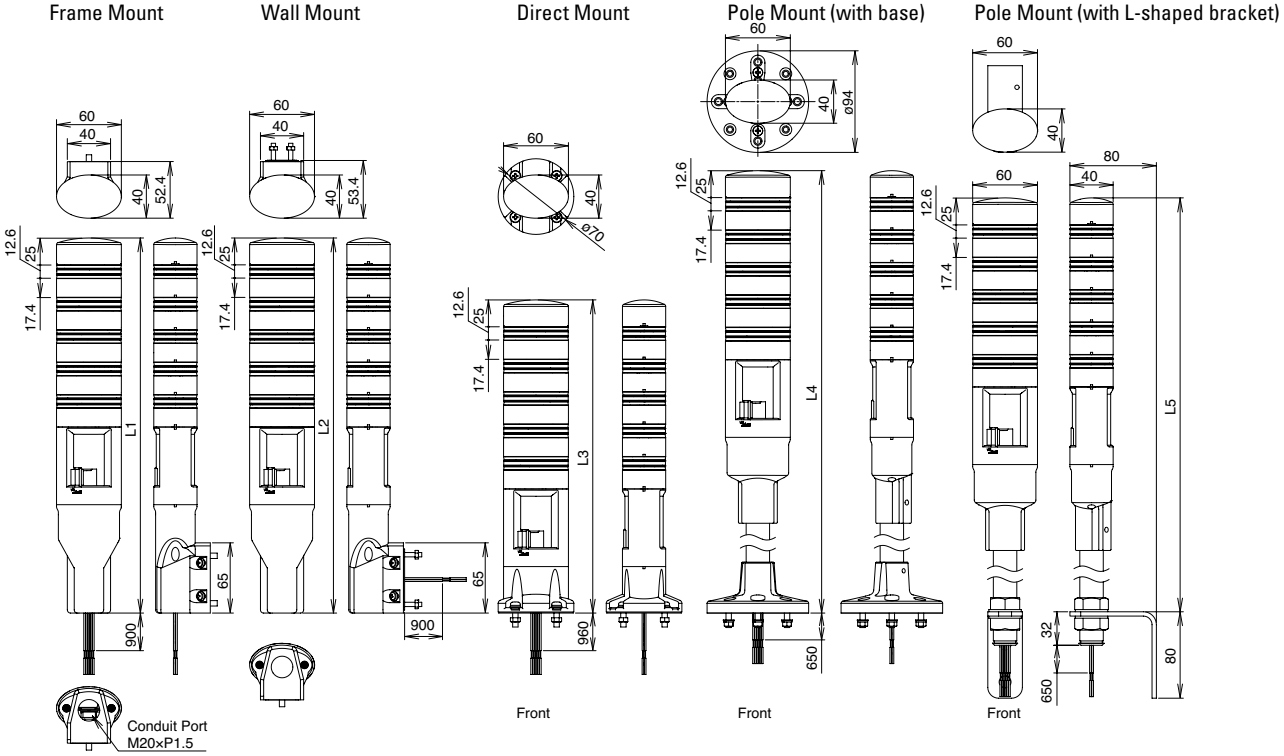
Wiring Example (Steady Light)

Mechanical Contacts | NPN Transistors | PNP Transistors



Dimensions (Steady/Flashing/Alarm)

Frame Mount | Wall Mount | Direct Mount | Pole Mount (with base) | Pole Mount (with L-shaped bracket)

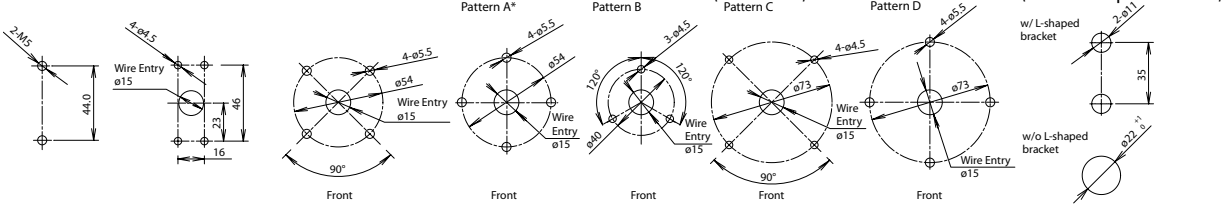


Dimension Table

Tiers	Frame Mount (L1)	Wall Mount (L2)	Direct Mount (L3)	Pole Mount	
				w/ base (L4)	w/ L-shaped bracket (L5)
1	228	228	170	480	444
2	258	258	200	510	474
3	288	288	230	540	504
4	318	318	260	570	534
5	348	348	290	600	564

Panel Cut-Out

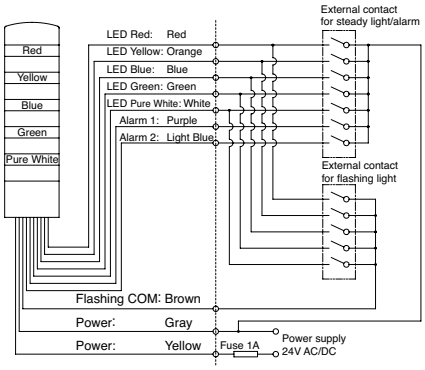
Frame Mount | Wall Mount | Direct Mount* | Pattern A* | Pole Mount (with base) Pattern B | Pattern C | Pattern D | Pole Mount (with L-shaped bracket)



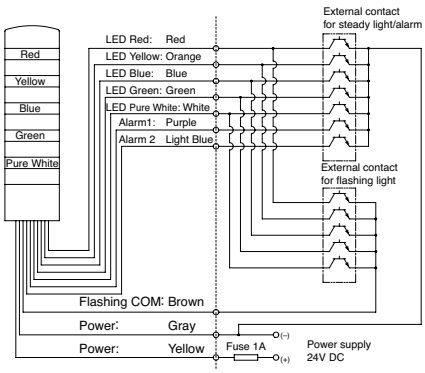
*Complies with IEC60947-5-1.

Wiring Example (Flashing Light and Alarm)

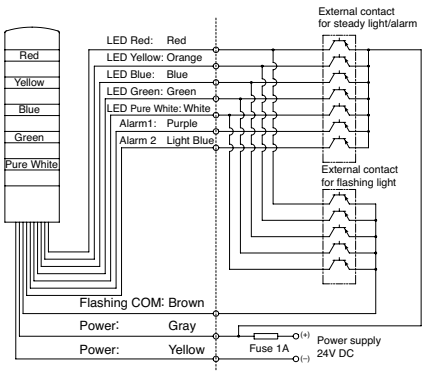
Mechanical Contacts



NPN Transistors

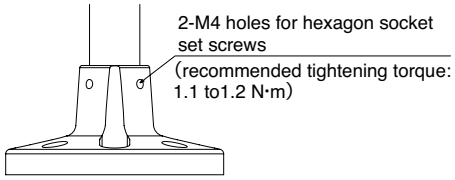


PNP Transistors



Safety Precautions

- Turn off the power to the LD6A before mounting, removing, wiring or assembling the LED module. Make sure the wiring is done correctly otherwise electrical shock or fire may result.
- Mount the LD6A on a solid surface not subject to vibrations.
- Do not mount the LD6A upside-down or horizontally.
- Do not leave the LD6A without a cap or unassembled.
- Install the supplied gasket, otherwise the waterproof seal will be compromised.
- Do not apply any chemicals that may corrode the plastic materials.
- If the LD6A is subjected to strong vibrations, the hexagon socket screw may become loose. Take measures to prevent loosening. (See the figure below.)



- Do not loosen any screws if the tightening torque is not specified.

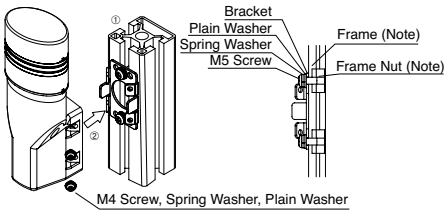
Instructions

Mounting

- See drawing below regarding the mounting of the LD6A.
- For panel cut-out dimensions, see pages 9 and 10.
- Postion the LD6A to make sure the alarm sound is the loudest. (Steady/flashing/alarm type)

Frame Mounting

1. Insert two nuts in the frame, and attach the bracket using two M5 screws. Recommended tightening torque: 2.6 to 2.7 N·m
2. Mount the LD6A to the bracket using four M4 screws. Recommended tightening torque: 1.6 to 1.7 N·m



Note: See table below for typical examples of frames and nuts. Consult the manufacturer of the frame for the installation method of the frame nut.

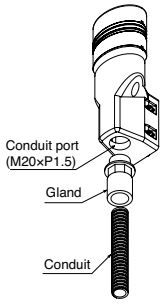
Examples of recommended frames and frame nuts

Frame Size	Frame	Frame Nut	Manufacturer
□30 mm*	SFF-302	SFB-001 SFB-4B5 SFB-101	SUS Corporation (Japan)
□40 mm	SFF-402	SFB-008 SFB-4A5 SFB-108	

*The mounting bracket for the housing is 40 mm.

When using a frame mount type, be sure to use flexible conduit, otherwise the waterproof seal will be compromised.

Refer to the "Example of Flexible Conduit" shown on the right.

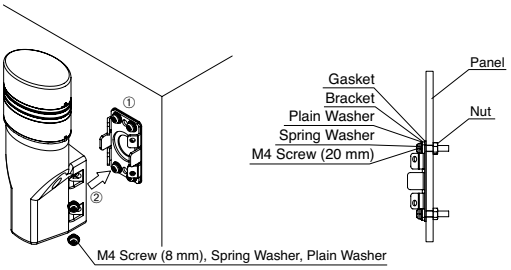


Example of Flexible Conduit

Conduit Port Size	M20
Gland	AL16/M20/A/BL
Conduit	PAFS16BL
Manufacturer	Adaptaflex

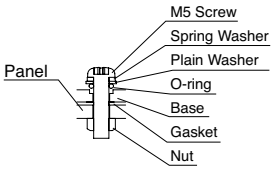
Wall Mounting

1. Make four tapped holes in the mounting panel and mount the bracket and gasket using four screws (M4 x 20).
   Recommended tightening torque: 1.6 to 1.7 N·m
2. Mount the LD6A to the bracket using four screws (M4 x 8).
   Recommended tightening torque: 1.6 to 1.7 N·m



Direct Mounting

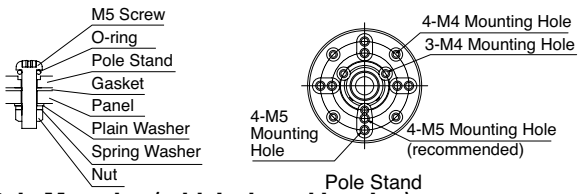
Recommended tightening torque: 2.6 to 2.7 N·m



Pole Mounting (with base)

The pole mount type can be installed in four ways. The recommended mounting method (pattern A from page 9 or 10) is described below.

Recommended tightening torque: 2.6 to 2.7 N·m (M5 screw)



Pole Mounting (with L-shaped bracket)

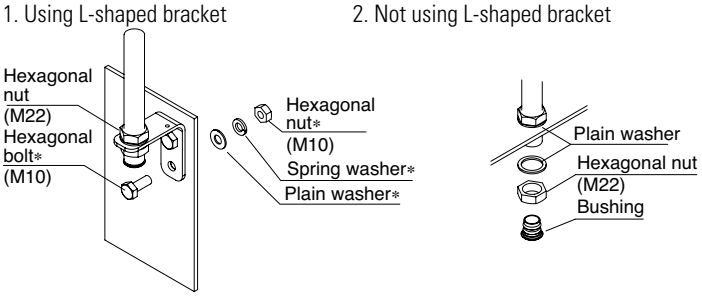
1. Using L-shaped bracket

Recommended tightening torque: 10 to 11 N·m (M10)
Recommended tightening torque: 25 to 26 N·m (M22)

2. Not using L-shaped bracket

Remove the bushing, hexagonal nut (M22), plain washer, and L-shaped bracket from the LD6A and install in the following order: plain washer, hexagonal nut (M22), and bushing.
Recommended tightening torque: 25 to 26 N·m (M22)

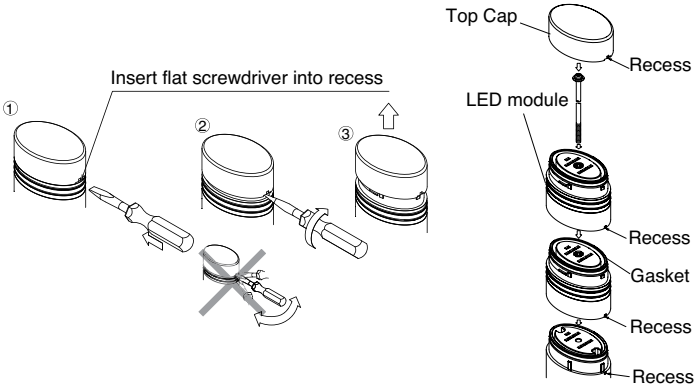
1. Using L-shaped bracket 2. Not using L-shaped bracket



The parts marked with * are not supplied and should be provided by the user.

Replacement and Addition of LED Modules

- Make sure to turn power off.
- Insert a flat screwdriver into the cap recess as shown below, lift up the cap, and remove with your hands. Use a flat screwdriver with maximum 1-mm thick and 7-mm wide tip.
- Remove the center screw before reassembling the LED modules.
- When assembling the LED modules, make sure to align the recess of the cap with the recess of the LED module. Otherwise, damage may result.
  Recommended tightening torque: 0.4 to 0.5 N·m.



- Note the correct orientation when assembling the LED modules.
- Tighten the screws to the recommended tightening torque. The LED module may be damaged if the screw is loose during operation.
- Do not touch the metal plug on the LED module. Otherwise, LED elements maybe damaged due to static electricity.
- Use a maximum of 5 tiers.
- Select the correct screw length depending on the number of tiers.
- Do not remove the gasket from the LED module. Otherwise, the waterproof seal will be compromised.

Wiring

- For wiring, see the wiring diagrams on pages 848 and 850.
- Incorrect wiring may damage the internal circuit.
- Be sure to insulate unused wires.
- Connect a 1A fuse to the power line as shown in the Wiring Examples on pages 848 and 850.
- Use a UL listed external fuse holder.
- Use a class 2 power supply only.
- When using LED modules of the same color for two or more tiers, determine contact capacity in referencet to the LED current, because only one wire is used to light all tiers of the same color.
- Do not apply voltage to flashing (brown) lines.
- Do not connect flashing (brown) line to the power lines. The internal circuit may be damaged.
- Do not turn on steady and flashing circuits simultaneously.
- Do not turn on alarms 1 and 2 simultaneously.

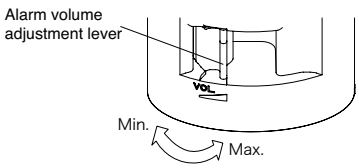
Wire Color

Wire Color	Steady	Steady, Flashing, Alarm
Red	LED Module – Red	LED Module – Red
Orange	LED Module – Yellow	LED Module – Yellow
Blue	LED Module – Blue	LED Module – Blue
Green	LED Module – Green	LED Module – Green
White	LED Module – White	LED Module – White
Purple	—	Alarm 1
Light Blue	—	Alarm 2
Brown	—	Flashing COM
Gray	—	Power Line
Yellow	Power Line	Power Line

For information on external contacts, see "External Contact Ratings" on page 847.

Alarm Volume Adjustment

- Move the volume adjustment to the right or left to change the volume.
- When the adjustment lever is all the way to the right the volume is at its maximum.
- The adjustment lever may be damaged if forced open or closed.



High Temperature Limitations

The external temperature cannot exceed 50°C when all tiers are lit at the same time in the following combinations:

1. Three tiers
   Two or more tiers of blue and green (example: Red-Green-Blue, Green-Green-Red)
2. Four or five tiers (example: Red-Yellow-Green-White, Red-Yellow-Blue-Green-White)

LT7 Series Light Towers

Easily build or modify the combination that works for you!

The LT7 light tower combines innovative LED technology with modular style assembly. This enables the towers to meet the extensive requirements seen in most status indicating applications. The simple design uses only 9 modular components to make a five color tower complete with alarm and flashing functions.

Using the latest and brightest LEDs, the LT7 product range provides brilliant illumination for all the lens colors. The unique prism cut design enhances the brightness and ensures outstanding levels of visibility from any direction and distance.

Key features of the LT7 series light towers include:

- 70mm diameter
- Ultra bright LEDs
- LED strobe modules
- Unique interlocking construction
- Fast and easy assembly
- Optional adjustable alarm
- Lead-free design, RoHS compliant
- IP65 environment protection, NEMA 4, 4X, 13
- Color-coded wiring terminals
- Only nine modular components with 5 lens colors & 4 base units
- UL/c-UL Listed, CE marked

File #E245027

Part Numbers

Part Numbers: Base Units

Voltage	Steady	Flashing/Buzzer
24V DC	LT7B-D24	LT7B-D24FB
	LT7B-D24SB*	
90-250V AC	LT7B-A250	LT7B-A250FB

1. Base unit comes with top cap.
2. *Short body, black base type.

Part Numbers: Lens/LED Units

Color	Part Number
Red	LT7A-R
Amber Yellow	LT7A-Y
Green	LT7A-G
Blue	LT7A-S
White	LT7A-C
Lemon Yellow	LT7A-LY*

*Maximum 5 LED color variations per base. Lemon yellow LED module and amber yellow LED module share same signal and both will light if stacked together.

Part Numbers: LED-Strobe Units

Color	Part Number
Red	LT7A-XE-R
Amber Yellow	LT7A-XE-Y
Green	LT7A-XE-G
Blue	LT7A-XE-S
White	LT7A-XE-C

(for 24V DC base only)

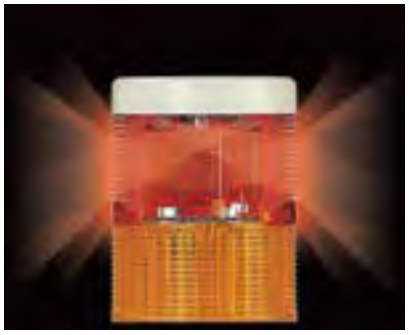
Lemon Yellow LED module

Short body type

LT7 Specifications

Base Units			LT7B-D24 LT7B-D24SB	LT7B-D24FB		LT7B-A250	LT7B-A250FB	
Specifications	Operation/Function		Steady	Flashing/Steady		Steady	Flashing/Steady	
	Rated Voltage		24V DC			90~250V AC (50/60Hz)		
	Operating Voltage		24V ±10% (21.6~26.4V)			90~250V AC (50/60Hz)		
	Alarm		–	Alarm 1*	Alarm 2**	–	Alarm 1*	Alarm 2**
	Current Consumption		–	50mA±10mA	24mA±10mA	–	50mA±10mA	24mA±10mA
	Power Consumption		–	1.2W±0.25W	0.58W±0.25W	–	1.8W±0.25W	1.3W±0.25W
	Alarm Sound Level	Max	–	90dB±5 (at 1m)		–	90dB±5 (at 1m)	
		Min	–	70dB or less (at 1m)		–	70dB or less (at 1m)	
	Flashing Cycle		–	60 flashes per minute		–	60 flashes per minute	
	Operating Temperature Range		-30°C~+60°C			-25°C~+55°C		
	Mounting		Upright, indoor only			Upright, indoor only		
	Protection		IP65, Type 4, 4X, 13			IP65, Type 4, 4X, 13		
	Weight		250g	280g		310g	340g	
	Open Collector		PNP/NPN			NPN		

*Alarm 1: continuous sound
*Alarm 2: intermittent sound



Ultra-bright LEDs

Color Coded Wiring Terminals

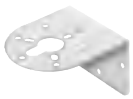
Specifications	LED Unit Type	Steady/Flashing						Strobe				
	LED Unit Color	Red	Amber Yellow	Green	Blue	White	Lemon Yellow	Red	Amber Yellow	Green	Blue	White
	Current/Power	52mA/1.25W		42mA/1.0W				280mA/6.96W		130mA/3.36W	260mA/6.48W	270mA/6.72W
	Operating Temperature Range	-30°C~+60°C						-10°C~+60°C				
	Weight	60g						70g				

*Operate with all voltage base units listed on previous page.
1. Strobe units pulse 77 times per minute
2. Strobe units suitable only for BASE unit [LT7B-D24(FB)]. Units do NOT work with BASE unit [LT7B-A250(FB)].
3. Strobe units should be operated in 'Continuous light' mode. If it is operated in flashing mode, it will NOT operate correctly.
4. Do not substitute parts of units from other products.
5. This product can be used only indoors. Do not use outdoors.
6. Do not use without LED unit or top cover installed.

Accessories & Replacement Parts

LT9Z-7T
mounting pole with base mount

LT9Z-7L
mounting pole with L-angle bracket



LT9Z-SZ007
90 degree angle mounting bracket

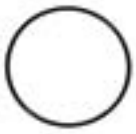
LT9Z-SZ020*
wall mounting bracket (pole required)

LT9Z-SZ018
wall mounting bracket (direct mount)

LT9Z-SZ50NPT
1/2" NPT aluminum mounting adapter

LT9Z-HCLT7
replacement top cap (1 piece)

LT9Z-M4NUTSLT7
Replacement M4 mounting nuts (1 piece)



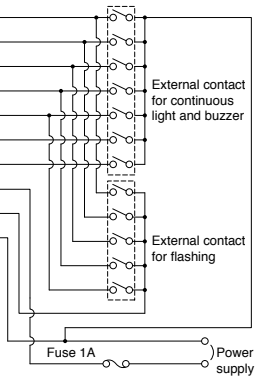
LT9Z-ORINGLT7
Replacement O-ring gasket (1 piece)

Must use LT9Z-7L pole mount with LT9Z-SZ020 wall mount bracket.

Wiring Examples

LT7B-D24FB

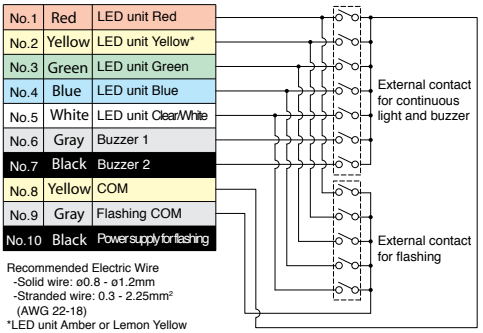
No.1	Red	LED unit Red
No.2	Yellow	LED unit Yellow*
No.3	Green	LED unit Green
No.4	Blue	LED unit Blue
No.5	White	LED unit Clear/White
No.6	Gray	Buzzer 1
No.7	Black	Buzzer 2
No.8	Yellow	COM
No.9	Gray	Flashing COM
No.10	Black	Power supply for flashing



Recommended Electric Wire
-Solid wire: ø0.8 - ø1.2mm
-Stranded wire: 0.3 - 2.25mm²
(AWG 22-18)
*LED unit Amber or Lemon Yellow

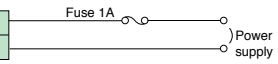
LT7B-A250FB

No.1	Red	LED unit Red
No.2	Yellow	LED unit Yellow*
No.3	Green	LED unit Green
No.4	Blue	LED unit Blue
No.5	White	LED unit Clear/White
No.6	Gray	Buzzer 1
No.7	Black	Buzzer 2
No.8	Yellow	COM
No.9	Gray	Flashing COM
No.10	Black	Power supply for flashing



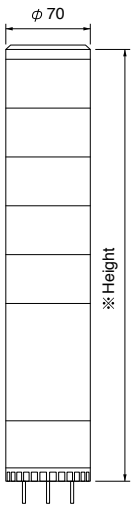
Recommended Electric Wire
-Solid wire: ø0.8 - ø1.2mm
-Stranded wire: 0.3 - 2.25mm²
(AWG 22-18)
*LED unit Amber or Lemon Yellow

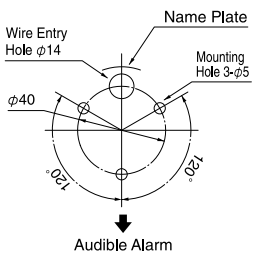
P1	AC in (L)
P2	AC in (N)



LT7 Dimensions

LT7 Base Unit





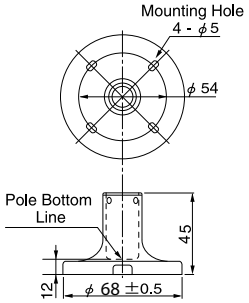
Height (mm)

1	211	119
2	252	160
3	293	201
4	334	242
5	375	283

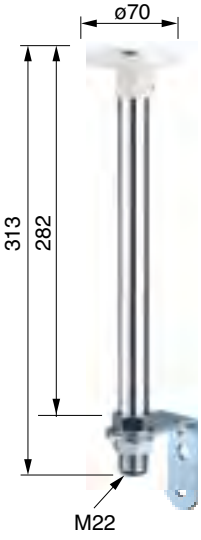
LT7 Dimensions con't

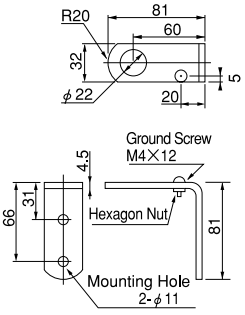
LT7 Mounting Brackets

LT9Z-7T

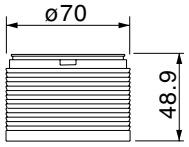


LT9Z-7L



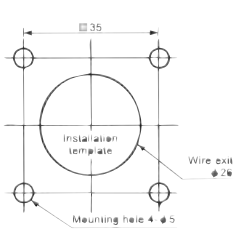


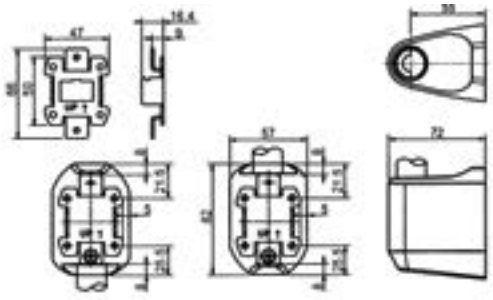
LT7 LED Unit



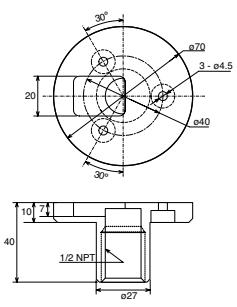
LT9Z-SZ018

LT9Z-SZ020

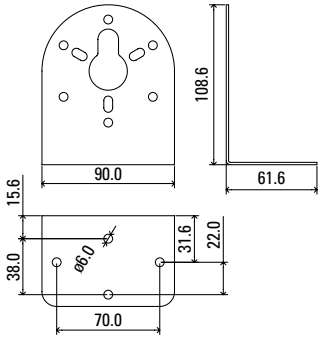




LT9Z-SZ50NPT



LT9Z-SZ007



LH Series Surface Mount Indicators

Innovative indicators in a slim & stylish design.
Reduces installation space.

Key features of the LH series include:

- Direct mounting on surfaces such as panels, aluminum frames, and walls.
- Surface mount style does not affect the placement of other components. Requires only a small space behind the mounting surface for screws and nuts.
- Slim design well suited for installation in small spaces.
- Direct cable wiring style ensures waterproof characteristics. 1m, 3m, and 5m cables available.
- IP67, Type 4X
- Excellent visibility from the front and from the side.
- Legends and symbols can be printed on marking film to customize flat type.
- Red/Green two-color alternate illumination available.
- Three-color alternate illumination available with jumbo-dome models.
- Jumbo dome models available with connector.

Part Numbers

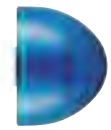
Dome ø37 One Color		1m	LH1D-D2HQ4C10-①
		3m	LH1D-D2HQ4C30-①
		5m	LH1D-D2HQ4C50-①
Dome ø37 Red/Green 2-color Alternate		1m	LH1D-D2HQ4C10-RG
		3m	LH1D-D2HQ4C30-RG
		5m	LH1D-D2HQ4C50-RG
Flat One Color Full		1m	LH1D-H2HQ4C10-①
		3m	LH1D-H2HQ4C30-①
		5m	LH1D-H2HQ4C50-①
Flat Red/Green 2-color Alternate		1m	LH1D-H2HQ4C10-RG
		3m	LH1D-H2HQ4C30-RG
		5m	LH1D-H2HQ4C50-RG

Jumbo Dome (one color)		Cable	1m LH1D-D3HQ4C10-②
			3m LH1D-D3HQ4C30-②
			5m LH1D-D3HQ4C50-②
		Connector	LH1D-D3HQ4CN1-②
Jumbo Dome (two color)		Cable	1m LH1D-D3HQ4C10-③
			3m LH1D-D3HQ4C30-③
			5m LH1D-D3HQ4C50-③
		Connector	LH1D-D3HQ4CN1-③
Jumbo Dome (three color)		Cable	1m LH1D-D3HQ4C10-④
			3m LH1D-D3HQ4C30-④
			5m LH1D-D3HQ4C50-④
		Connector	LH1D-D3HQ4CN1-④

1. Specify a color code in place of ① in the Part No.: **A**: amber, **G**: green, **PW**: cool white, **R**: red, **S**: blue, **W**: warm white, **Y**: yellow
2. Specify a color code in place of ② in the Part No.: **A**: amber, **G**: green, **R**: red, **S**: blue, **W**: warm white, **Y**: yellow
3. Specify a color code in place of ③ in the Part No.: **AG**: amber/green, **AW**: amber/warm white, **APW**: amber/cool white, **RG**: red/green, **RW**: red/warm white, **RPW**: red/cool white, **GW**: green/warm white, **GPW**: green/cool white
4. Specify a color code in place of ④ in the Part No.: **RGW**: red/green/warm white, **RGPW**: red/green/cool white
5. **RG**: R (red) / G (green) 2-color alternate illumination

Note: Dual- and tri-color units use a white lens.

Replacement Parts

Style	Material	Part Number	② Lens Color
Lens (flat) 	Polyarylate	LH9Z-1DLH2-①	For flat lens. Specify a color code in place of ① in the Part No. A: amber G: green C: clear R: red S: blue Y: yellow Note: Use C (clear) lens for R/G (red/green alternate), W (warm white), or PW (cool white) illumination.
Lens (jumbo dome) 	Polycarbonate	HW1A-P5②	For jumbo dome lens. Specify a color code in place of ② in the Part No. A: amber G: green R: red S: blue W: white Y: yellow Note: Dual- and tri-color units use a white lens.

LH Specifications

Applicable Standards	IEC 60947-1, IEC 60947-5-1, EN 60598-2-1, EN 60947-5-1 UL508, CSA C22.2 No.14
Operating Temperature	–20 to +55°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)
Storage Temperature	–30 to +80°C (no freezing)
Impulse Withstand Voltage (illuminating part)	800V
Insulation Resistance	Between live and dead parts: 100 MΩ minimum
Dielectric Strength	Between live and dead parts: 2000V, 50/60Hz , 1 minute
Pollution Degree	3
Vibration Resistance	60m/s^2, 5 to 55 Hz, amplitude 0.5 mm
Shock Resistance	1000m/s^2
Cable Tensile Strength	90N minimum
Degree of Protection	IP67, Type 4X
Housing Color	Black
Cable	24 AWG 2-core (one-color) 3-core (2-color alternate) 4-core (3-color alternate)
Cable Outside Diameter	ø4.1mm
Allowable Cable Bending Radius	24.6mm minimum
Weight (1m cable)	50g (dome type, flat type) 140g (jumbo dome type)

Standards

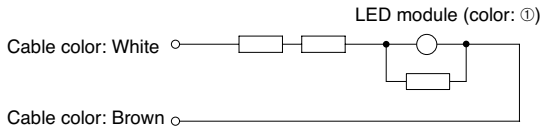
Standards	Marks	File No. or Organization
EN 60598-2-1	TÜV	TÜV SÜD
EN 60598-2-1 EN 60947-5-1	CE	EC Low Voltage Directive
UL508	c UL us	UL, cUL

LH series surface mount indicators are approved by TÜV as class III lighting fixtures.

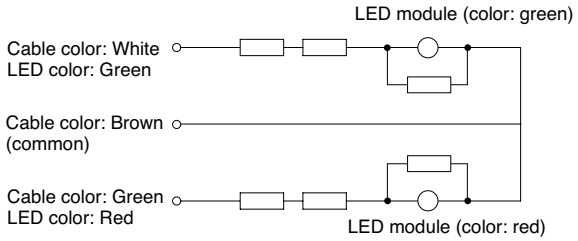
Specifications

Rated Insulation Voltage (Ui)	32V
Rated Voltage	24V AC/DC
Operating Voltage Range	24V AC/DC ±10%
Rated Current	17 mA
Maximum Power/Current	0.6W (25 mA)
Illumination Color	A (amber), G (green), PW (cool white), R (red), S (blue), W (warm white), Y (yellow) R (red) /G (green) alternate
LED Lamp Life	Approx. 50,000 hours (When used on complete DC at 25°C, brightness reduces to 50% of the initial intensity.)

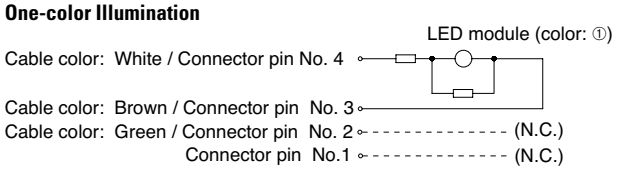
Internal Circuit
One-color Illumination (Dome)



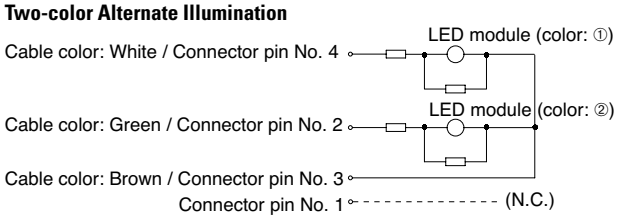
Two-color
(Dome)



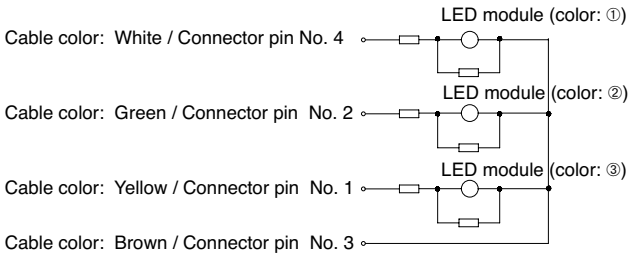
Internal Circuit
One-color Illumination



Two-color Alternate Illumination

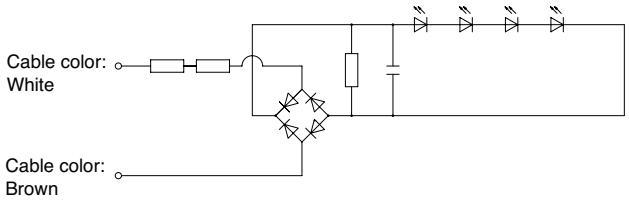


Three-color Alternate Illumination

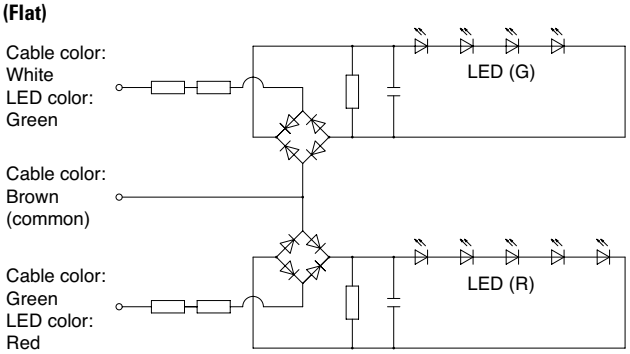


Note: For the schematic of the LED module, see "LED Module Internal Circuit" on the right.
N.C. means No connection

One-color Illumination (Flat)

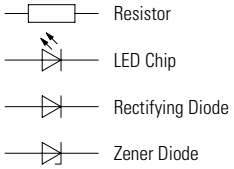


(Flat)



Lens Colors

	Illumination Type	Illumination Color	White Lens Color
Dome/Flat	One Color	Amber	Amber
		Blue	Blue
		Green	Green
		Cool White	Clear (Note)
		Red	Red
		Warm White	Clear (Note)
		Yellow	Yellow
	Two-color Alternate	Red/Green	Clear (Note)
Jumbo Dome	One Color	Amber	Amber
		Green	Green
		Red	Red
		Blue	Blue
		White	White
		Yellow	Yellow
	Two-color Alternate	Red/Green	White
		Green/White	White
		Red/White	White
		Amber/Green	White
		Amber/White	White
		Red/Pure White	White
		Green/Pure White	White
		Amber/Pure White	White
	Three-color Alternate	Red/Green/White	White
		Red/Green/Pure White	White

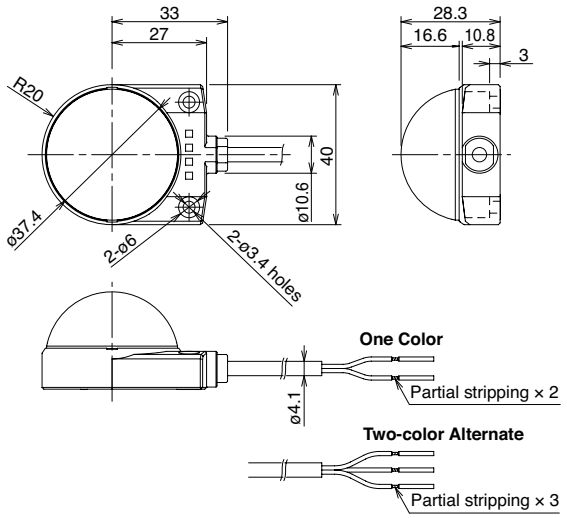


Note: Because lenses have a white diffusion cover inside, cool white, warm white, and red/green types look white when the light is off.

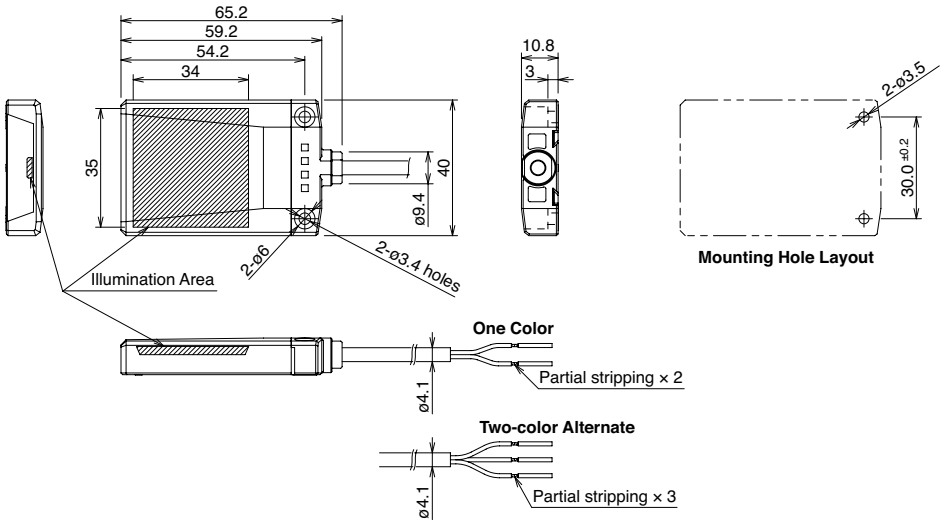
Dimensions (mm)

Not to scale.

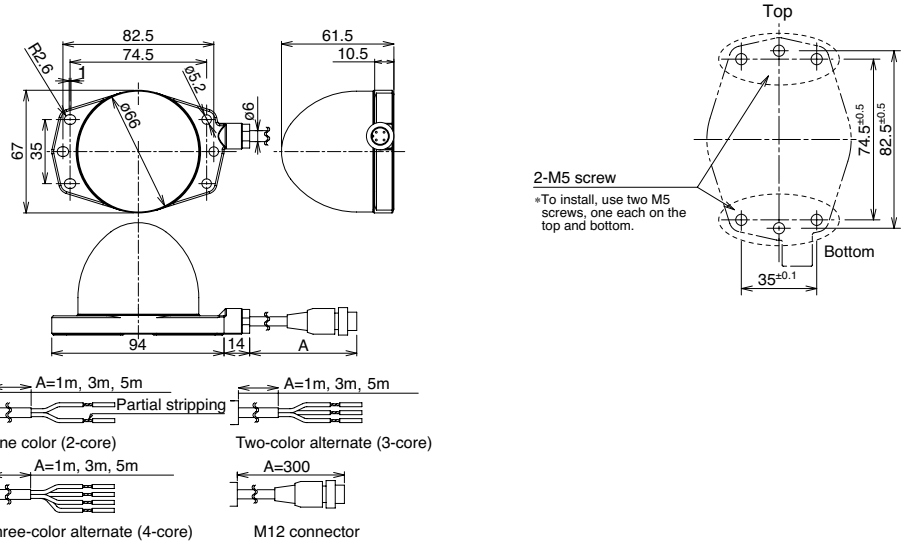
Dome



Flat



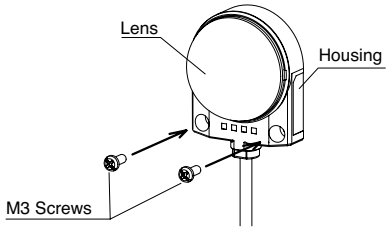
Jumbo Dome



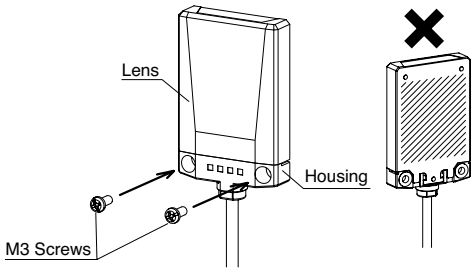
Instructions

Panel Mounting

Using two M3 screws, install the LH indicator to a mounting surface. Tighten the screws to a torque of 0.6 N·m maximum.
Mounting screws are not provided and must be supplied by the user.



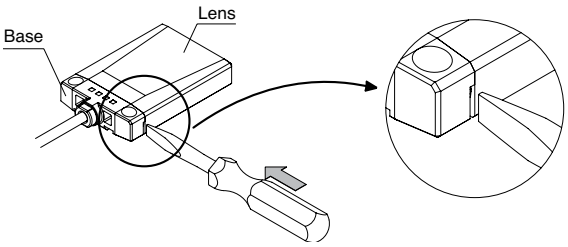
Note: The standard dome lens is not removable. Do not attempt to remove or damage may occur. However, the jumbo dome lens is removable and replaceable.



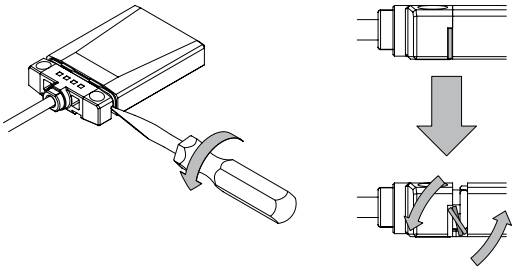
Note 1: Do not install the LH indicator by attaching the lens only, such as by taping down on the lens as the internal components may come loose.
Note 2: Make sure that the back of the indicator is securely attached to the mounting surface so that the lens cannot be easily removed.

Inserting Marking Film into Flat Type Lens

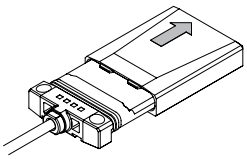
1. Insert a flat screwdriver into the groove between the base and lens.



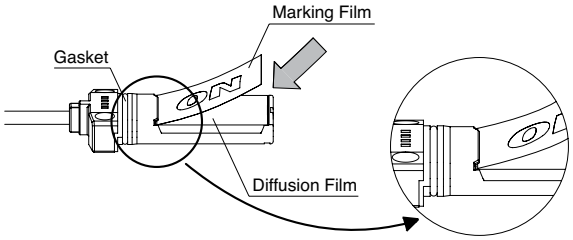
2. Twist the screwdriver and disengage the lens from the base.



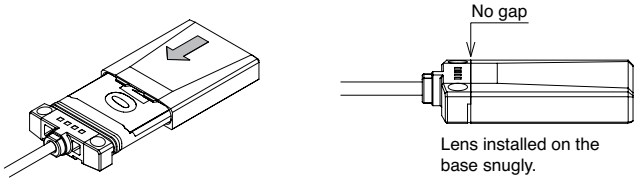
3. Remove the lens from the base.



4. Insert the edge of a marking film into the gap between the base and the diffusion plate, and place the marking film on top of the diffusion plate.



5. Replace the lens. Ensure that the lens is installed snugly.



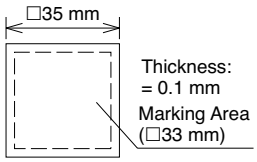
Note 1: Do not touch the gasket, as this may affect its waterproof characteristics.
Note 2: Do not touch the diffusion plate.

Markings

Legends and symbols can be printed on marking film that can be used with the flat lens. One 0.1mm-thick film can be inserted.

Marking films are not inlcuded and must be supplied by the user.

Recommended marking film: Polyester



Jumbo Dome Pilot Lights

			Plastic Bezel
Jumbo Dome	LED	*Operator Only*	*HW1P-5Q0*
		Full Voltage 24V AC/DC	HW1P-5Q4-②
	Incandescent	*Operator Only*	*HW1P-5Q7**
		Full Voltage 24V AC/DC	HW1P-5Q7-②

1. In place of ②, specify the Lens/LED Color Code.
2. *Incandescent operator comes with bulb.
3. Available with spring-up terminals and 24V only.
4. For nameplates and accessories, see page 546 and 549.
5. For dimensions, see page 551.

② Lens/LED Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	PW
Yellow	Y

Jumbo Dome Replacement Parts

Item	Appearance	Description	Part Number
Lens		Polycarbonate Lens	HW1A-P5②
LED Diffusing Lens*			HW9Z-PP5C
LED Lamps		LED Lamp	LSTDB-2②

1. In place of ②, specify the Lens/LED Color Code.
2. *Diffusing lens for LED models only.
3. Use white LED for yellow lens.

Lamp Ratings

	Part Number	Operating Voltage	Rated Current	Power Consumption
LED	LSTDB-2	24V AC/DC ±10%	15mA	0.36W
Incandescent	LSB-2		150mA	3.6W

SLC30 Series — Panel Mounted Annunciators

SLC Series Panel Mounted Annunciators — an Ideal Alternative to Mounting Multiple Pilot Devices

Cluster mounting simplifies panel cutouts and offers a variety of window combination sizes!

Available with incandescent or Superbright LED illumination.

Key features of the SLC30 series include:

- Custom configurations with up to 200 windows
- Five window sizes based on a 30mm grid
- Non-reflective clear lenses
- Incandescent or Superbright LED illumination
- Wide variety of input voltages
- Two color alternate illumination in Red/Green LED

UL Recogized
File No. E68961

CSA Certified
File No.
LR48366

Cert No.
B970213332375

ABS
American Bureau of Shipping

Style F (30mm x 30mm)

Style H (30mm x 60mm)

Style L (30mm x 90mm)

Style V (60mm x 30mm)

Style G (60mm x 60mm)

Staggered Terminals: increased safety and serviceability

Specifications

Light Source		LED	Incandescent
Nominal Voltages	Full Voltage	6, 12, 24V AC/DC	6, 12, 18, 24, 30V AC/DC
	Transformer	120, 240V AC	120, 240V AC
	DC-DC Conv.	110V DC	110V DC
Colors		Amber, Green, Red, Yellow, Blue (24V only), White, dual color Red/Green (24V only)	Amber, Green, Red, Yellow, Blue, White
Lamp Type		Surface (Chip type) LED cluster	BA9S/13 (T3-1/4) bayonet base (1W)
Current Consumption	6V DC	Red (R), Green (G), Yellow (Y), Amber (A), White (W): 80mA	
	12V DC	Red (R), Green (G), Yellow (Y), Amber (A), White (W): 40mA	
	24V DC	Red (R), Green (G), Yellow (Y), Amber (A), White (W), Blue (S): 20mA	
Available Window Sizes		"F" 30x30mm, "H" 30x60mm, "L" 30x90mm, "V" 60x30mm, "G" 60x60mm	
Insulation Resistance		More than 100 MΩ by a 500V DC megger	
Degree of Protection		IP20 (for indoor use only)	
Dielectric Strength		2,000V AC direct (2,500V AC transformer, 1 minute)	
Operating Temperature		– 20˚ to +40˚C; 15–90% relative humidity (– 10˚ to +40˚C DC-DC converter)	
Material of Marking Plate and Color Screen		Polycarbonate	
Termination		M3.5 screw with captive sems plate (Check terminals: M3 screw with captive sems plate on applicable units)	
Maximum Size		Full voltage 10 rows, 20 columns (200 windows) Transformer and DC/DC converter (50 windows)	
Recommended Wire Size		22-14 AWG x2 ($2mm^2$ x 2)	
Approvals		TÜV Cert. No. B970213332375; UL Recognized File No. E68961; ABS American Bureau of Shipping; CSA Certified File No. LR48366	

Part Numbers (assembled)

Part Number Guide

SLC30N ① **01** Number of Rows ② **03** Number of Columns – ③ **DD** Type ④ **2** Voltage ⑤ **F** Style **B** – ⑥ **A(3)** Color and Number of Windows

Description			Code	Remark
①Number of Rows			01, 02, 03, 04, 05, 06, 07, 08, 09, 10	10 row maximum (always expressed in terms of "F" size windows)
② Number of Columns			01, 02, 03, 04, 05, 06, 07, 08, 09, 10 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	20 column maximum (always expressed in terms of "F" size windows)
③ Type	LED	Full voltage	DD	6V, 12V, 24V
		Full voltage with check terminal	DHM	24V only
		Full voltage 2 color (Red/Green)	DW	24V only
		Transformer	TD	120V, 240V AC
		DC-DC converter	CD	110V DC only
	Incandescent	Full voltage	DS	6V, 12V, 18V, 24V, 30V
		Transformer	TS	120V, 240V
④ Voltage	6V AC/DC		6	Type DD or DS
	12V AC/DC		1	With Type DD or DS
	18V AC/DC		8	Type DS only
	24V AC/DC		2	Type DD, DW, DS or DHM
	30V AC/DC		3	Type DS only
	120V AC		12	Type TD or TS
	240V AC		24	Type TD or TS
	110V DC		1	With Type CD
	No lamp		99	Type DS only
⑤ Style	Square		F	30x30mm
	Horizontal rectangle		H	30x60mm
	Horizontal rectangle with barrier		H2	
	Large horizontal rectangle		L	30x90mm
	Vertical rectangle		V	60x30mm
	Large square		G	60x60mm
	Combination		M	Fill out order form on next page
⑥ Color (number of windows)	Amber		A	After each color, specify the number of windows Example... A(3), G(2), R(1)
	Green		G	
	Red		R	
	Blue		S (LED version: 24V only)	
	White		W	
	Yellow		Y	

1. Secondary voltage on transformers and DC-DC converters is 24V.
2. To specify arrangement of varying window sizes and colors, use the order form on the next page.
3. Drawing required for any units ordered with engraving.
4. Incandescent models use color screen and marking plate, LED models use 2 marking plates (no color screen).

Purchase Order No. _____ **Date** _____ **Sheet** ☐ **of** ☐

Contact _____

Company _____

Phone # _____

Ship to _____

_____

City/State/Zip _____

Fill in Part Number Below:

SLC30N – ☐☐ ☐☐ – ☐ ☐ ☐ **B–** *Black Frame*

Number of Rows | *Number of Columns* | *Type Code* | *Operating Voltage* | *Style Code*

Note: *Convert all window styles to the style F (basic unit size).*

F *= One Window*
H *= Two Windows Wide*
L *= Three Windows Wide*
V *= Two Windows High*
G *= Two x Two*
M *= Multiple Combination*

A ☐	*Number of Amber*
G ☐	*Number of Green*
R ☐	*Number of Red*
S ☐	*Number of Blue*
W ☐	*Number of White*
Y ☐	*Number of Yellow*

Remarks:

First Window (upper, left-hand corner of panel)

THIS SIDE UP

Basic Unit Size (style F)

COLUMNS

ROWS

Quantity _____

Note: All units ordered with one order form must be identical

For engraving information, see page 715.

Order Form

For information on how to complete the order form or to view examples, see the following page.

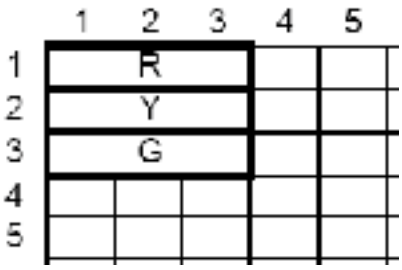
1. For part number development, see the previous page.
2. Panel cutout dimensions are on page 697.
3. Additional ordering information is on page 696.

THIS SIDE UP

How to complete SLC30N Series annunciator order form:

1. Draw the SLC30N layout in the Order Form as per customer requirements. Define the boundaries of each window (F, V, H, L or G Style) and of complete annunciator panel by heavy border lines. Specify each window color with appropriate designation (eg: G for Green, R for Red, etc). See Example 1 below:

Example 1



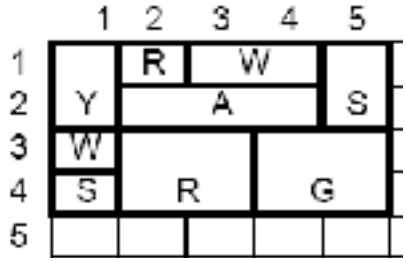
2. Count number of rows and columns. eg: Example 1, Rows: 03 and Columns: 03
   SLC30N-0303
3. Determine the type of illumination required. eg: "DD" for LED full voltage type illumination.
   SLC30N-0303-DD
4. Determine the voltage code. eg: "2" for 24V AC/DC.
   SLC30N-0303-DD2
5. Determine window style. eg: "L" style windows as shown in Example 1.
   SLC30N-0303-DD2LB*
   *B denotes black frame
6. Count the number of different colored windows in the annunciator. Example 1 has 1 Red L-style (30x90mm) window, 1 Yellow L-style window and 1 Green L-style window.
   SLC30N-0303-DD2LB-R(1)Y(1)G(1)
7. Now your part number is complete, please fill out contact information and fax or email the form to IDEC Customer Service for order processing. If you would like to get annunciator windows engraved, please see the information on page 887 and send us your engraving information. If you have any questions, please contact IDEC Technical Support or for additional information, view examples 2 and 3:

Example 2

Rows=03; Columns= 03; F Style Windows (30x30mm); LED Full Voltage 24V AC/DC Illumination. Part number **SLC30N-0303-DD2FB-R(3)Y(3)G(3)**.

Example 3:

Rows = 04; Columns = 05; M = combination of various window styles(F, H, L V and G Style) ; LED Full Voltage 24V AC/DC Illumination.
Part number **SLC30N-0405-DD2MB-A(1)R(2)Y(1)G(1)W(2)S(2)**.



Dimensions

Panel Cut-Out Dimensions

No. of Rows	No. of Columns			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Overall Panel Width Dimension →			1.654" (42mm)	2.853" (72mm)	4.016" (102mm)	5.197" (132mm)	6.378" (162mm)	7.559" (192mm)	8.740" (222mm)	9.921" (252mm)	11.102" (282mm)	12.283" (312mm)	13.465" (342mm)	14.646" (372mm)	15.827" (402mm)	17.008" (432mm)	18.189" (462mm)	19.370" (492mm)	20.551" (522mm)	21.732" (552mm)	22.913" (582mm)	24.094" (612mm)
	Overall Height ↓	Cut-out Ht ↓	Cut-out Wd →	1.378" (35mm)	2.559" (65mm)	3.740" (95mm)	4.921" (125mm)	6.102" (155mm)	7.283" (185mm)	8.465" (215mm)	9.646" (245mm)	10.827" (275mm)	12.008" (305mm)	13.189" (335mm)	14.370" (365mm)	15.551" (395mm)	16.732" (425mm)	17.913" (455mm)	19.094" (485mm)	20.276" (515mm)	21.457" (545mm)	22.638" (575mm)	23.819" (605mm)
1	1.654" (42mm)	1.378" (35mm)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2.853" (72mm)	2.559" (65mm)		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
3	4.016" (102mm)	3.740" (95mm)		3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
4	5.197" (132mm)	4.921" (125mm)		4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
5	6.378" (162mm)	6.102" (155mm)		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
6	7.559" (192mm)	7.283" (185mm)		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
7	8.740" (222mm)	8.465" (215mm)		7	14	21	28	35	42	49	56	63	70	77	84	91	98	105	112	119	126	133	140
8	9.921" (252mm)	9.646" (245mm)		8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
9	11.102" (282mm)	10.827" (275mm)		9	18	27	36	45	54	63	72	81	90	99	108	117	126	135	144	153	162	171	180
10	12.283" (312mm)	12.008" (305mm)		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
				Total Number of Windows (equivalent to style F—basic unit size)																			

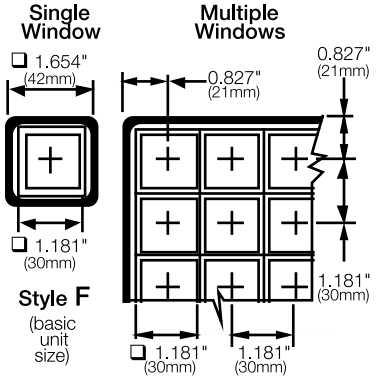
1. The number of rows and columns refers to styles equivalent to style F (basic unit size).
   For styles H, L, V, and G, convert into style F (basic unit size) equivalents.
   - Style H: 1 window high (1 row) x 2 windows wide (2 columns)
   - Style V: 2 windows high (2 rows) x 1 window wide (1 column)
   - Style L: 1 window high (1 row) x 3 windows wide (3 columns)
   - Style G: 2 windows high (2 rows) x 2 windows wide (2 columns)

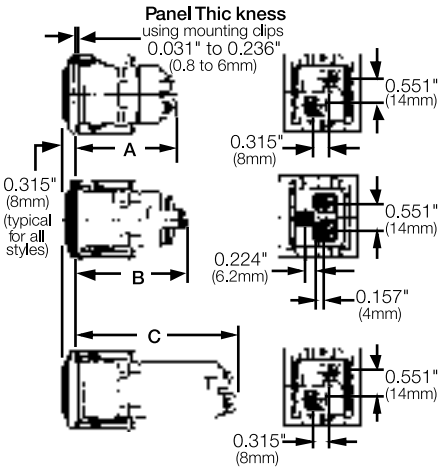
   Example: 18 windows = 3 windows high (3 rows) x 6 windows wide (6 columns)
   Overall dimension (H x W): 4.016" x 7.559" (102 x 192mm)
   Panel cut-out (H x W): 3.740" x 7.283" (95 x 185mm)
   Tolerance: +0.039" (1mm), –0
2. For part numbering information, see page 864.

Window Dimensions

Window Style		Style F	Style H	Style L	Style V	Style G
Appearance						
Window Size	Illumination Face (H x W)	1.181" x 1.181" (30 x 30mm)	1.181" x 2.362" (30 x 60mm)	1.181" x 3.543" (30 x 90mm)	2.362" x 1.181" (60 x 30mm)	2.362" x 2.362" (60 x 60mm)
	Lens (H x W)	1.102" x 1.102" (28 x 28mm)	1.102" x 2.283" (28 x 58mm)	1.102" x 3.432" (28 x 88mm)	2.283" x 1.102" (58 x 28mm)	2.283" x 2.283" (58 x 58mm)
	Marking Plate (H x W x t)	1.062" x 1.062" x 0.04" (27 x 27 x 1.0mm)	1.062" x 2.244" x 0.04" (27 x 57 x 1.0mm)	1.062" x 3.425" x 0.04" (27 x 87 x 1.0mm)	2.244" x 1.062" x 0.04" (57 x 27 x 1.0mm)	2.244" x 2.244" x 0.04" (57 x 57 x 1.0mm)
	Color Screen (H x W x t)	1.062" x 1.062" x 0.04" (27 x 27 x 1.0mm)	1.062" x 2.244" x 0.04" (27 x 57 x 1.0mm)	1.062" x 3.425" x 0.04" (27 x 87 x 1.0mm)	2.244" x 1.062" x 0.04" (57 x 27 x 1.0mm)	2.244" x 2.244" x 0.04" (57 x 57 x 1.0mm)
	Engraving Area	0.984" x 0.984" (25 x 25mm)	0.984" x 2.165" (25 x 55mm)	0.984" x 3.346" (25 x 85mm)	2.165" x 0.984" (55 x 25mm)	2.165" x 2.165" (55 x 55mm)

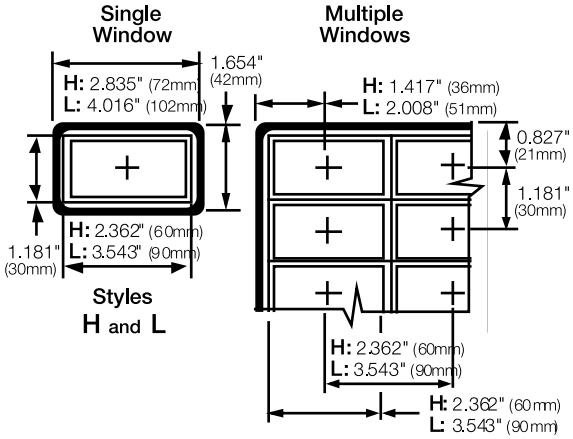
Dimensions, continued

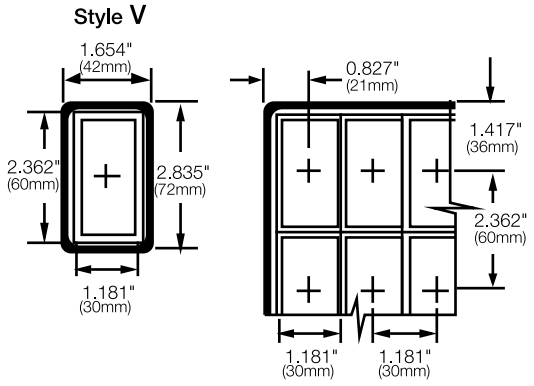


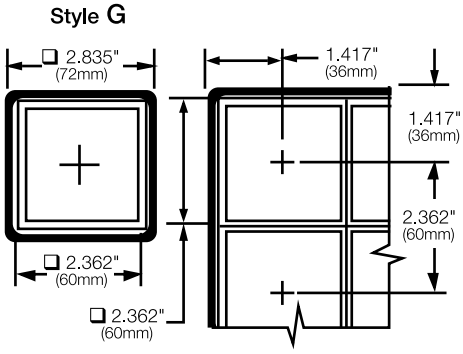


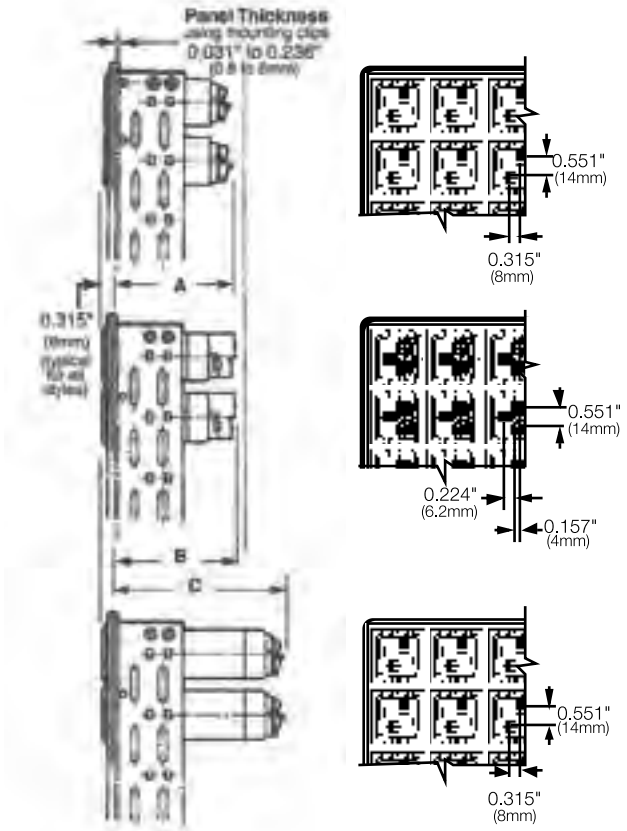
Styles F, H, L, V, G:
Single Window (right)
Multiple Windows (below)

	Description	LED	Incandescent
A	Full voltage	2.146" (54.5mm)	2.264" (57.5mm)
B	Full voltage LED 2-color alternate	2.343" (59.5mm)	—
C	Transformer	3.228" (82mm)	—
	DC-DC converter	3.228" (82mm)	—
	Transformer	—	3.228" (82mm)
Terminals (X1, X2)		M3.5 screw	
Check terminal (C)		M3 screw	
Same terminals, adjacent windows		1.181" (30mm) centers	

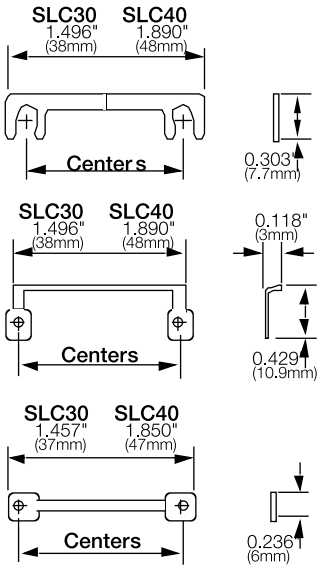








Dimensions, continued



Instructions

Estimating Weights

A x [**Rows + Columns**] **+** **B x** [**Rows x Columns**] **+** **C x** [**Rows x Columns**] **=** **Total Weight of Display Panel**

1. Make sure that the panel thickness is sufficient to support the total weight of the display panel(s).

		Full Voltage	**Transformer** (incandescent/LED)	**DC-DC Converter** (LED only)
A Frame Weight	B Housing Weight	C **Lamp/LED Weight** (includes lamp/LED)		
0.68oz (22g)	0.53oz (17g)	0.65oz (21g)	2.36oz (76g)	1.77oz (52g)

2. Weights are approximate.

Example:
SLC30N-0304-DD2FB
Total weight = A (rows + columns) + B (rows x columns) + C (rows x columns)
Total weight = 0.68 (3+4) + 0.53 (3x4) + 0.65 (3x4) = 19.92 oz

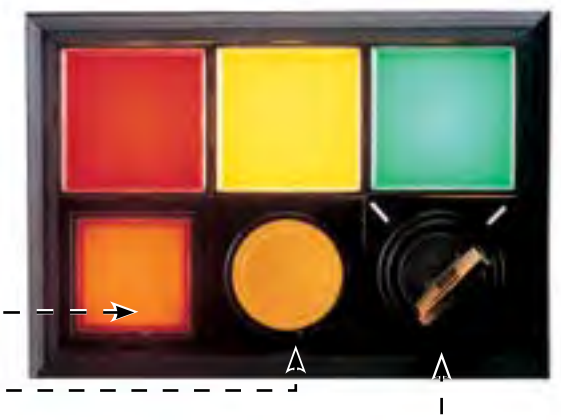
SLC30-IPS Series — Panel Mounted Annunciators

SLC Series Panel Mounted Annunciators — an Ideal Alternative to Mounting Multiple Pilot Devices

SLC30-IPS combination display lights with control units combine display lights with control units such as pushbuttons, illuminated pushbuttons, selector switches and keylock selector switches.
This results in savings of both space and installation time, since mounting separate switches becomes unnecessary. SLC30-IPS combination display lights can be custom built to meet your specifications.

Key features of the SLC30-IPS series include:

- Switches are integrated into an assembled SLC matrix, requiring only one panel cutout
- Illuminated, non-illuminated, selector, and key-switches are available
- Five window sizes based on a 30mm grid
- Non-reflective clear lenses
- Incandescent or Superbright LED illumination
- Momentary pushbuttons only



UL Recogized
File No. E68961

CSA Certified
File No.
LR48366

TÜV
Cert No.
B970213332375

Specifications

Light Source		LED	Incandescent
Nominal Voltages	Full Voltage	6, 12, 24V AC/DC	6, 12, 18, 24, 30V AC/DC
	Transformer	120, 240V AC	120, 240V AC
	DC-DC Conv.	110V DC	110V DC
Maximum Voltage		250V AC/DC	
Contact Thermal Current		3A (gold contact), 5A (silver contact)	
Contact Operating Current		Gold contact: 125V AC/0.1A, 30V DC/0.1A (resistive load) Silver contact: 125V AC/3A, 250V AC/2.0A (resisitive load), 30V DC/2A, 125V DC/0.4A (resistive load)	
Control Unit Types		Pushbuttons: Square or round, illuminated or non-illuminated (momentary only)	
		Selector switches: 2-position or 3-position, maintained	
		Keylock switches: 2-position or 3-position, maintained	
Colors		Amber, Green, Red, Yellow, Blue (24V only), White, dual color Red/Green (24V only)	Amber, Green, Red, Yellow, Blue, White
Lamp Type		Surface (Chip type) LED cluster	BA9S/13 (T3-1/4) bayonet base (1W)
Available Window Sizes		"F" 30x30mm, "H" 30x60mm, "L" 30x90mm, "V" 60x30mm, "G" 60x60mm	
Insulation Resistance		More than 100 MΩ by a 500V DC megger	
Degree of Protection		IP20 (for indoor use only), Type 1	
Dielectric Strength		2,000V AC direct (2,500V AC transformer, 1 minute)	
Operating Temperature		– 20˚ to +40˚C; 15–90% relative humidity (– 10˚ to +40˚C DC-DC converter)	
Material of Marking Plate and Color Screen		Polycarbonate	
Termination		M3.5 screw with captive sems plate (Check terminals: M3 screw with captive sems plate on applicable units)	
Maximum Size		Full voltage: 10 rows, 20 columns (200 windows) Transformer and DC/DC converter: 50 windows	
Recommended Wire Size		22-14 AWG x2 ($2mm^2$ x 2)	
Approvals		TÜV Cert. No. B970213332375; UL Recognized File No. E68961; CSA Certified File No. LR48366	

Part Numbers (assembled)

Part Number Guide

SLC30N– ① **01** ② **03** **–** ③ **DD** ④ **2** **MLB**

① Number of Rows
② Number of Columns
③ Type
④ Voltage

①Number of Rows				01, 02, 03, 04, 05, 06, 07, 08, 09, 10	10 row maximum (number of base unit (F-style) windows)
② Number of Columns				01, 02, 03, 04, 05, 06, 07, 08, 09, 10 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	20 column maximum (number of base unit (F-style) windows)
③ Type	LED	Full voltage	Standard	DD	6V, 12V, 24V
			With check terminal	DHM	24V only
			2 color (Red/Green)	DW	24V only
		Transformer		TD	120V, 240V AC
		DC-DC converter		CD	110V DC only
	Incandescent	Full voltage		DS	6V, 12V, 18V, 24V, 30V
		Transformer		TS	120V, 240V

Description		Code	Remark
④ Voltage	6V AC/DC	6	Type DD or DS
	12V AC/DC	1	With Type DD, DHM or DS
	18V AC/DC	8	Type DS only
	24V AC/DC	2	Type DD, DHM, DW, or DS
	30V AC/DC	3	Type DS only
	120V AC	12	Type TD or TS
	240V AC	24	Type TD or TS
	110V DC	1	With Type CD
	No lamp	99	Type DS only

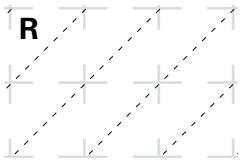
1. Secondary voltage on transformers and DC-DC converters is 24V.
2. To specify arrangement of varying window sizes and colors, use the order form on the next page.
3. Drawing required.

SLC30-IPS Order Form Instructions

How to order a SLC30-IPS display light:

Example 1: Specifying a window color

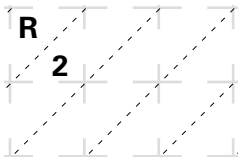
Enter the lens illumination color code in each square. Use the table below for color codes.



This example would place a Red window in this location

Example 2: Specifying a control unit

Enter the lens illumination color code in each square. Use the table below for color codes.



This example would place a Red, square, illuminated pushbutton with silver contacts in this location

For assistance with developing part numbers or completing the order form on the next page, contact IDEC technical support.

Color Codes

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y

Control Unit Codes

	Contact Type	
Type	Gold	Silver
Square illuminated pushbutton (DPDT)	**1**	**2**
Round illuminated pushbutton (DPDT)	**3**	**4**
Square pushbutton (DPDT)	**5**	**6**
Round pushbutton (DPDT)	**7**	**8**
Selector switch (2-position)	**9**	**10**
Selector switch (3-position)	**11**	**12**
Keylock selector switch (2-position)	**13**	**14**
Keylock selector switch (3-position)	**15**	**16**

Purchase Order No. _____ **Date** _____ **Sheet** ☐ **of** ☐

Contact _____

Company _____

Phone # _____

Ship to _____

_____

City/State/Zip _____

Fill in Part Number Below:

	Number of Rows	*Number of Columns*	*Type Code*	*Lamp Voltage*	
SLC30N –	☐☐	☐☐	☐	☐	– **MLB** *Black Frame*

Note: *Convert all window styles to the style F (basic unit size).*

Remarks:

First Window (upper, left-hand corner of panel)

THIS SIDE UP

Basic Unit Size (style F)

COLUMNS

ROWS

Quantity _____

Note: All units ordered with one order form must be identical

For engraving information, see page 715.

THIS SIDE UP

1. For SLC30-IPS ordering form instruction, see previous page.
2. See engraving information page 715.
3. See panel cutout dimensions on page 705.
4. Additional ordering information is on page 702 and 704.

For information on how to complete the order form or to view examples, see the following page.

Order Form

How to complete SLC30N-IPS Series annunciator order form:

1. Determine the type of switches you would like to include in the annunciator panel. For this example, we will include the following 3 types of switches:
   i. Red Square illuminated pushbutton DPDT with silver contacts.
   ii. Yellow round non-illuminated push button DPDT with silver contacts.
   iii. 2 Position keylock selector switch with silver contacts.

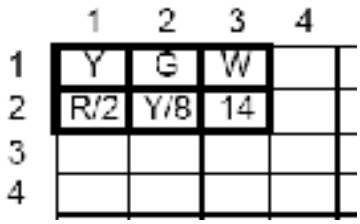
2. From chart shown on page 872,

CODE	DESCRIPTION
R/2	Red Square Illuminated Push Button DPDT with Silver Contacts.
Y/8	Yellow Round Non-illuminated Push Button DPDT with Silver contacts
14	2 Position Keylock Selector Switch with Silver contacts.

Enter the above mentioned CODE designation in the layout window (on the previous page), where you would like the respective switch to be installed.

3. Determine the type of 30x30mm illuminated windows you would like to include. For the current example, we will assume 3 F-Style (30x30mm) windows in Yellow, Green and White color. Specify each window color in the Order Form with appropriate designation: "Y" for Yellow, "G" for Green and "W" for White.

4. Define the boundaries of each window (F, V, H, L or G Style) and of complete annunciator panel by heavy border lines, as shown below.



5. Count the number of rows and columns in the SLC30N diagram. eg: For the current example, we have, Rows: 02 and Columns: 03.
   SLC30N-0203

6. Determine the type of illumination for SLC30N annunciator. eg: For the current example, we use, "DD" for LED Full Voltage type illumination.
   SLC30N-0203-DD

7. Determine the voltage code; for the current example, we will use 24V AC/DC for all illuminated windows and illuminated switches. This is designated by using the number "2".
   SLC30N-0203-DD2

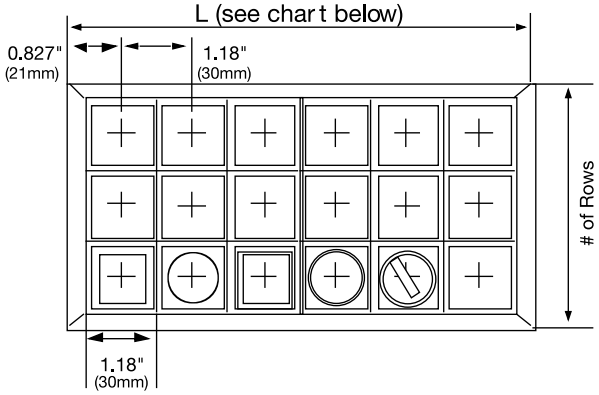
8. The complete part number would be:
   SLC30N-0203-DD2MLB

9. **A drawing must be provided for each of these parts ordered.**

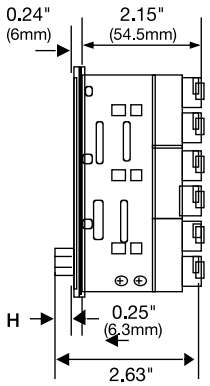
Note: Buttons and switches are only available in 'F' (30 x 30mm) window sizes.

Dimensions

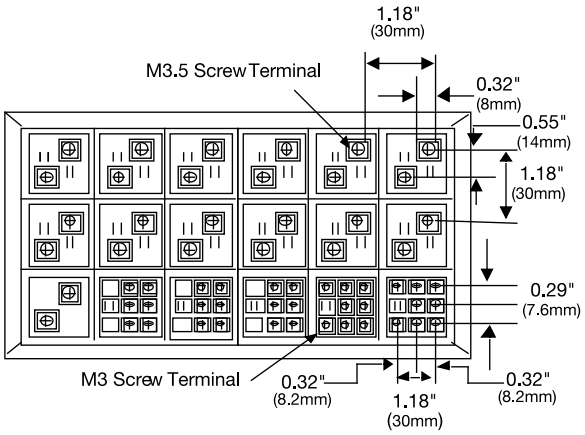
Front View



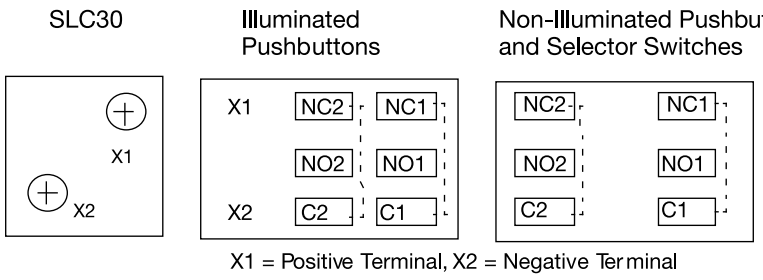
Side View



Back View

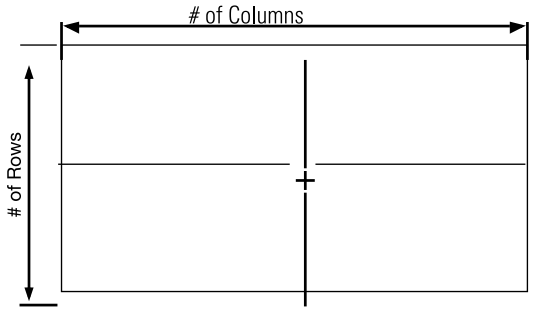


Bottom View



X1 = Positive Terminal, X2 = Negative Terminal

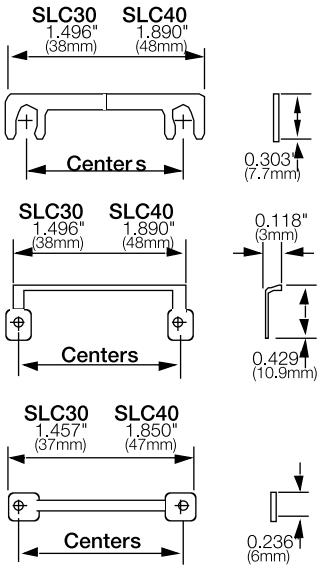
Panel Cut-Out Size



Panel Cut-Out Dimensions

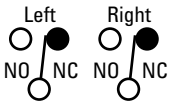
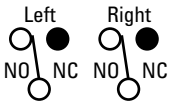
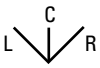
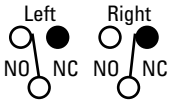
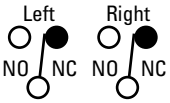
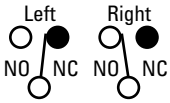
No. of Rows	No. of Columns		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Overall Panel Width Dimension →		1.654" (42mm)	2.853" (72mm)	4.016" (102mm)	5.197" (132mm)	6.378" (162mm)	7.559" (192mm)	8.740" (222mm)	9.921" (252mm)	11.102" (282mm)	12.283" (312mm)	13.465" (342mm)	14.646" (372mm)	15.827" (402mm)	17.008" (432mm)	18.189" (462mm)	19.370" (492mm)	20.551" (522mm)	21.732" (552mm)	22.913" (582mm)	24.094" (612mm)
	Overall Height ↓	Cut-out Ht ↓ / Cut-out Wd →	1.378" (35mm)	2.559" (65mm)	3.740" (95mm)	4.921" (125mm)	6.102" (155mm)	7.283" (185mm)	8.465" (215mm)	9.646" (245mm)	10.827" (275mm)	12.008" (305mm)	13.189" (335mm)	14.370" (365mm)	15.551" (395mm)	16.732" (425mm)	17.913" (455mm)	19.094" (485mm)	20.276" (515mm)	21.457" (545mm)	22.638" (575mm)	23.819" (605mm)
1	1.654" (42mm)	1.378" (35mm)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2	2.853" (72mm)	2.559" (65mm)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
3	4.016" (102mm)	3.740" (95mm)	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
4	5.197" (132mm)	4.921" (125mm)	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
5	6.378" (162mm)	6.102" (155mm)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
6	7.559" (192mm)	7.283" (185mm)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
7	8.740" (222mm)	8.465" (215mm)	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105	112	119	126	133	140
8	9.921" (252mm)	9.646" (245mm)	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160
9	11.102" (282mm)	10.827" (275mm)	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135	144	153	162	171	180
10	12.283" (312mm)	12.008" (305mm)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
			Total Number of Windows (equivalent to style F—basic unit size)																			

Dimensions, continued



Contact Operations

Selector Switches and Keylock Selector Switches

			Operator Position and Contact Operation (top view)		
	Position	Contacts	Left	Center	Right
Contact Operation	90° 2-position maintained 	DPDT 2-position		—	
	45° 3-position maintained 	DPDT 3-position			

SLC40 Series — Panel Mounted Annunciators

SLC 40 Series Annunciators

SLC series panel mounted annunciators are an ideal alternative to mounting multiple pilot devices.
Cluster mounting simplifies panel cutouts and offers a variety of window combination sizes.
Available with incandescent or Superbright LED illumination.

Key features of the SLC40 series include:

- Custom configurations with up to 105 windows
- Four window sizes based on a 40mm grid
- Non-reflective clear lenses that can be extended (angled) for better visibility when mounted in higher locations
- Incandescent or Superbright LED illumination
- Wide variety of input voltages

TÜV
Cert No.
B970213332375

UL Recogized
File No. E68961

CSA Certified
File No.
LR48366

Extended Windows

Style F
(40mm x 40mm)

Style G
(80mm x 80mm)

Style H
(40mm x 80mm)

Style L
(40mm x 120mm)

Style V
(80mm x 40mm)

Staggered Terminals:
increased safety
and serviceability

Specifications

Light Source		LED	Incandescent
Nominal Voltages	Full Voltage	6, 12, 24V AC/DC	6, 12, 18, 24, 30V AC/DC
	Transformer	120, 240V AC	120, 240V AC
	DC-DC Conv.	110V DC	—
Colors		Full voltage: Amber, Green, Red, Yellow, Blue (24V only), White, dual color Red/Green (24V only)	Amber, Green, Red, Yellow, Blue, White
Lamp Type		Surface (Chip type) LED cluster	E12/15 Screw terminal base (2W)
Current Consumption	24V AC/DC	40mA	80mA
	12V AC/DC	80mA	160mA
	6V AC/DC	160mA	330mA
Available Window Sizes		"F" 40x40mm, "H" 40x80mm, "L" 40x120mm, "V" 80x40mm, "G" 80x80mm	
Insulation Resistance		100MW minimum (with 500V DC megger), between live and dead parts	
Degree of Protection		IP20 (for indoor use only), Type 1	
Dielectric Strength		Full voltage: 2,000V AC direct Adaptor/transformer 2,500V AC (1 minute)	
Operating Temperature		– 20˚ to +40˚C; (45-85% relative humidity)	
Material of Marking Plate and Color Screen		Polycarbonate	
Termination		X1 and X2 terminals: M3.5 screw with a captive wire clamp washer (Check terminal: M3 screw on applicable models)	
Maximum Size		Full voltage: 7 rows, 15 columns (105 windows) Others: 50 windows maximum	
Recommended Wire Size		22-14 AWG x2 ($2mm^2$ x 2)	
Approvals		TÜV Cert. No. B970213332375 UL Recognized File No. E68961 ABS American Bureau of Shipping CSA Certified File No. LR48366	

Part Numbers (assembled)

Part Number Guide

	①	②		③	④	⑤			⑥
SLC40N	**01**	**03**	**–**	**DD**	**2**	**F**	**B**	**–**	**A(3)**
	Number of Rows	Number of Columns		Type	Voltage	Style			Color and Number of Windows

Part Numbers: Assembled Parts

Description			Code	Remark
①Number of Rows			01, 02, 03, 04, 05, 06, 07	7 row maximum (always expressed in terms of "F" size windows)
② Number of Columns			01, 02, 03, 04, 05, 06, 07, 08, 09, 10 11, 12, 13, 14, 15	15 column maximum (always expressed in terms of "F" size windows)
③ Type	LED	Full voltage	DD	6V, 12V, 24V
		Full voltage with check terminal	DHM	24V only
		Full voltage 2 color (Red/Green)	DW	24V only
		Transformer	TD	120V, 240V AC
		DC-DC converter	CD	110V DC only
	Incandescent	Full voltage	DE	6V, 12V, 18V, 24V, 30V
		Full voltage with check terminal	DEM	6V, 12V, 18V, 24V, 30V
		Transformer	TE	120V, 240V
④ Voltage	6V AC/DC		6	Type DD, DE, or DEM
	12V AC/DC		1	Type DD, DE or DEM
	18V AC/DC		8	Type DE or DEM
	24V AC/DC		2	Type DD, DHM, DW, DE, or DEM
	30V AC/DC		3	Type DE or DEM
	120V AC		12	Type TD or TE
	240V AC		24	Type TD or TE
	110V DC		1	Type CD
	No lamp		99	Type DE or DEM
⑤ Style	Square		F	40x40mm
	Horizontal rectangle		H	40x80mm
	Large horizontal rectangle		L	40x120mm
	Vertical rectangle		V	80x40mm
	Large square		G	80x80mm
	Combination		M	Fill out order form on next page
⑥ Color (number of windows)	Amber		A	After each color, specify the number of windows Example... A(3), G(2), R(1)
	Green		G	
	Red		R	
	Blue		S (LED version: 24V only)	
	White		W	
	Yellow		Y	

1. Secondary voltage on transformers and DC-DC converters is 24V.
2. To specify the arrangement of varying window sizes and colors, use the order form on the next page.
3. Drawing required for any units ordered with engraving.
4. Incandescent models use color screen and marking plate, LED models use 2 marking plates (no color screen).

Purchase Order No. _____ **Date** _____ **Sheet** ☐ **of** ☐

Contact _____

Company _____

Phone # _____

Ship to _____

_____

City/State/Zip _____

Fill in Part Number Below:

SLC40N – ☐☐ ☐☐ – ☐ ☐ ☐ **B–** *Black Frame*

Number of Rows | *Number of Columns* | *Type Code* | *Operating Voltage* | *Style Code*

Note: *Convert all window styles to the style F (basic unit size).*

F *= One Window*
H *= Two Windows Wide*
L *= Three Windows Wide*
V *= Two Windows High*
G *= Two x Two*
M *= Multiple Combination*

A	☐	*Number of Amber*
G	☐	*Number of Green*
R	☐	*Number of Red*
S	☐	*Number of Blue*
W	☐	*Number of White*
Y	☐	*Number of Yellow*

First Window (upper, left-hand corner of panel)

THIS SIDE UP

COLUMNS

ROWS

Basic Unit Size (style F)

Remarks:

Quantity _____

Note: All units ordered with one order form must be identical

For engraving information, see page 715.

For information on how to complete the order form or to view examples, see the following page.

1. The part number guide is on the previous page.
2. Panel cutout dimensions are on page 712.

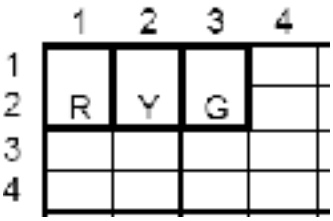
THIS SIDE UP

Order Form

How to complete SLC40N Series annunciator order form:

1. Draw the layout of SLC40N annunciator in the Order Form as per customer requirements. Define the boundaries of each window (F, V, H or L Style) and of complete annunciator panel by heavy border lines. Specify each window color with appropriate designation: eg: G for Green, R for Red, etc.

Example 1

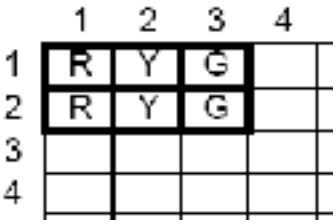


2. Count number of rows and columns. Eg: Example 1 has 02 rows and 03 columns.
   SLC40N-0203
3. Determine the type of illumination required. Eg: "DD" for LED full voltage type illumination.
   SLC40N-0203-DD
4. Determine the voltage code. Eg: "2" for 24V AC/DC, as in Example 1.
   SLC40N-0203-DD2
5. Determine window style. Eg: "V" style windows as shown in Example 1.
   SLC40N-0203-DD2VB*
   ***B** denotes black frame.
6. Count the number of different colored windows. Eg: Example 1 has 1 Red V-style (80mmx40mm) window, 1 Yellow V-style window and 1 Green V-style window. Therefore to complete the part number for example 1, you would illustrate this by: R(1)Y(1)G(1)
   SLC40N-0203-DD2VB-R(1)Y(1)G(1)
7. Now your part number is complete, please fill out contact information and fax or email the form to IDEC Customer Service for order processing. If you would like to get annunciator windows engraved, please see the examples on page 887 and send us your engraving information. If you have any questions please contact IDEC Technical Support.

Here are two more examples of your order form and the subsequent SLC40N layout you will receive.

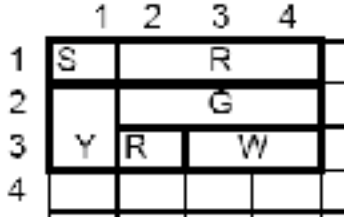
Example 2

Rows=02; Columns= 03; F Style Windows (40x40mm); LED Full Voltage 24V AC/DC Illumination. Part number **SLC40N-0203-DD2FB-R(2)Y(2)G(2)**.



Example 3

Rows=3; Columns= 4; M = combination of various window styles (F, H, L and V Style); LED Full Voltage 24V AC/DC Illumination.
Part number **SLC40N-0304-DD2MB-R(1)Y(1)G(1)W(1)S(1)**.



Dimensions

Panel Cut-Out Dimensions

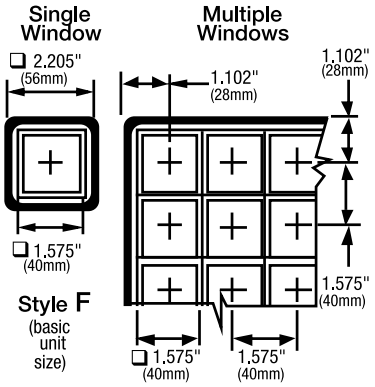
No. of Rows	No. of Columns		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Overall Panel Width Dimension →		2.205" (56mm)	3.780" (96mm)	5.354" (136mm)	6.929" (176mm)	8.504" (216mm)	10.079" (256mm)	11.654" (296mm)	13.228" (336mm)	14.804" (376mm)	16.378" (416mm)	17.953" (456mm)	19.528" (496mm)	21.102" (536mm)	22.677" (576mm)	24.252" (616mm)
	Overall Height ↓	Cut-out Ht ↓ / Cut-out Wd →	1.772" (45mm)	3.346" (85mm)	4.921" (125mm)	6.496" (165mm)	8.071" (205mm)	9.646" (245mm)	11.220" (285mm)	12.795" (325mm)	14.370" (365mm)	15.945" (405mm)	17.520" (445mm)	19.094" (485mm)	20.669" (525mm)	22.244" (565mm)	23.819" (605mm)
1	2.205" (56mm)	1.772" (45mm)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	3.780" (96mm)	3.346" (85mm)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
3	5.354" (136mm)	4.921" (125mm)	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
4	6.929" (176mm)	6.496" (165mm)	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
5	8.504" (216mm)	8.071" (205mm)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
6	10.079" (256mm)	9.646" (245mm)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
7	11.654" (296mm)	11.220" (285mm)	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
			Total Number of Windows (equivalent to style F—basic unit size)														

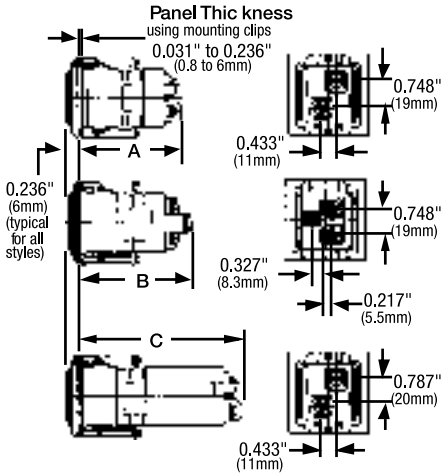
1. The number of rows and columns refers to styles equivalent to style F (basic unit size).
   For styles H, L, V, and G, convert into style F (basic unit size) equivalents.
   Style H: 1 window high (1 row) x 2 windows wide (2 columns)
   Style V: 2 windows high (2 rows) x 1 window wide (1 column)
   Style L: 1 window high (1 row) x 3 windows wide (3 columns)
   Style G: 2 windows high (2 rows) x 2 windows wide (2 columns)
   Example: 18 windows = 3 windows high (3 rows) x 6 windows wide (6 columns)
   Overall dimension (H x W): 5.354" x 10.079" (136 x 256mm)
   Panel cut-out (H x W): 4.921" x 9.646" (125 x 245mm)
   Tolerance: +0.039" (1mm), –0
2. See page 880 for part numbering information.

Window Dimensions

Window Style		Style F	Style H	Style L	Style V
Appearance					
Window Size	Illumination Face (H x W)	1.575" x 1.575" (40 x 40mm)	1.575" x 3.150" (40 x 80mm)	1.575" x 4.724" (40 x 120mm)	3.150" x 1.575" (80 x 40mm)
	Lens (H x W)	1.457" x 1.457" (37 x 37mm)	1.457" x 3.031" (37 x 77mm)	1.457" x 4.606" (37 x 117mm)	3.031" x 1.457" (77 x 37mm)
	Marking Plate (H x W x t)	1.409" x 1.409" x 0.04" (35.8 x 35.8 x 1.0mm)	1.409" x 2.984" x 0.04" (35.8 x 75.8 x 1.0mm)	1.409" x 4.559" x 0.04" (35.8 x 115.8 x 1.0mm)	2.984" x 1.409" x 0.04" (75.8 x 35.8 x 1.0mm)
	Color Screen (H x W x t)	1.409" x 1.409" x 0.04" (35.8 x 35.8 x 1.0mm)	1.409" x 2.984" x 0.04" (35.8 x 75.8 x 1.0mm)	1.409" x 4.559" x 0.04" (35.8 x 115.8 x 1.0mm)	2.984" x 1.409" x 0.04" (75.8 x 35.8 x 1.0mm)
	Engraving Area	1.339" x 1.339" (34 x 34mm)	1.339" x 2.913" (34 x 55mm)	1.339" x 4.488" (34 x 85mm)	2.913" x 1.339" (55 x 34mm)

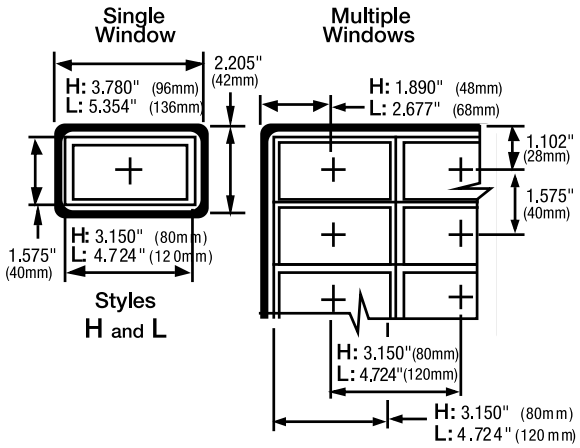
Dimensions, continued

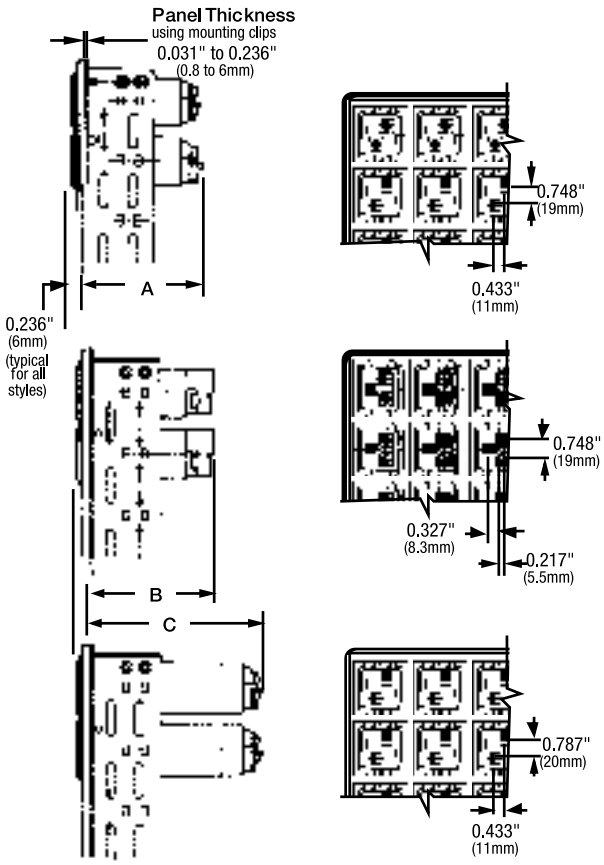


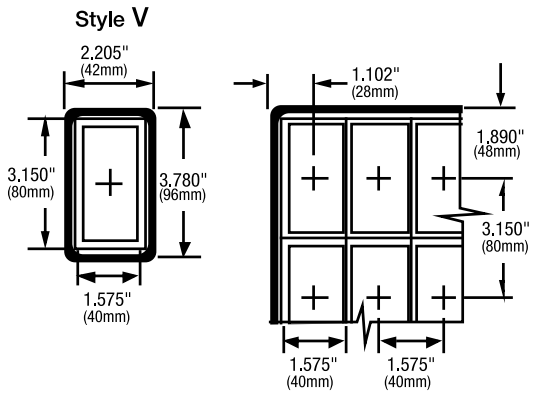


Styles F, H, L, V, G:
Single Window (right)
Multiple Windows (below)

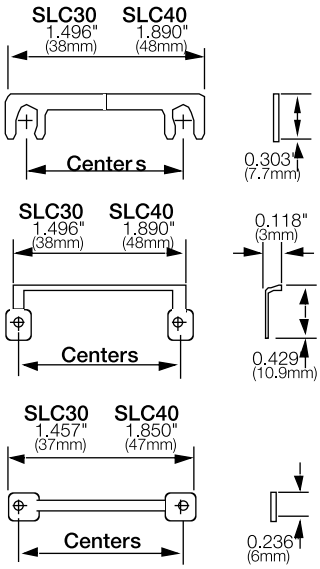
	Description	LED	Incandescent
A	Full voltage	2.618" (66.5mm)	2.539" (64.5mm)
B	Full voltage LED 2-color alternate	2.874" (73mm)	—
C	Transformer	3.327" (84.5mm)	—
	DC-DC converter	3.327" (84.5mm)	—
	Transformer	—	2.854" (72.5mm)
Terminals (X1, X2)		M3.5 screw	
Check terminal (C)		M3 screw	
Same terminals, adjacent windows		1.575" (40mm) centers	





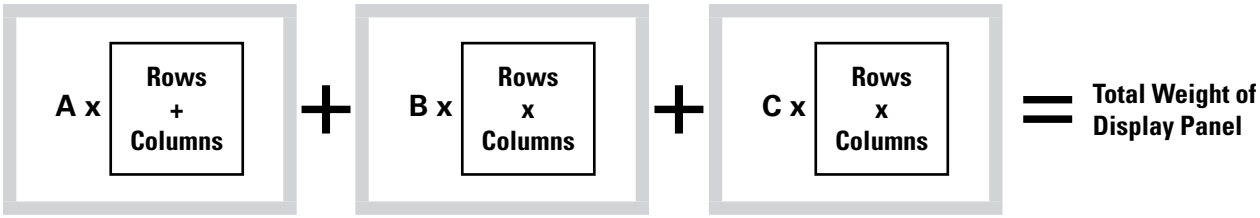


Dimensions, continued



Instructions

Estimating Weights



1. Make sure that the panel thickness is sufficient to support the total weight of the display panel(s).

		Full Voltage	**Transformer** (incandescent) **AC Adapter** (LED)	**DC-DC Converter** (LED only)
A Frame Weight	B Housing Weight	C **Lamp/LED Weight** (includes lamp/LED)		
0.93oz (30g)	0.93oz (30g)	0.93oz (30g)	2.98oz (96g)	1.92oz (62g)

2. Weights are approximate.

Example:
SLC40N-0304-DD2FB
Total weight = A (rows + columns) + B (rows x columns) + C (rows x columns)
Total weight = 0.93 (3+4) + 0.93 (3x4) + 0.93 (3x4) = 28.83 oz

Engraving Information

Part Numbers: SLC30 Engraving Plates

Window Type	Part No.	Character Size	Maximum Characters per Line	Maximum Lines
F 30x30mm	SLC-3PF	7/32	9	4
		3/16	10	4
		5/32	11	5
		9/64	12	6
		1/8	13	7
H 30x60mm	SLC-3PH	5/16	10	3
		7/32	15	4
		5/32	19	6
L 30x90mm	SLC-3PL	5/16	16	3
		7/32	22	4
		5/32	28	6
V 60x30mm	SLC-3PV	5/16	6	7
		7/32	8	9
		5/32	10	13
G 60x60mm	SLC-3PG	5/16	12	7
		7/32	15	10
		5/32	18	14

Engraving Size Samples

5/16" size
7/32" size
3/16" size
5/32" size
9/64" size
1/8" size

Part Numbers SLC40 Engraving Plates

F 40x40mm	SLC-4PF	5/16	8	4
		7/32	11	6
		5/32	14	8
H 40x80mm	SLC-4PH	5/16	17	4
		7/32	20	6
		5/32	24	8
L 40x120mm	SLC-4PL	5/16	22	4
		7/32	30	6
		5/32	34	8
V 80x40mm	SLC-4PV	5/16	7	8
		7/32	10	9
		5/32	12	14
G 80x80mm	SLC-4PG	5/16	12	7
		7/32	15	10
		5/32	18	14

Engraving Size Samples

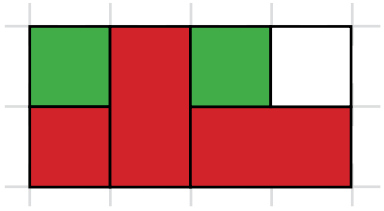
5/16" size
7/32" size
5/32" size

Engraving Example

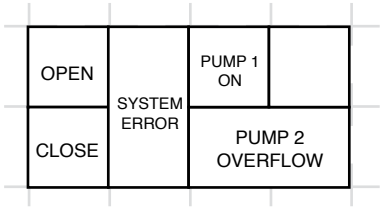
Engraving information can be provided in two ways:

Method 1

If you have created your own SLC annunciator layout and there is enough space to write engraving information, please print out a copy of the layout and write what you would like to be engraved in respective window. Attach this with the Order Form and send it to IDEC Customer Service for processing.



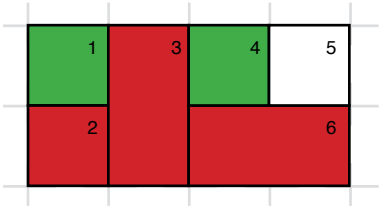
Engraving Layout



SLC Annunciator Layout

Method 2

If you are using the Order Form from the IDEC Automation Catalog and do not have enough space to list engraving information, you can number the top right corner of the window you would like to be engraved.

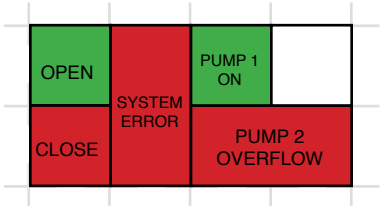


Keeping engraving window type, character size, maximum character per line and maximum number of lines in perspective, create a table (see Engraving Table Example shown below). Please attach the Table along with SLC annunciator layout and send it to IDEC Customer Service for processing.

Engraving Table Example

1	7/32"	"OPEN"
2	7/32"	"CLOSE"
3	7/32"	"SYSTEM" "ERROR "
4	3/16"	"PUMP 1" "ON"
5		NO ENGRAVING
6	5/32"	"PUMP 2" "OVERFLOW"

Using method 1 or 2, the final engraved panel will look as below:



Final Engraved Panel

Accessories

Description		Application		Part No.	Remarks	
Lenses		SLC30 incandescent, LED	F	SLC-3LF-(UL)	A lens is included with each window on assembled units	
			H and V	SLC-3LH-(UL)		
			L	SLC-3LL-(UL)		
			G	SLC-3LG-(UL)		
		SLC40 incandescent, LED	F	SLC-4LF-(UL)		
			H and V	SLC-42H-(UL)		
			L	SLC-4LL-(UL)		
			G	SLC-4LG		
Color Screens		SLC30 incandescent	F	SLC-3PF-*-(UL)	Specify color code in place of asterisk (*): A = Amber C = Transparent G = Green (incandescent) R = Red S = Blue W = White Y = Yellow	A color screen and marking plate are included with each window of assembled incandescent units Two marking plates are included with each window of assembled LED units; LED units do not use color screens
			H and V	SLC-3PH-*-(UL)		
			L	SLC-3PL-*-(UL)		
			G	SLC-3PG-*		
		SLC40 incandescent	F	SLC-4PF-*-(UL)		
			H and V	SLC-4PH-*		
			L	SLC-4PL-*-(UL)		
			G	SLC-4PG		
Marking Plates		SLC30 incandescent, LED	F	SLC-3PF-□-(UL)	Specify color code in place of square (□): C = Transparent (LED) W = White (incandescent) WL = White (LED)	
			H and V	SLC-3PH-□-(UL)		
			L	SLC-3PL-□-(UL)		
			G	SLC-3PG-□-(UL)		
		SLC40 incandescent, LED	F	SLC-4PF-□-(UL)		
			H and V	SLC-4PH-□-(UL)		
			L	SLC-4PL-□-(UL)		
			G	SLC-4PG		
Lens Frames		SLC30 incandescent only	F	SLC-3WF-B	A lens frame is included with each window on assembled units Lens frame for LED modules has the inner walls painted white, while the incandescent frame is completely black.	
			H	SLC-3WH-B		
			V	SLC-3WV-B		
			L	SLC-3WL-B		
			G	SLC-3WG-B		
		SLC30 LED only	F	SLC-3WF-BL		
			H	SLC-3WH-BL		
			V	SLC-3WV-BL		
			L	SLC-3WL-BL		
			G	SLC-3WG-BL		
		SLC40 incandescent only	F	SLC-4WF-B		
			H	SLC-4WH-B		
			V	SLC-4WV-B		
			L	SLC-4WL-B		
			G	SLC-4WG-B		
		SLC40 LED only	F	SLC-4WF-BL		
			V	SLC-4WV-BL		
			L	SLC-4WL-BL		
			G	SLC-4WG-BL		

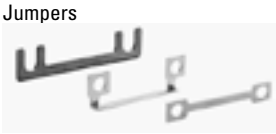
Description		Application		Part No.	Remarks
Incandescent Lamps	BA9S/13 (1W) 	SLC30 incandescent only	BA9S/13 lamp base	IS-6	6.3V, 1W; operating voltage: 5 to 6V AC/DC
				IS-12	12V, 1W; operating voltage: 9 to 12V AC/DC
				IS-24	24V, 1W; operating voltage: 18 to 24V AC/DC
				IS-30	30V, 1W; operating voltage: 24 to 30V AC /DC
	E12/15 (2W) 	SLC40 incandescent only	E12/15 lamp base	LE-6	6.3V, 2W; operating voltage: 5 to 6V AC/DC
				LE-8	18V, 2W; operating voltage: 12 to 18V AC/DC
				LE-2	24V, 2W; operating voltage: 18 to 24V AC/DC
				LE-3	30V, 2W; operating voltage: 24 to 30V AC/DC
LED Lamps		SLC30 LED only 1-color	6V AC/DC	SLDN-36M-*	Specify color code in place of asterisk (*): A = Amber G = Green R = Red S = Blue (available in 24V version only) W = White Y = Yellow
			12V AC/DC	SLDN-31M-*	
			24V AC/DC	SLDN-32M-*	
		SLC30 LED only 2-color: Red/Green	24V AC/DC	SLDN-32MW-RG	
		SLC40 LED only 1-color	24V AC/DC	SLCN-42M-*	
		SLC40 LED only 2-color: Red/Green	24V AC/DC	SLCN-42MW-RG	

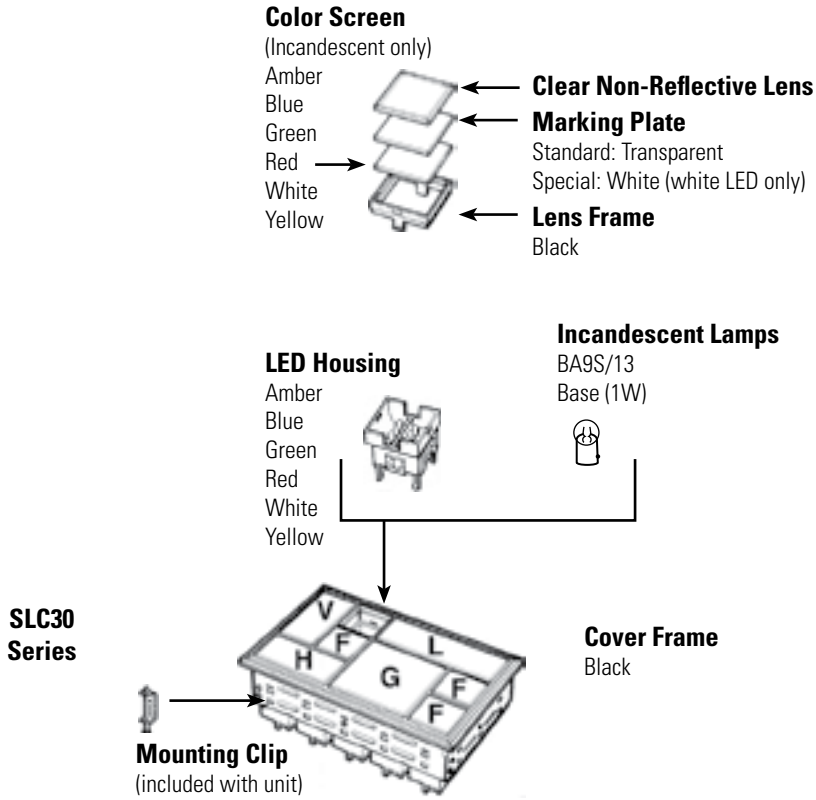
Unless "no lamp" (99) is specified, a lamp is included with each style F window equivalent

One part number is specified for one replacement bulb

Replacement Parts

Full Voltage Models		Description	Type	Part Number
SLC30 	Incandescent	Incandescent	DS	SLC-3DS
	LED	Standard LED	DD	SLDN-3DH
		LED w/ Check Terminal	DHM	SLD-3DHM
		Dual Color LED	DW	SLD-3DW
SLC 40 	Incandescent	Incandescent	DE	SLC-4DE
		Incandescent w/ Check Terminal	DEM	SLC-4DEM
	LED	Standard LED	DD	SLDN-4DH
		LED w/ Check Terminal	DHM	SLD-4DHM
		Dual Color LED	DW	SLD-4DW
Step Down Models		**Description**	**Type**	**Part Number**
SLC30  	Incandescent	Incandescent xfrmr, 120V AC	TS12	SLC-3TS120
		Incandescent xfrmr, 240V AC	TS24	SLC-3TS240
	LED	LED xfrmr, 120V AC	TD12	SLDN-3TH12
		LED xfrmr, 240V AC	TD24	SLDN-3TH24
		LED DC-DC converter, 110V DC	CD1	SLDN-3CH1
SLC40  	Incandescent	Incandescent xfrmr, 120V AC	TE12	SLC-4TE12
		Incandescent xfrmr, 240V AC	TE24	SLC-4TE240
	LED	LED xfrmr, 120V AC	TD12	SLDN-4TH120
		LED xfrmr, 240V AC	TD24	SLDN-4TH240
		LED DC-DC converter, 110V DC	CD1	SLDN-4CH1

Description	Application		Part No.	Remarks
Lamp Holder Tool	SLC30 and SLC40 incandescent		OR-55	Rubber tool eases the removal of incandescent lamps
Tab Terminal Adaptors 	Used for wiring quick-connect terminals		TW-FA1	#250 tab terminal (W x H): 0.250" x 0.031" (6.35 x 0.8mm) single tab
Jumpers 	SLC30	X1 terminal (spade)	SLC-JP30	Total number of jumpers equals total number of style F window equivalents
		X2 terminal (ring)	SLCN-JP34	
		C terminal (ring)	SLC-JP32	
	SLC40	X1 terminal (spade)	SLC-JP40	
		X2 terminal (ring)	SLCN-JP44	
		C terminal (ring)	SLC-JP42	
Mounting Clip 	All SLCs		SLC-3K1	Mounting clips are included with the panel (see page 894 for details about quantity and placement).
Finger-Safe Terminal Covers 	Use with SLC30 types DD, TD, CD, DS and TS		SLC30-VL3	
	Use with all SLC30 types DHM and DW		SLC30-VL6	
	Use with SLC40 types DD, TD, CD, DE and TE		HW-VL3	
	Use with SLC40 types DHM, DW, and DEM		SLC40-VL6	



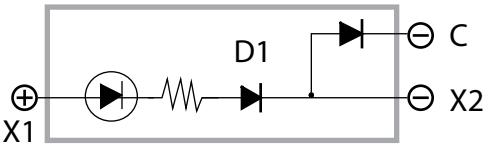
SLC Series Installation Instructions

Installation Notes

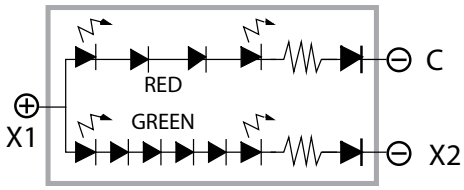
1. Since lamps generate heat, it is recommended that ventilation be provided for cooling when more than ten lamps are lit continuously.
2. A lower number of windows is specified for multiple transformer and DC-DC converter units (50 maximum, instead of 200 as for full voltage only). This is done to avoid damage which may result from excessive heat generation when all lamps are lit simultaneously.
3. When multiple units are panel mounted, determine panel thickness so that the combined weight of all units and connecting wires can be supported.
4. Multiple units are not designed for continuous, simultaneous lighting of all lamps. However, it is possible to conduct a lamp test with all lamps lit simultaneously for a period of up to 40 minutes.
5. Before removing the LED unit, turn the power supply off.
6. DC-rated voltages for LED units are complete direct current voltages. Make sure to check the measuring instruments and compensate for any error in the measured, full-wave rectified or pulsating voltages.
7. To ensure brightness and long life of LED units, keep the DC power voltage within the operating voltage range.
   LED Operating Voltage Range: 24V AC/DC ± 10%

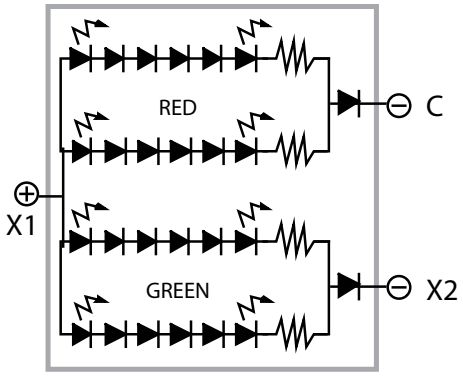
Terminal Arrangements (LED units)

For full voltage (1- and 2-color) and DC-DC converter LED units, terminal X1 is positive and terminal X2 is negative. Make sure to observe polarity when wiring.

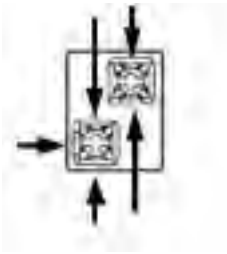


For 2-color alternate units, terminal X1 is positive, and terminals X2 and C (check terminal) are negative.

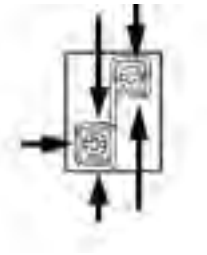




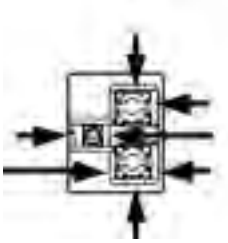
SLC30/SLC40
Full Voltage
DC-DC Converter



SLC30/SLC40
Transformer



SLC30/SLC40
Full Voltage
with Check Terminal



SLC30/40
2-color LED
(alternating)

SLC30

SLC40

Installation Instructions, continued

Removing Windows

SLC30: To remove a window, insert the tip of a small screwdriver into the slot under the lens frame and gently press down on the screwdriver.

SLC40: To remove an extended window, pull on the top as if to extend the unit; then continue pulling until the unit comes out of the housing. All units are shipped with windows retracted. When transporting units, make sure windows are pushed in fully. After windows are installed, they can be extended as shown in Figure 1.

Removing Lens, Color Screen, and Marking Plate

The lens has two retaining projections on the right and two on the left. To remove the lens, color screen, and marking plate from the lens frame, push open the lens frame with both hands as shown in Figure 2.

The lens can also be removed by inserting a screwdriver into one of the sides with recesses. Since the lens has an orientation, be sure to insert the screwdriver in the direction shown in Figures 3 and 4.

Figure 3: SLC30

Figure 4: SLC40

Installing Lens, Color Screen, and Marking Plate

First, install the marking plate and color screen into the lens frame. To install the lens, insert its retaining projections into the recesses inside the lens frame, and press the lens into the lens frame as shown in Figure 5.

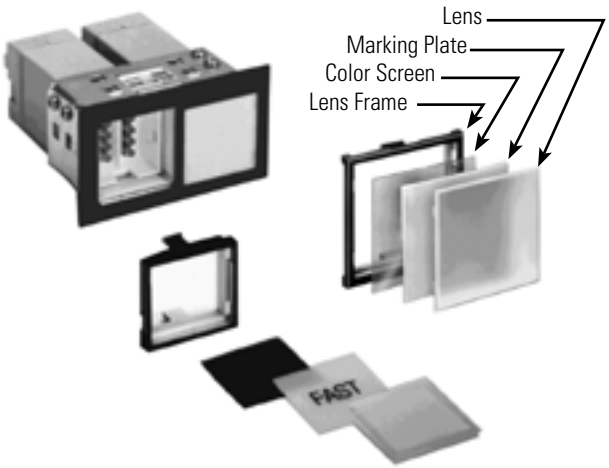


Figure 5: SLC30 and SLC40

Replacing the LED Unit

To remove: Insert the tip of a screwdriver into one of the two slots inside the LED unit. Pull the LED unit straight out without pressing on the LED terminals, as shown in Figure 6.

To install: Make sure that the junction inside the LED unit is aligned in the same direction as the junction of the LED housing. Push the LED unit into the LED housing as shown in Figure 7.

Figure 6: Remove LED

Figure 7: Install LED

Installing Units into a Panel

Single units: With leaf springs installed, push the SLC housing from the front of the panel. Secure the SLC housing with two mounting clips. Tighten the mounting clip screws to a torque of 4 to 5 kgf-cm as shown in Figure 8.

Figure 8: SLC40

Multiple combination units: Insert the units into the panel cut-out from the front. Install the attached mounting clips into the openings on the frame, and tighten the screws as shown in Figure 9. After tightening, use Loctite to prevent loosening. The number of mounting clips included with each multiple unit varies with the number of windows as shown in the table below.

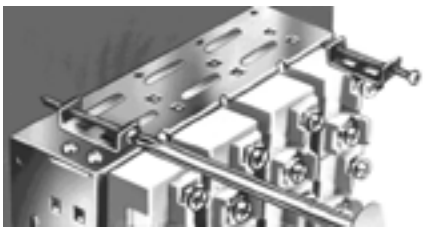


Figure 9: Multiple Combination

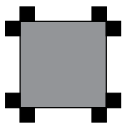
SLC Series Installation Instructions, continued

Number of Mounting Clips Included

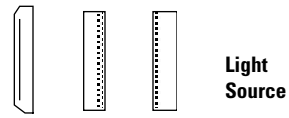
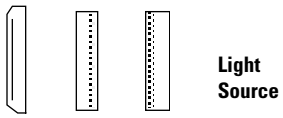
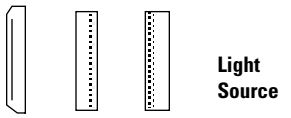
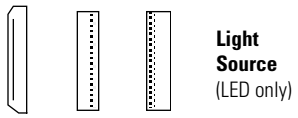
Columns	1 or 2		3 to 8		9 to 15	16 to 20 *
Rows	Full Voltage	Others	Full Voltage	Others	All Types	All Types
1 or 2	2		4		6	8
3 to 6	4	6	6	8	8	10
7 to 10 (SLC30 only)	6	8	8		10	12

* SLC30 series only

Recommended Mounting Clip Positions

Columns	1 or 2		3 to 8		9 to 15	16 to 20*
Rows	Full Voltage	Others	Full Voltage	Others	All Types	All Types
1 or 2	2 Clips		4 Clips		6 Clips	8 Clips
						
3 to 6	4 Clips	6 Clips	6 Clips	8 Clips	8 Clips	10 Clips
						
7 to 10 (SLC30 only)	6 Clips	8 Clips	8 Clips		10 Clips	12 Clips
						

Assembly Order for Lamp On/Lamp Off Colors

Lamp On: Amber, Blue Green, Red, Yellow		Lamp On: White	Lamp On: Red/Green
Lamp Off: Desired Color	Lamp Off: White	Lamp Off: White	Lamp Off: White
Matte Surface (non-shiny)	**Matte Surface** (non-shiny)	**Matte Surface** (non-shiny)	**Matte Surface** (non-shiny)
			
Light Source	**Light Source**	**Light Source**	**Light Source** (LED only)
Lens Color Screen: Any Color Marking Plate: White	Lens Marking Plate: White Color Screen: Any Color	Lens Marking Plate: White Color Screen: White	Lens Marking Plate: White Color Screen: White