



FUSEGEAR

1SC/1MSC

Modular Semiconductor Fuse Blocks

Mersen 1SC and 1MSC semiconductor fuse blocks feature modular mounting that offers greater flexibility in adjusting to various fuse lengths. Both stud type and integral box connector versions are offered to allow for user preference of wire terminations. The integral box connector versions also provide for greater heat dissipation. Mounting hardware is supplied with the blocks.

FEATURES/BENEFITS:

- Modular two-piece design
- Compact footprint
- Stud versions
- Heat dissipating integral box connector versions
- Accommodates a large range of semiconductor fuses
- Rugged phenolic insulators
- Global acceptance fuse blocks meet UL and IEC requirements



RATINGS:

1SC

- **Volts:**
1000VAC/DC (SCCR: 200kA)
1500VAC/DC (SCCR: 100kA)
- **Amps:** 800A Maximum

1MSC

- **Volts:** 600V
- **Amps:** 600A Maximum
- **SCCR:** 200kA

RECOMMENDED FOR USE WITH:

- Blade-style fuses

APPROVALS:

- UL Recognized Component
File for 1SC: E52283
File for 1MSC: E35113



DIMENSIONS - 1SC:

Catalog No.	Maximum Voltage Rating*	Current Rating I _n (A)	Pkg.	UR	Connector		Hardware		Tightning Torque (lb.-in.)			Fig.
					Type	Wire Range	Bolt	Washer	Cable	Fuse	Mounting	
1SC250	1500	400	Pair	Yes	1/4" Stud	—	—	—	60	60	25	1
1SC375	1500	800	Pair	Yes	3/8" Stud	—	—	—	190	190	50	2
1SCM8	1500	400	Pair	Yes	M8 Stud	—	—	—	60	60	25	1
1SCM10	1500	800	Pair	Yes	M10 Stud	—	—	—	190	190	50	2

For 1SC, order quantity 1 to receive 1 pair.

*Voltage rating applies to AC and DC.

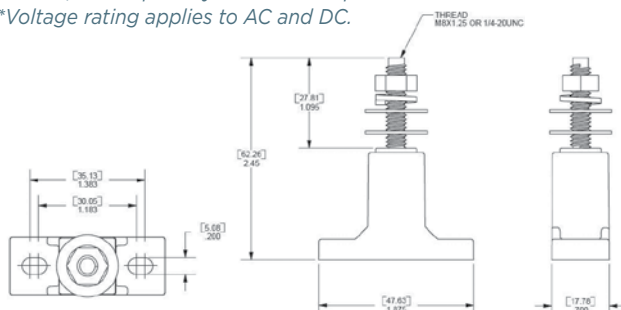


Figure 1

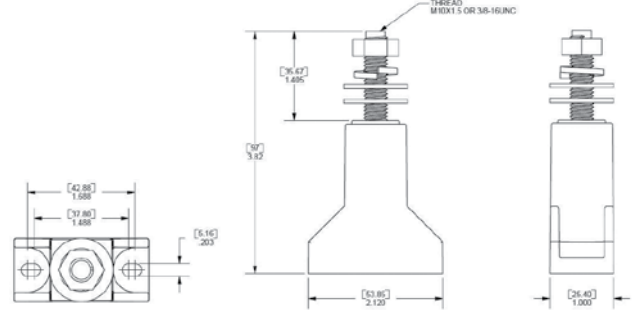


Figure 2

DIMENSIONS - 1MSC:

Catalog No.	Maximum Voltage Rating*	Current Rating I _n (A)	Pkg.	UR	Type	Connector	Hardware		Tightning Torque (lb.-in.)			Fig.
						Wire Range	Bolt	Washer	Cable	Fuse	Mounting	
1MSC101	600	100	Each	Yes	Al Box	Al/Cu 2/0 - #6	1/4"	0.655"	120	70	25	3
1MSC102	600	400	Each	Yes	Al Box	Al/Cu (2) 250kcmil - #6	1/4"	0.655"	275	120	25	4
1MSC103	600	400	Each	Yes	Al Box	Al/Cu (2) 250kcmil - #6	3/8"	0.900"	275	120	25	5
1MSC104	600	600	Each	Yes	Al Box	Al/Cu (2) 500kcmil - #6	3/8"	0.900"	375	170	25	6

For 1MSC, order quantity 2 to receive 1 pair.

*Voltage rating applies to AC and DC.

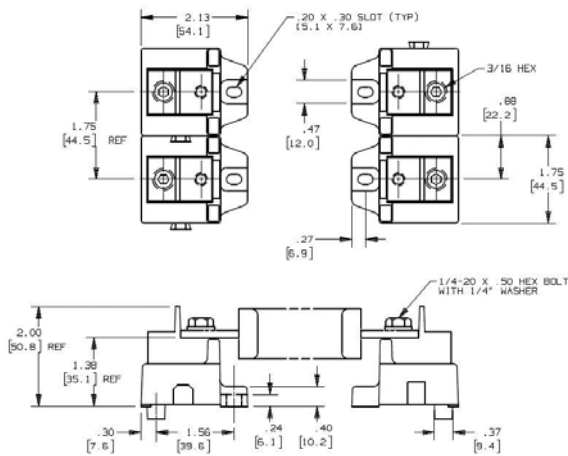


Figure 3

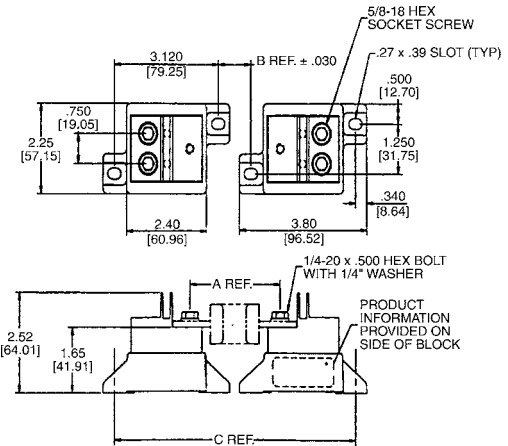


Figure 4

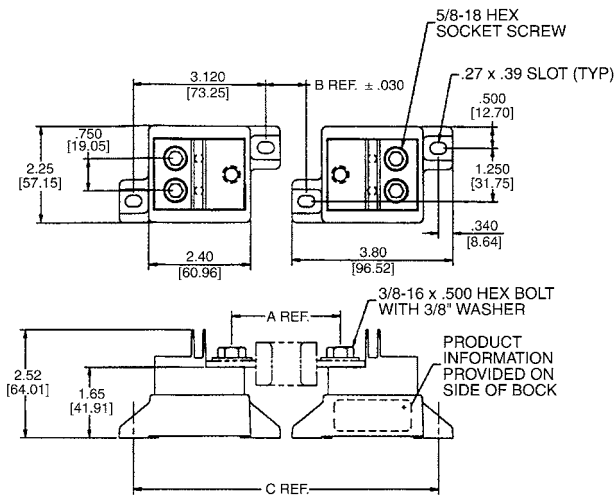


Figure 5

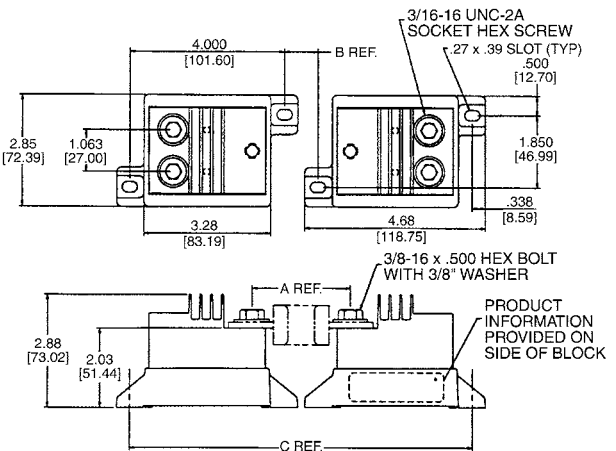


Figure 6

P-Block

P243/P266/P292 Fuse Blocks for use with Form 101 fuses

Mersen P243 and P266 series fuse blocks for Form 101 fuses are glass-filled polycarbonate or laminated phenolic insulator blocks with studs to accommodate bolt-in fuses. The P292 series has a laminated phenolic insulator base with fuse clips. All studs, clips and mounting hardware are tin or zinc plated.



RATINGS:

- **Amps:** 1 to 1000A
- **Clip Type:** 1200VAC or less
- **Stud Type:** 1000VAC or less

RECOMMENDED FOR USE WITH:

- Blade-style fuses

APPROVALS:

- UL Recognized Component guide IZLT2 File E52283
- CSA Certified C22.2, class 6225, File 32169



DIMENSIONS:

For Use with	Current Rating I _n (A)	Catalog No.	Fig.	Dimensions - Inches							Stud Size	Torque (in lbs)
				A	B	C	D	E	F			
A13X, A15QS	70-450	P243D	2	4.40	1.50	2.79	2.20	2.06	1.17		1/4-20	36
A13X, A15QS	500-600	P243G	2	4.40	1.50	2.79	2.20	2.44	0.98		5/16-18	84
A25X, A25Z, A30QS	35-60	P243G	2	4.40	1.50	2.79	2.20	2.44	0.98		5/16-18	84
A25X, A25Z, A30QS	70-200	P243	1	4.50	1.50	2.50	2.25	2.38	1.06		1/4-20	36
A25X, A25Z, A30QS	225-600	P243G	2	4.40	1.50	2.79	2.20	2.44	0.98		5/16-18	84
A50P	35-60	P243G	2	4.40	1.50	2.79	2.20	2.44	0.98		5/16-18	84
A50P, A50QS	70-200	P243E	2	4.40	1.50	2.79	2.20	2.88	0.76		1/4-20	36
A50P, A50QS	225-600	P266C	1	6.00	2.00	3.00	3.00	3.28	1.36		3/8-16	180
A60X, A60Z, A70QS-4	35-200	P243C	2	4.40	1.50	2.79	2.20	3.62	0.39		1/4-20	36
A60X, A60Z, A70QS-4	225-600	P266A	1	6.00	2.00	3.00	3.00	4.06	0.97		3/8-16	180
A70P, A70Q	35-100	P243C	2	4.40	1.50	2.79	2.20	3.62	0.39		1/4-20	36
A70P, A70Q	125-200	P266A	1	6.00	2.00	3.00	3.00	4.06	0.97		3/8-16	180
A70P, A70Q	225-400	P266A	1	6.00	2.00	3.00	3.00	4.06	0.97		3/8-16	180
A70QS-4K	125-200	P266A	1	6.00	2.00	3.00	3.00	4.06	0.97		3/8-16	180
A70P, A70Q, A70QS-4K	450-600	P266F	1	8.00	2.50	3.00	4.00	5.09	1.45		3/8-16	180
A100P	35-100	P266G	1	6.00	2.00	2.50	3.00	4.25	0.88		1/4-20	36
A100P	125-400	P266L	1	6.00	2.00	3.00	3.00	4.66	0.67		3/8-16	180
A120X	1-30	P292	3	-	-	-	-	-	-		-	-
A30QS	700-800	FH25F4	1	6.00	2.00	3.00	3.00	2.66	1.67		3/8-16	144
A50QS	700-800	FH50F4	1	8.00	2.50	3.00	4.00	4.21	1.84		1/2-13	360
A50QS	900-1000	FH50F5	1	8.00	2.50	3.00	4.50	4.97	1.50		1/2-13	360
A70QS-4K	450-600	FH70F3	1	8.00	2.50	3.00	4.00	5.09	1.91		1/2-13	360

Note: FH Blocks are 1" thick.

* Not UL or CSA Certified

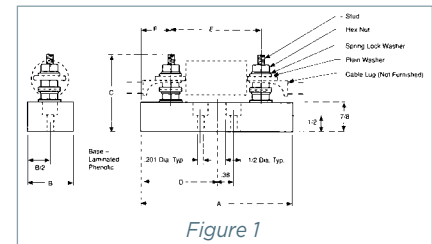


Figure 1

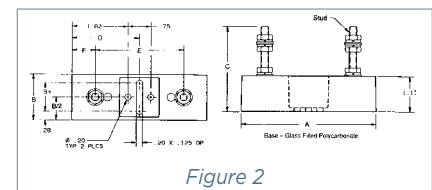


Figure 2

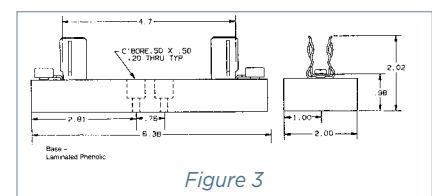


Figure 3

PS 20x127

Ferrule Fuse Holders and No-Load Disconnectors

FEATURES/BENEFITS:

- Solid assembly offers good thermal and mechanical withstand rating
- Fuse mounting in holders or no-load disconnectors with or without open fuse indicating microswitches
- Phenolic resin models for basic applications, fiber-glass polyester for applications in corrosive atmospheres or applications for traction
- Voltage = 1500 V and 2500 V



RATINGS:

- **Volts:** 1,500V, 2,500V
- **SCCR:** 42kA AC, 55kA DC

RECOMMENDED FOR USE WITH:

- 20 x 127 Ferrule Fuses

APPROVALS:

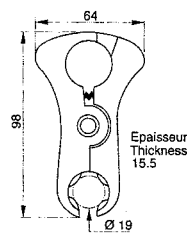
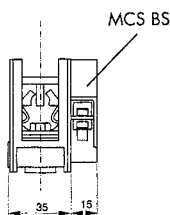
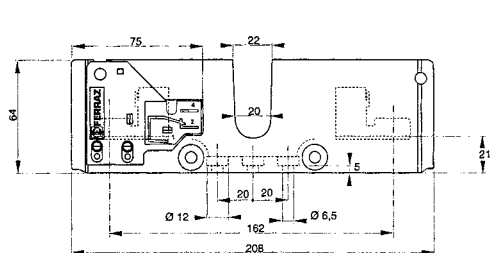
- UL Recognized component File E113357



Connecting with 50 mm² max. cable with copper terminals or with a 15 x 8 max. rigid or flexible bar.

DIMENSIONS:

Description	Insulation voltage rating Ui AC 50/60 Hz or DC	Fuse current rating I _n (A)	Maximum operating current of fuse (A)					Advised copper wire size mm ²	Fire and fumes class NF F 16-101 and 102 and UL
			1000 V gLB	=1000 V gRC	=1000 V gRB	=1500 V gRB	=1500 V gRD		
PSI 20X127	1500 V without terminal covers	50		50	No Operating Limit			10	basic model 12-F1 UL 94 V1
PSI 20X127 PRE	2500 V with terminal covers and only salt spray-proof model	63	80	56				16	
PSII 20X127 PRE		80	90					25	
PSIII 20X127 PRE		100	100					35	
PSIV 20X127 PRE		125						50	



CATALOG NUMBERS

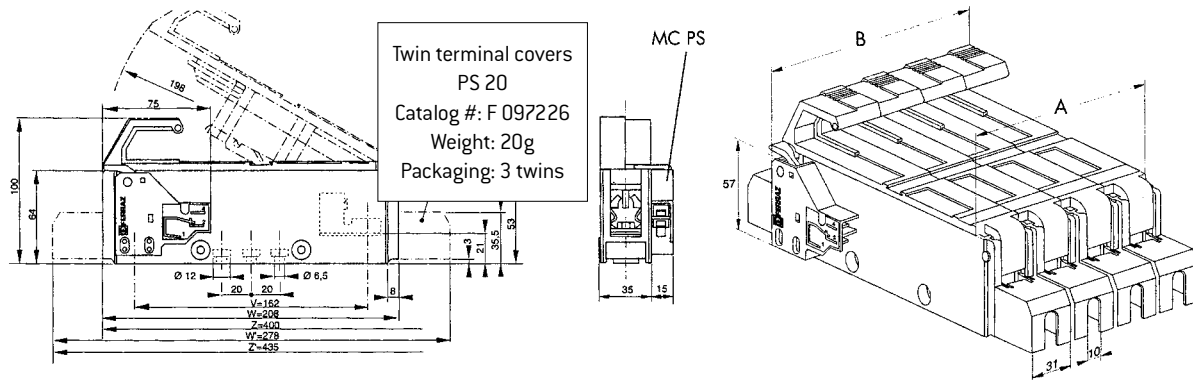
FUSE HOLDERS AND ACCESSORIES:

Description	Catalog No.	Weight (g)	Packaging
PSI 20x127	X 097310	260	3 pieces
PSI 20x127 + MCS BS	X 220130	290	2 pieces

PMCP 20+22
Catalog #: K 100036
Weight: 40g
Packaging: 1

Ferrule Fuse Holders and No-Load Disconnectors

FUSE NON-LOAD DISCONNECTORS AND ACCESSORIES:



V: Connecting distance between centers
W: Clip for rail mounting in two positions
W': With terminal cover length
Y: Space factor with a 90° fuse carrier position

Z: Without terminal cover, space factor with a 180° fuse carrier position
Z': With terminal cover, space factor with 180° fuse carrier position

Description (basic model)	Catalog No.
PSI 20x127 PRE	F097203
PSII 20x127 PRE	G097227
PSIII 20x127 PRE	H097228
PSIV 20x127 PRE	J097229
PSI 20 x 127 PRE+MC PS	H097205
PSII 20 x 127 PRE+MC PS	D097293
PSIII 20 x 127 PRE+MC PS	E097294
PSIV 20 x 127 PRE+MC PS	F097295

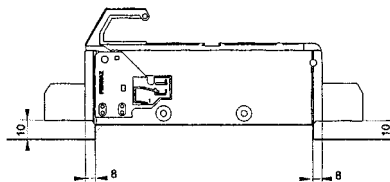
No. of Poles	A	B
1	35	50
2	69	84
3	103	118
4	137	152

Preisolating and blown fuse indicating microswitch features	
Microswitch rated current	Non-inductive circuit interrupting rating
3A - 50 Hz	3A - 50 Hz
3A - DC	3A - DC

Reliable minimum operating voltage/
current: 10V - 10mA
Connecting with 6.35 mm lug

Description (salt spray-proof model)	Ref. No.
PSI 20x127 PRE BS	G097204
PSII 20x127 PRE BS	L097231
PSIII 20x127 PRE BS	T097261
PSIV 20x127 PRE BS	C097292
PSI 20 x 127 PRE BS+MC PS	J097206
PSII 20 x 127 PRE BS+MC PS	G097296
PSIII 20 x 127 PRE BS+MC PS	H097297
PSIV 20 x 127 PRE BS+MC PS	J097298

Distances when mounting on a conductive board @ $U_i = 2500$ VAC



USM

UltraSafe™ Fuse Holders for Midget 1-1/2" x 13/32" Fuses, IP20

Mersen UltraSafe Modular Fuse holders introduce a new level of safety for Midget 1-1/2" x 13/32" (USM) AC and DC-rated fuses up to 30 amperes. UltraSafe holders qualify as "Finger-safe" under IEC and DIN standards to an IP20 grade of protection, including fuse changing (with the flick of a finger). UltraSafe holders are available in 1, 2, 3 or 4 poles, with or without visual blown-fuse indicators in each pole. Multi-pole units can also be field assembled by ordering pin-tie handles.

UltraSafe holders save up to 15% mounting space and any combination can be snapped onto 35mm DIN-rail for extra savings in panel building time. UltraSafe body material is tough and durable polyamide, with exceptional insulating properties.



FEATURES/BENEFITS: RECOMMENDED FOR USE WITH:

- IP20 Finger-Safe (touch safe)
- Optional visual blown fuse Indicator lights
- DIN-rail mounting
- Compact footprint
- Quick, tool-free, easy fuse change outs

- ATQ, ATM*, A6Y-2B, A25Z-2, TRM, OTM, A13X-2, A60Q-2, DCT*, HP6M, HP10M

** Recommended for DC applications*

RATINGS:

- **Volts:** 800VAC Maximum, 1000VDC Maximum
- **Amps:** 30A Maximum
- **SCCR:** 200kA AC, 100kA DC

Min. voltage to operate indicator light: 90VAC, 115VDC [Less than 0.7 mA leakage current at 600V]

APPLICATIONS:

- All circuits up to 600 volts for motors, control circuits, transformers, etc.
- DC circuits up to 1000VDC including photovoltaic applications
- Non-load disconnect

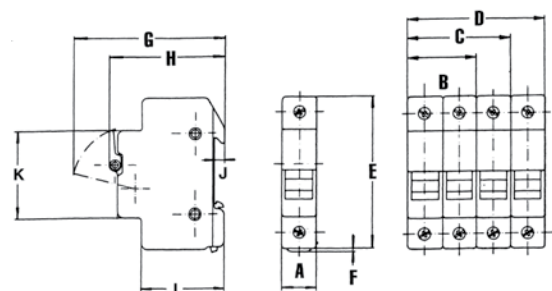
APPROVALS:

- UL Listed to Standard 4248-4 (class CC) and 4248-1 (midget), File E52283
- UL Listed to standard 4248-18 (photovoltaic), File E347822
- CSA Certified C22.2
- IEC 60269-2-1 and 60947-3 Compliant (USM only)



DIMENSIONS:

Dimension	mm	In	Dimension	mm	In
A	17.5	0.69	G	78.0	3.07
B	35.0	1.38	H	59.0	2.32
C	52.5	2.07	I	42.5	1.67
D	70.0	2.76	J	5.0	0.20
E	78.0	3.07	K	45.0	1.77
F	2.5	0.10			



CATALOG NUMBERS — FUSE HOLDERS:

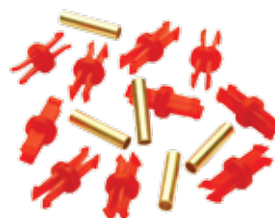
Fuse Type	Current Rating I _n [A]	Voltage Rating AC	DC	Visual Indication	No. of Poles	Catalog Number
Midget (10 x 38mm) (1-1/2" x 13/32")	30	800	1000	No	1	USM1
	30	800	1000	No	2	USM2
	30	800	1000	No	3	USM3
	30	800	1000	No	4	USM4
	30	800	1000	No	3+N	USM3N
	30	600	600	Yes	1	USM1I
	30	600	600	Yes	2	USM2I
	30	600	600	Yes	3	USM3I
	30	600	600	Yes	4	USM4I
	30	600	600	Yes	3+N	USM3IN
	30	120	-	Yes	1	USM1I-AC120
	30	-	24	Yes	1	USM1I-DC24

CATALOG NUMBERS—ACCESSORIES:

Accessories Catalog No.	Description
USN	1-Pole with Integral Neutral Link
USPTH	Pin-tie Accessory for 12-Poles

IEC Ratings for USM: 690VAC / 1000VDC, 32A, 50kA SCCR

CSA Ratings for USM: 750VAC / 1000VDC, 30A



USPTH Pin-Tie Accessory



USM1 with USPTH Pin-Ties

ADDITIONAL SPECIFICATIONS:

- **Terminal screws:** Phillips/slot head
- **Suggested screw torque:** 14.75 in-lbs.
- **Wire range:** #14 to 6 AWG (2.5 to 16mm²) single conductor; #14 to 10 AWG (2.5 to 5.0 mm²) dual conductor
- **Wire type:** 60/75/90°C solid/stranded copper
- **Connector type:** Pressure plate
- **Load-break disconnect:** No
- **Environmental:** RoHS compliant, lead free
- **Operating temperature:** -40° to 85°C
- **Watts loss:** 3W or less
- **Flammability rating:** UL 94-V0
- **Optional Blown Fuse Indicator Lens Color:** Red

UltraSafe™ US14

For 14 x 51 mm A70QS, A70P, URC, URD Fuses

Mersen UltraSafe™ US14 modular fuse-holders are finger-safe under IEC standards to an IP20 grade of protection, including fuse changing (with the flick of a finger). Modular fuse-holders are available in 1, 2, 3 or 4 poles, with or without visual blown fuse indicator, in UL + IEC version.

Multi-pole units can also be field assembled by ordering pin-ties assembly kit. In this size, the range also offers the possibility to use microswitches (supplied with the holders or ordered separately) to allow remote indication.

UltraSafe™ range is made of tough and durable thermoplastic or thermoset material.



FEATURES/BENEFITS:

- Finger safe
- Degree of protection: IP20
- Optional visual blown fuse indicator & microswitch
- DIN rail mounting
- Modular design
- Lockable
- Multi-pole assembly kit available
- Sealable in closed and open position
- Plastic material UL94V2 mini
- Flame retardant materials with glow wire flammability index to 960°C

RATINGS:

- **Volts:** 750VAC/DC
- **Amps:** 50A (14 x 51 mm), 125A (22 x 58 mm)
- **SCCR:** 200kA

APPLICATIONS:

- All circuits up to 750 volts using high speed fuses for protection of small inverters, UPS systems, motor drives, etc.
- No-load disconnect
- IP20 requirements

RECOMMENDED FOR USE WITH:

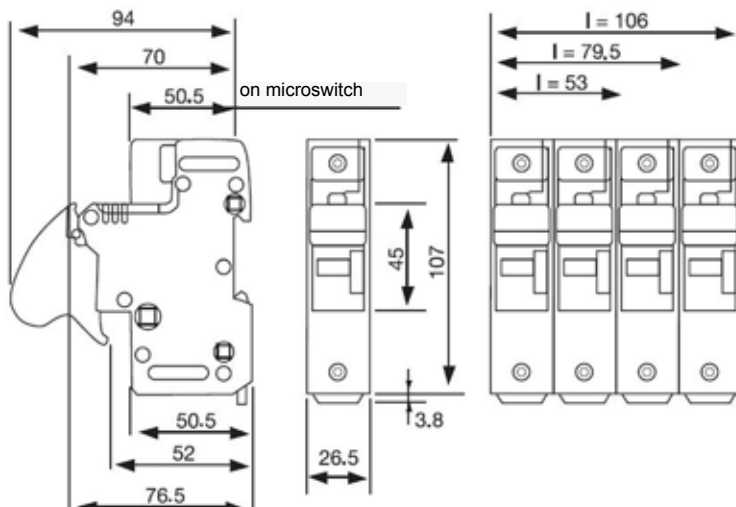
- US14 use with 14 x 51 mm: A70QS, A70P, URC, URD



APPROVALS:

- UL Recognized Component, UL4248, guide IZLT2, file E52283
- CSA Certified C22.2, class 6225, file 32169
- IEC 60269-2 and IEC 60947-3
- RoHS Compliant
- Plastic material: NF 16101 & 16102 Requirement 2 Compliant

DIMENSIONS



UltraSafe™ US14

For 14 x51 mm A70QS, A70P, URC, URD Fuses



US143

UltraSafe™ fuse holders for 14x51 fuse links, without indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US141	Z331153	1	US14 single pole	6	0.14 kg
US141N	D331157	1 + N	US14 single pole + neutral conductor	3	0.30 kg
US142	G331137	2	US14 double pole	3	0.28 kg
US143	N331143	3	US14 triple pole	2	0.43 kg
US143N	X331151	3 + N	US14 triple pole + neutral conductor	1	0.6 kg



US141I

UltraSafe™ fuse holders for 14x51 fuse links, with indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US141I	A331154	1	US14 single pole	6	0.14 kg
US142I	H331138	2	US14 double pole	3	0.3 kg
US143I	P331144	3	US14 triple pole	2	0.44 kg



US142M2

UltraSafe™ fuse holders for 14x51 fuse-links, with auxiliary microswitch

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US141M	B331155	1	US14 single pole, 1 microswitch	6	0.15 kg
US142M	J331139	2	US14 double pole, 2 microswitches	3	0.31 kg
US142M2	L331141	2	US14 double pole, 2 connected microswitches	3	0.31 kg
US143M	Q331145	3	US14 triple pole	2	0.45 kg
US143M2	T331148	3	US14 triple pole, 2 connected microswitches	2	0.45 kg
US143NM	Y331152	3 + N	US14 triple pole + neutral conductor, 3 microswitches	1	0.62 kg



US143MI

UltraSafe™ fuse holders for 14x51 fuse-links, with indicator and auxiliary microswitch

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US141MI	C331156	1	US14 single pole	6	0.15 kg
US142MI	K331140	2	US14 double pole	3	0.31 kg
US142M2I	M331142	2	US14 double pole	3	0.28 kg
US143MI	S331147	3	US14 triple pole	2	0.46 kg
US143M2I	W331150	3	US14 triple pole	2	0.46 kg

UltraSafe™ US14

For 14 x51 mm A70QS, A70P, URC, URD Fuses

TECHNICAL DATA

	US14	US14I	US14M	US14MI
Size	14x51	14x51	14x51	14x51
Number of poles/phases	1, 1+N, 2, 3, 3+N, 4	1, 1+N, 2, 3, 3+N, 4	1, 1+N, 2, 3, 3+N, 4	1, 1+N, 2, 3, 3+N, 4
UL ratings AC	800VAC, 50A, 50kA	800 VAC, 50 A, 50 kA	800 VAC, 50 A, 50 kA	800 VAC, 50 A, 50 kA
UL ratings DC	1000VDC, 50A, 50kA	1000 VDC, 50 A, 50 kA	1000 VDC, 50 A, 50 kA	1000 VDC, 50 A, 50 kA
Conventional free air thermal current with fuse links I_{th}	50 A	50 A	50 A	50 A
Power dissipation at I_{th}	5 W	5 W	5 W	5 W
Utilisation category	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B
Rated insulation voltage U_i	690 V	690 V	690 V	690 V
SCCR	100 kA	100 kA	100 kA	100 kA
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Degree of protection	IP 20	IP 20	IP 20	IP 20
Voltage limit for blown fuse indicator	-	230 to 690V AC/DC	-	230 to 690V AC/DC
Indication System	-	with indicator	with auxiliary microswitch	with indicator and auxiliary microswitch
Operating temperature	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C
Storage temperature	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C
Connection	Max. tightening torque: 3.5Nm (30lbs-in) Rigid wire = 1.5-35mm² (16-3AWG) Stranded wire = 1.5-25mm² (16-4AWG) P22 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) Rigid wire = 1.5-35mm² (16-3AWG) Stranded wire = 1.5-25mm² (16-4AWG) P22 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) Rigid wire = 1.5-35mm² (16-3AWG) Stranded wire = 1.5-25mm² (16-4AWG) P22 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) Rigid wire = 1.5-35mm² (16-3AWG) Stranded wire = 1.5-25mm² (16-4AWG) P22 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)

SPECIFIC USAGE CONDITIONS

Ambient temperature	>20°C	30°C	40°C	50°C	60°C
Derating factor (I_a)	1	0.95	0.9	0.8	0.7

No of poles (side by side)	1 to 3	4 to 6	>= 7
Derating factor of current (I_{th})	1	0.95	0.9

Nominal current of fuse-link gR	25 A	32 A	40 A	50 A	63 A
Max. operational current in fuse-holder	23 A	28 A	34 A	40 A	46 A
Cable wire section	4 mm²	6 mm²	10 mm²	10 mm²	16 mm²

UltraSafe™ US14

For 14 x51 mm A70QS, A70P, URC, URD Fuses

FUNCTIONS



Indicator light kit for US14

With the indicator light a blown fuse can be quickly located if power is still on.

1. Carefully remove the cover with 2 screw drivers.



2. Slip the indicator light's to insert into the rails, being careful not to twist the contact tabs.

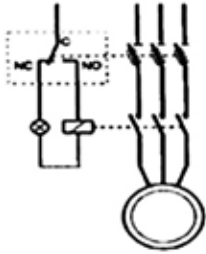


3. Put the cover back on.

UltraSafe™ US14

For 14 x51 mm A70QS, A70P, URC, URD Fuses

FUNCTIONS

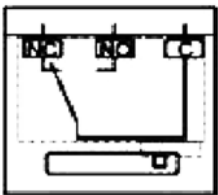


Auxiliary microswitch functions

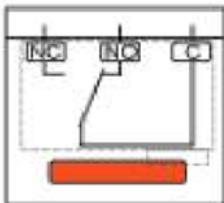
Fuse melting: a fuse-holder containing a fuse with a striker sends out a signal when the fuse element melts.

Pre-isolation: when opening the fuse-holder, the microswitch sends a signal before the opening of the main contacts.

Presence: sends a signal when the holder is closed with no fuse in it.



With the fuse in the handle closed state



No fuse - Fuse blown in handle open

Characteristics

Rated insulation voltage: 250VAC

Rated operational current following IEC 60947-5 & -1

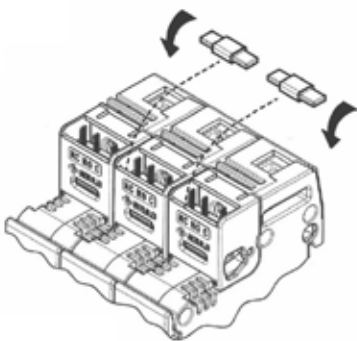
Utilization category AC15: 4A/24V, 4A/48V, 3A/127V, 2.5A/240V

Utilization category DC13: 3A/24V, 1A/48V, 0.2A/127V, 0.1A/240V

Minimum operational current and voltage: 1mA/4V AC or DC

Auxiliary microswitch is designed to operate equally well on dual-current (1mA 4V minimum) or medium-current (5A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Connection: Faston lugs



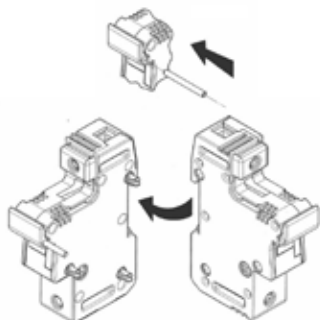
Mechanically interconnected

3 X USMSW1 + 2 X US1422PTH

UltraSafe™ US14

For 14 x51 mm A70QS, A70P, URC, URD Fuses

ACCESSORIES



Multiphase connection kit



LOCK



TBB1A

TBB1C



TBB23A

TBB23C



Kit for multi-phase connection

Catalog number	Item number	Design	Package	Weight
US14PAK	US14PAK	links for connection of multipole units	10	2.5 g
US14PAK	US14PAK	links for connection of multipole units	10	2.5 g
US14PAK	US14PAK	links for connection of multipole units	10	2.5 g
US14PAK	US14PAK	links for connection of multipole units	10	2.5 g
US14PAK	US14PAK	links for connection of multipole units	10	2.5 g

Auxiliary Switches

Catalog number	Item number	Design	Package	Weight
USMSW1	USMSW1	Auxiliary contact kit 1 pole US14	1	25 g
USMSW2	USMSW2	Auxiliary contact kit 3 poles US14	1	20 g
USMSW3	USMSW3	2 Auxiliary contact kit 3 poles US14	1	27 g

Kit for multi-phase connection

Catalog number	Item number	Features	Package	Weight
LOCK	M223525	Padlock	1	0.48 kg
TAGLOCKCMS14	T1015927	Locking kit (Tag and lockout)	1	20 g

Power supply

Catalog number	Item number	Application	Features	Package	Weight
TBB1A	D210315	Max. rms current 90A	1 phase axial incoming power supply	50	10.1 g
TBB1C	E210316	Max. rms current 90A	1 phase lateral incoming power supply	50	10 g
TBB23A	F210317	Max. rms current 90A	2 & 3 phases axial incoming power supply	50	23.3 g
TBB23C	G210318	Max. rms current 90A	2 & 3 phases lateral incoming power supply	50	23.1 g

Wiring bars / Insulated bus bars

Catalog number	Item number	Design	Application	Package	Weight
CMS14BB3F4	A210312	triple pole	Max. rms current 100A, for installation of 4 modules	5	0.12 kg
CMS14BB2F6	Z210311	double pole	Max. rms current 63A, for installation of 6 modules	5	0.1 kg
CMS14BB1F12	Y210310	single pole	Max. rms current 63A, for installation of 12 modules	5	47.4 g

Indication facilities

Catalog number	Item number	Features	Package	Weight
CMS1422LHI	A225653	Indicator light kit	1	10 g

UltraSafe™ US22

For Use with 22 x 58 mm: A70QS, URD Fuses

Mersen's UltraSafe™ US22 modular fuse holders are finger-safe under IEC standards to an IP20 grade of protection, including fuse changing (with the flick of a finger). Modular fuse-holders are available in 1, 2, 3 or 4 poles, with or without visual blown fuse indicator, in UL + IEC version.

Multi-pole units can also be field assembled by ordering pin-ties assembly kit. In this size, the range also offers the possibility to use microswitches (supplied with the holders or ordered separately) to allow remote indication.

UltraSafe™ range is made of tough and durable thermoplastic or thermoset material.

FEATURES/BENEFITS:

- Finger safe
- Degree of protection: IP20
- Optional visual blown fuse indicator & microswitch
- DIN rail mounting
- Modular design
- Lockable
- Multi-pole assembly kit available
- Sealable in closed and open position
- Plastic material UL94V2 mini
- Flame retardant materials with glow wire flammability index to 960°C

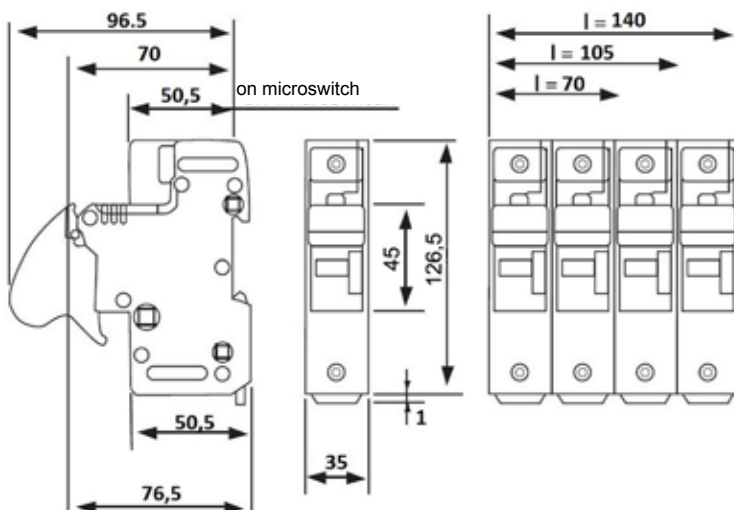
RATINGS:

- **Volts:** 800VAC (SCCR: 50kA), 1000VDC (SCCR: 100kA)
- **Amps:** 125A Maximum

APPLICATIONS:

- All circuits up to 750VAC for protection of motors, transformers, low voltage distribution, control circuits
- Non-load operation

DIMENSIONS



RECOMMENDED FOR USE WITH:

- 22x58mm ferrule, A70QS, URD Fuses

APPROVALS:

- UL Recognized Component, UL4248, guide IZLT2, file E52283
- CSA Certified C22.2, class 6225, file 32169
- IEC 60269-2 and IEC 60947-3
- RoHS Compliant
- Plastic material: NF 16101 & 16102 Requirement 2 Compliant

UltraSafe™ US22

For Use with 22 x 58 mm: A70QS, URD Fuses



US221

UltraSafe™ fuse holders for 22x58 fuse links, without indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US223	R331169	3	triple pole	2	0.64 kg
US223N	X331174	3 + N	triple pole + neutral conductor	1	0.91 kg
US221	E331158	1	single pole	6	0.21 kg
US222	K331163	2	double pole	3	0.44 kg
US221N	H331161	1 + N	single pole + neutral conductor	3	0.45 kg



US223I

UltraSafe™ fuse holders for 22x58 fuse links, with indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US221I	F331159	1	single pole	6	0.22 kg
US222I	L331164	2	double pole	3	0.33 kg
US223I	S331170	3	triple pole	2	0.44 kg



US222M

UltraSafe™ fuse holders for 22x58 fuse links, with auxiliary microswitch

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US221M	G331160	1	single pole	6	0.15 kg
US221NM	J331162	1 + N	single pole + neutral conductor	3	0.47 kg
US222M	M331165	2	double pole	3	0.46 kg
US222M2	P331167	2	double pole	3	0.46 kg
US223M	T331171	3	triple pole	2	0.67 kg
US223M2	W331173	3	triple pole	2	0.67 kg



US222MI

UltraSafe™ fuse holders for 22x58 fuse links, with indicator and auxiliary microswitch

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US221MI	Z1006203	1	single pole	6	0.22 kg
US222MI	N331166	2	double pole	3	0.46 kg
US223M2I	X1011974	3	triple pole	2	0.65 kg
US222M2I	Q331168	2	double pole	3	0.47 kg
US223MI	V331172	3	triple pole	2	0.68 kg

UltraSafe™ US22

For Use with 22 x 58 mm: A70QS, URD Fuses

TECHNICAL DATA

	US22	US22I	US22M	US22MI
Size	22x58	22x58	22x58	22x58
Number of poles/phases	1, 1+N, 2, 3, 3+N	1, 2, 3	1, 1+N, 2, 3	1, 2, 3
UL ratings AC	800 VAC, 125 A, 50 kA	800 VAC, 125 A, 50 kA	800 VAC, 125 A, 50 kA	800 VAC, 125 A, 50 kA
UL ratings DC	1000 VDC, 125 A, 100 kA	1000 VDC, 125 A, 100 kA	1000 VDC, 125 A, 100 kA	1000 VDC, 125 A, 100 kA
Conventional free air thermal current with fuse links I_{th}	125 A	125 A	125 A	125 A
Power dissipation at I_{th}	9.5 W	9.5 W	9.5 W	9.5 W
Utilisation category	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B
Rated insulation voltage U_i	750 V	750 V	750 V	750 V
SCCR	100 kA	100 kA	100 kA	100 kA
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Degree of protection	IP 20	IP 20	IP 20	IP 20
Voltage limit for blown fuse indicator	-	230 to 690V AC/DC	-	230 to 690V AC/DC
Indication System	-	with indicator	with auxiliary microswitch	with indicator and auxiliary microswitch
Operating temperature	-25°C to +60°C	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C
Storage temperature	-25°C to +80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C
Connection	Max. tightening torque: 4Nm (35lbs-in) Rigid wire = 1.5-50mm² (16-1AWG) Multistrand wire = 35mm² (3AWG) P22 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs-in) Rigid wire = 1.5-50mm² (16-1AWG) Multistrand wire = 35mm² (3AWG) P22 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs-in) Rigid wire = 1.5-50mm² (16-1AWG) Multistrand wire = 35mm² (3AWG) P22 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs-in) Rigid wire = 1.5-50mm² (16-1AWG) Multistrand wire = 35mm² (3AWG) P22 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)

SPECIFIC USAGE CONDITIONS

Ambient temperature	>20°C	30°C	40°C	50°C	60°C
Derating factor (I_e)	1	0.95	0.9	0.8	0.7

No of poles (side by side)	1 to 3	4 to 6	>= 7
Derating factor of current (I_{th})	1	0.95	0.9

Nominal current of fuse-link gR	25 A	32 A	40 A	50 A	63 A
Max. operational current in fuse-holder	23 A	28 A	34 A	40 A	46 A
Cable wire section	4 mm²	6 mm²	10 mm²	10 mm²	16 mm²

UltraSafe™ US22

For Use with 22 x 58 mm: A70QS, URD Fuses

FUNCTIONS



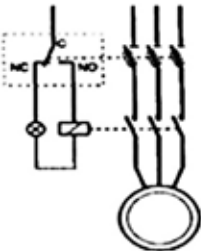
Indicator light kit for US22

With the indicator light a blown fuse can be quickly located if power is still on.

1. Carefully remove the cover with 2 screw drivers.

2. Slip the indicator light's to insert into the rails, being careful not to twist the contact tabs.

3. Put the cover back on.

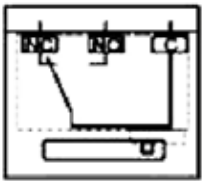


Auxiliary microswitch functions

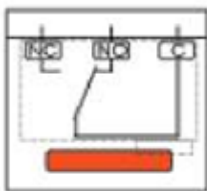
Fuse melting: a fuse-holder containing a fuse with a striker sends out a signal when the fuse element melts.

Pre-isolation: when opening the fuse-holder, the microswitch sends a signal before the opening of the main contacts.

Presence: sends a signal when the holder is closed with no fuse in it.



With the fuse in the handle closed state



No fuse - Fuse blown in handle open

Characteristics

Rated insulation voltage: 250VAC

Rated operational current following IEC 60947-5 & -1

Utilization category AC15: 4A/24V, 4A/48V, 3A/127V, 2.5A/240V

Utilization category DC13: 3A/24V, 1A/48V, 0.2A/127V, 0.1A/240V

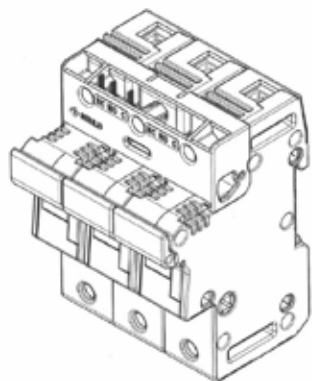
Minimum operational current and voltage: 1mA/4V AC or DC

Auxiliary microswitch is designed to operate equally well on dual-current (1mA 4V minimum) or medium-current (5A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Connection: Faston lugs

UltraSafe™ US22

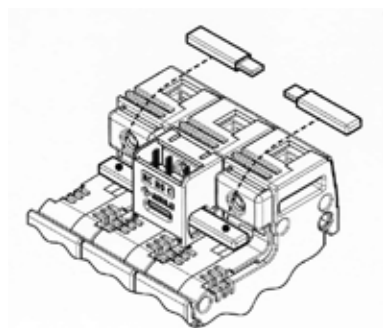
For Use with 22 x 58 mm: A70QS, URD Fuses



Auxiliary microswitch can only be mounted on previously prepared fuse disconnectors. Use of the auxiliary microswitch for fuse melting requires the use of fuses with strikers.

1 auxiliary microswitch

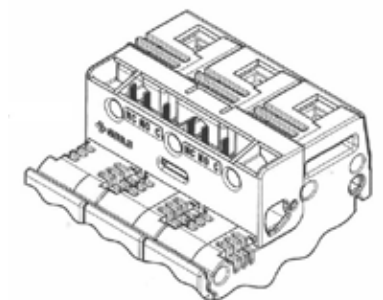
Auxiliary microswitch is designed to operate equally well on dual-current (1mA 4V minimum) or medium-current (5A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life. Connection: Faston lugs



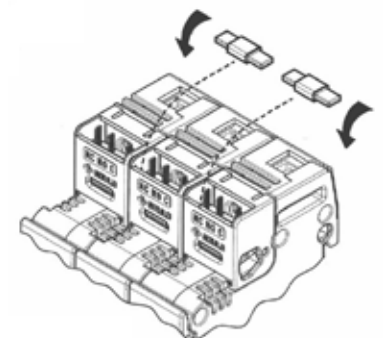
USMSW4

2 auxiliary microswitches

USMSW4 + US1422BP



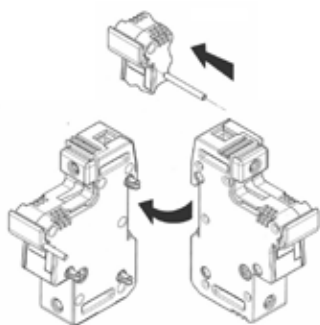
3 x USMSW4



UltraSafe™ US22

For Use with 22 x 58 mm: A70QS, URD Fuses

ACCESSORIES



multiphase connection kit



LOCK



TBB1A

TBB1C



TBB23A

TBB23C



Kit for multi-phase connection

Catalog number	Item number	Design	Package	Weight
US22PAK	US22PAK	links for connection of multipole units	10	0.48 kg

Auxiliary Switches

Catalog number	Item number	Design	Package	Weight
CMS22W2	CMS22W2	Auxiliary microswitch kit 3 poles CMS22	1	32 g
CMS22W3	CMS22W3	2 Auxiliary microswitches kit 3 poles CMS22	1	35 g
USMSW4	USMSW4	Auxiliary contact kit 1 pole US22	1	20 g

Locking devices

Catalog number	Item number	Design	Package	Weight
LOCK	M223525	Padlock	1	0.48 kg
TAGLOCKCMS22	V1015928	Locking kit (Tag and lockout)	1	25 g

Power Supply

Catalog number	Item number	Application	Features	Package	Weight
TBB1A	D210315	Max. rms current 90A	1 phase axial incoming power supply	50	10.1 g
TBB1C	E210316	Max. rms current 90A	1 phase lateral incoming power supply	50	10 g
TBB23A	F210317	Max. rms current 90A	2 & 3 phases axial incoming power supply	50	23.3 g
TBB23C	G210318	Max. rms current 90A	2 & 3 phases lateral incoming power supply	50	23.1 g

Wiring bars / Insulated bus bars

Catalog number	Item number	Design	Application	Package	Weight
CMS22BB2F6	C210314	double pole	Max. rms current 150A, for installation of 6 modules	5	0.30 kg
CMS22BB1F12	B210313	single pole	Max. rms current 90A, for installation of 12 modules	5	81 g

Indication facilities

Catalog number	Item number	Features	Package	Weight
CMS1422LHI	A225653	Indicator light kit	1	10 g

Modulostar® CMS27 - UltraSafe™ US27

For use with 27x60 fuse links. IP20

The innovative and comprehensive Modulostar® range of Mersen fuse-holders.

Modular fuse-holders are finger-safe as per IEC standards to an IP20 grade of protection. Including fuse changing, with the flick of a finger. Modular fuse-holders are available in 1, 2 or 3 poles, with or without visual blown fuse indicators, in IEC + UL version.

Multi-pole units can also be field assembled by ordering pin-ties assembly kit. The range offers the possibility to use microswitches (supplied with the holders or ordered separately) to allow remote indication. Modulostar® range is made of tough and durable thermoplastic or thermoset material.



FEATURES/BENEFITS:

- Finger safe
- Degree of protection: IP20
- Optional visual blown fuse indicator & microswitch
- Designs available for DIN rail mounting and direct mounting on board
- Modular design
- Multi-pole assembly kit available
- Plastic material UL94V2 mini
- Flame retardant materials with glow wire flammability index to 960°C

RECOMMENDED FOR USE WITH:

- 27x60mm ferrule fuses

RATINGS:

- **Volts:** 800V
- **Amps:** 140A Maximum

APPLICATIONS:

- All circuits up to 800V using high speed fuses for protection of small inverters, UPS systems, motor drives, etc.
- Non-load operation

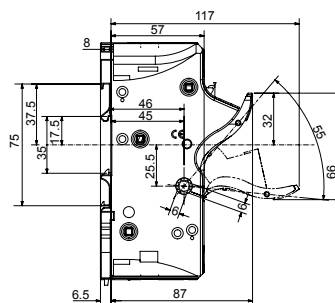
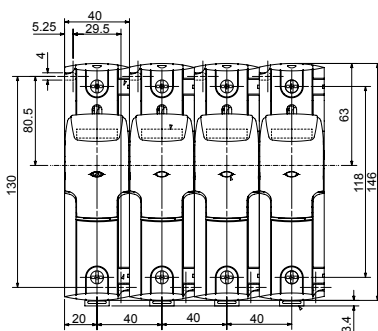
APPROVALS:

- IEC 60269-2 and IEC 60947-3 Compliance
- UL4248-1 Compliant
- RoHS Compliant
- Plastic material: NF 16101 & 16102 Requirement 2 Compliant
- Vibration tested for marine and railway applications
- CCC (screw terminal connection only)

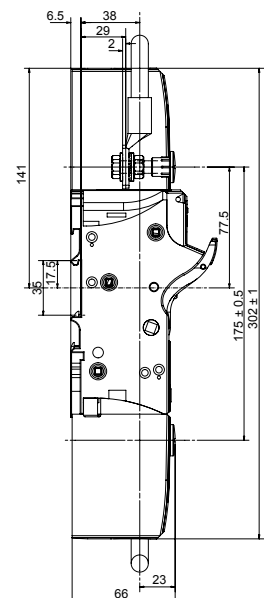
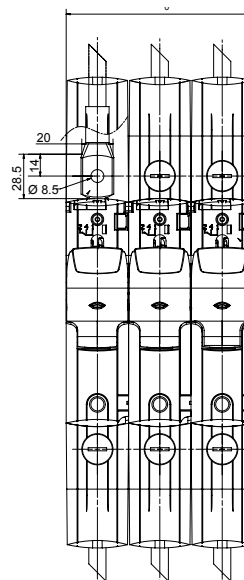


DIMENSIONS

Modulostar® CMS27 UltraSafe™ US27 fuse-holders for cylindrical fuse-links class 27x60mm (0114931)
Terminal connection: screw, U bolt or connector



Modulostar® CMS27 UltraSafe™ US27 fuse-holders for cylindrical fuse-links class 27x60mm (C118276) terminal connection: ring lug



Dimensions in mm

Modulostar® CMS27 - UltraSafe™ US27

For use with 27x60 fuse links. IP20



CMS271

Modulostar® fuse holders for 27x60 fuse-links, without indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
CMS271	R210580	1	single pole	3	0.30 kg
CMS271N	S210581	1 + N	single pole + neutral conductor	1	0.72 kg
CMS272	T210582	2	double pole	1	0.67 kg
CMS273	V210583	3	triple pole	1	0.91 kg
CMS273N	W210584	3 + N	triple pole + neutral conductor	1	1.25 kg
CMS27N	B210152	N	neutral conductor	3	0.37 kg



US271I

UltraSafe™ fuse holders for 27x60 fuse-links, with indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US271I	J226420	1	single pole	3	0.30 kg
US271NI	K226421	1+N	single pole + neutral conductor	1	0.73 kg
US272I	L226422	2	double pole	1	0.67 kg
US273I	M226423	3	triple pole	3	1 kg
US273NI	N226424	3+N	triple pole + neutral conductor	1	1.27 kg



US273

UltraSafe™ fuse holders for 27x60 fuse-links, without indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US271	G320005	1	single pole	3	0.30 kg
US272	H320006	2	double pole	1	0.66 kg
US273	J320007	3	triple pole	3	0.9 kg
US27N	R232729	N	neutral conductor	3	0.37 kg



US271MI

UltraSafe™ fuse holders for 27x60 fuse-links, with auxiliary microswitch and indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US271MI	R227600	1	single pole	1	0.32 kg
US272M2I	T227602	2	double pole, 2 microswitches	1	0.7 kg
US272MI	S227601	2	double pole, 1 microswitch	1	0.68 kg

UltraSafe™ fuse holders for 27x60 fuse-links, with auxiliary microswitch, indicator, and ring lug connection

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US271MIRING	Z227607	1	single pole	1	0.54 kg
US272M2IRING	B227609	2	double pole, 2 microswitches	1	1.00 kg

UltraSafe™ fuse holders for 27x60 fuse-links, with indicator and ring lug connection

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
US271NIRING	E223518	1+N	single pole + neutral conductor	1	0.8 kg
US271RING	B223515	1	single pole	3	0.47 kg
US272IRING	C223516	2	double pole	1	1.00 kg
US273IRING	D223517	3	triple pole	3	1.39 kg
US27NIRING	F223519	N	neutral conductor	3	0.34 kg

Modulostar® CMS27 - UltraSafe™ US27

For use with 27x60 fuse links. IP20

TECHNICAL DATA

	CMS27	US27I	US27	US27M	US27MIRING	US27IRING
Size	27x60	27x60	27x60	27x60	27x60	27x60
Installation mode	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]	direct mounting on board: 2xM4 screw with tightening torque 1-1.2Nm [8 to 10.6lbs-in]
Number of poles/phases	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3	1, 2	1, 2	1, 1+N, 2, 3
Conventional free air thermal current with fuse links I_{th}	140 A	140 A	140 A	140 A	140 A	140 A
Max. power dissipation of fuse links P_n	11 W	11 W	11 W	11 W	11 W	11 W
Utilisation category	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B
Rated insulation voltage U_i	800 V	800 V	800 V	800 V	800 V	800 V
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV	8 kV	8 kV
Degree of protection	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Voltage limit for blown fuse indicator	-	230 to 690V AC/DC	-	-	-	230 to 690V AC/DC
Indication System	-	with indicator	-	with auxiliary microswitch	with auxiliary microswitch and special connection	with indicator and special connection
Operating temperature	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C
Storage temperature	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C
Connection	rigid wire = 1.5-50mm ² [16-1/OAWG] multistrand wire = 1.5-16mm ² [16-6AWG] recommended tightening torque: 3.5Nm [30lbs-in] PZ3 or flat 8x1.2mm screw drivers recommended	rigid wire = 1.5-50mm ² [16-1/OAWG] multistrand wire = 1.5-16mm ² [16-6AWG] recommended tightening torque: 3.5Nm [30lbs-in] PZ3 or flat 8x1.2mm screw drivers recommended	rigid wire = 1.5-50mm ² [16-1/OAWG] multistrand wire = 1.5-16mm ² [16-6AWG] recommended tightening torque: 3.5Nm [30lbs-in] PZ3 or flat 8x1.2mm screw drivers recommended	rigid wire = 1.5-50mm ² [16-1/OAWG] multistrand wire = 1.5-16mm ² [16-6AWG] recommended tightening torque: 3.5Nm [30lbs-in] PZ3 or flat 8x1.2mm screw drivers recommended	-	-
Auxiliary switches						
Rated insulation voltage AC	250 V	250 V	250 V	250 V	250 V	250 V
Rated operational current to IEC 60947-5-1/AC15	4A/24V, 4A/48V, 3A/127V, 2,5A/240V	4A/24V, 4A/48V, 3A/127V, 2,5A/240V	4A/24V, 4A/48V, 3A/127V, 2,5A/240V	4A/24V, 4A/48V, 3A/127V, 2,5A/240V	4A/24V, 4A/48V, 3A/127V, 2,5A/240V	4A/24V, 4A/48V, 3A/127V, 2,5A/240V
Rated operational current to IEC 60947-5-1/AC13	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V	3A/24V, 1A/48V, 0,2A/127V, 0,1A/240V
Min. operational current AC/DC	100 mA	100 mA	100 mA	100 mA	100 mA	100 mA
Min. operational voltage AC/DC	20 V	20 V	20 V	20 V	20 V	20 V
Connection	Faston lugs	Faston lugs	Faston lugs	Faston lugs	Faston lugs	Faston lugs

Modulostar® CMS27 - UltraSafe™ US27

For use with 27x60 fuse links. IP20

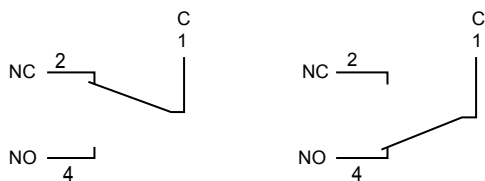
SPECIFIC USAGE CONDITIONS

Ambient temperature	> 20°C	30°C	40°C	50°C	60°C
Derating factor (I_e)	1	0.95	0.9	0.8	0.7

No of poles (side by side)	1 to 3	4 to 6	≥ 7
Derating factor of current (I_{th})	1	0.95	0.9

Nominal current of fuse-link gR	100 A	110 A
Max. operational current in fuse-holder	96 A	102 A
Cable wire section	25 mm ²	35 mm ²

Auxiliary Microswitch



ACCESSORIES

Kit for multi-phase connection

Catalog number	Item number	Design	Package	Weight
US27PAK	US27PAK	links for connection of multipole units	10	3 g

Auxiliary Switches

Catalog number	Item number	Design	Package	Weight
US27W1	US27W1	Microswitch kit	1	20 g

Wiring bars / Insulated bus bars

Catalog number	Item number	Design	Package	Weight
RAILDINSY	J213172	35mm Mounting rail symmetric	40	0.36 kg
RAILDINSYPERF	C213672	35mm Mounting rail symmetric drilled 1 pole	40	0.33 kg
RAILDINSYRENFZ	R215203	35mm Mounting rail symmetric reinforced	40	0.67 kg

703, U705, U710

Open style fuse holders for use with 14x51 and 22x58mm fuses

Mersen semiconductor fuse holders feature open face styles. Each version is rated 750 volts and accommodates 14 x 51 mm or 22 x 58 mm fuses. 703, U705 and U710 holders feature Mersen's unique adder-block design which can be snapped onto 1-, 2-, or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. A choice of box, screw or pressure plate connectors is offered to fit a wide range of standard or solid copper wire. All versions have verified dielectric strengths in excess of 2500V. A patented built-in DIN-rail adapter on the U710 blocks adds further design versatility. All fuse clips are made of high conductivity tin-plated copper with spring reinforced clips.



HIGHLIGHTS:

- Thermoplastic bases
- DIN-rail (U710) or Screw Mount
- Adder block design

RECOMMENDED FOR USE WITH:

- 703 use with 14x51mm A70QS, A70P, URD
- U705 use with 14x51mm A70QS, A70P, URD
- U710 use with 22x58mm A70QS, URD, up to 100A

RATINGS:

- **Volts:** 750V
- **Amps:** 30A (703), 50A (U7050), 100A (U7100)
- **SCCR:** 200kA dependent on fuse IR

APPLICATIONS:

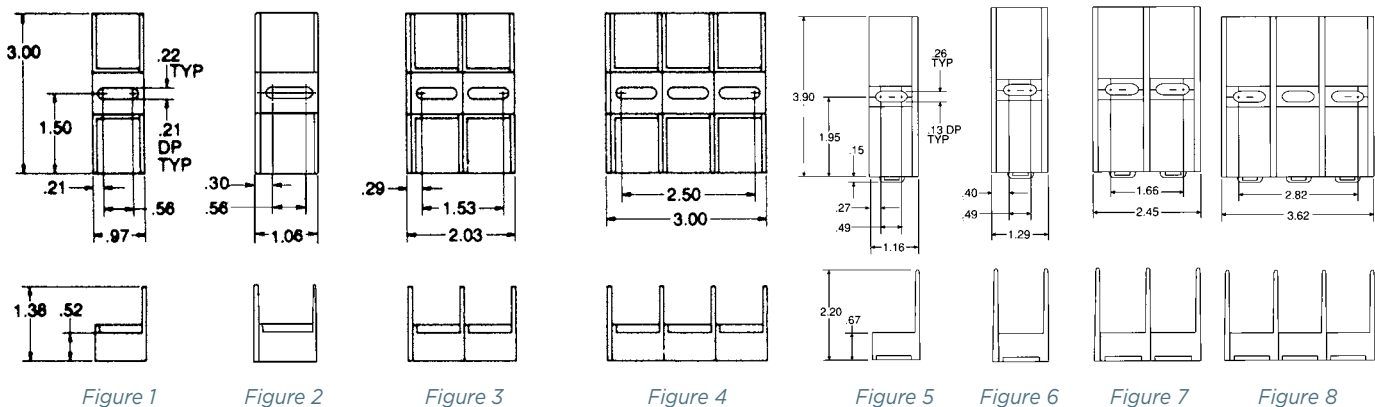
- All circuits up to 750 volts using high speed fuses for protection of small inverters, UPS systems, motor drives, etc.

APPROVALS:

- UL Recognized component guide IZLT2, File E52283
- CSA Certified class 6225, File 32169



DIMENSIONS:



703, U705, U710

Open style fuse holders for use with 14x51 and 22x58mm fuses

750 VOLT FUSE HOLDERS FOR 14 X 51 MM & 22 X 58 MM FUSES:

Catalog No.	Fuse Size	Current Rating I _n (A)	Poles	Connector Type	Wire Range	Figure	Connector Torque (In-Lb)
U70505	14 x 51	50	Adder	Box	Al/Cu #2-14	1	35
U70506			1			2	
U70507			2			3	
U70508			3			4	
70315	14 x 51	30	Adder	Screw	Cu #10-14	1	20
70316			1			2	
70317			2			3	
70318			3			4	
70325	14 x 51	30	Adder	Pressure Plate	Cu #10-14	1	20
70326			1			2	
70327			2			3	
70328			3			4	
70355	14 x 51	30	Adder	Box	Cu* #4-14	1	35
70356			1			2	
70357			2			3	
70358			3			4	
U71005	22 x 58	100	Adder	Box	Al/Cu #2-14	5	35
U71006			1			6	
U71007			2			7	
U71008			3			8	

*Copper box connectors and clips-for copper wires only.

Note: To convert 30A adder pole to single pole, use end barrier #U09322 100A adder pole to single pole, use end barrier #U09372.

Recommended mounting screws; #10 (.190" dia)

Midget

600V Fuse Blocks

Mersen midget fuse blocks accommodate all 30 ampere 1-1/2" x 13/32" midget fuses. A choice of box, screw, or pressure-plate connectors fit a wide range of stranded or solid copper wire. Insulators are glass-filled polycarbonate (GFPC) with verified dielectric strength in excess of 2500V. Fuse blocks feature a unique adder block which can be snapped onto 1-, 2- or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. All fuse clips are made of high conductivity tin-plated copper alloy.



FEATURES/BENEFITS: RECOMMENDED FOR USE WITH:

- Thermoplastic bases
- Adder block design

- **Midget Fuse Block** use with ATQ, ATM, A6Y-2B, A25Z-2, TRM, OTM, A15QS-2, GFN, GGU, A60Q-2, DCT

RATINGS:

Midget Block

- **Volts:** 600VAC / DC
- **Amps:** 30A Maximum
- **SCCR:** 100kA (depending on fuse IR); 10kA (when using quick connect terminal)

Temperature/flammability GFPC insulators rated 125°C, 94V-0 flammability.

APPLICATIONS:

- All circuits up to 600 volts using high speed fuses for protection of small inverters, UPS systems, motor drives, etc.

APPROVALS:

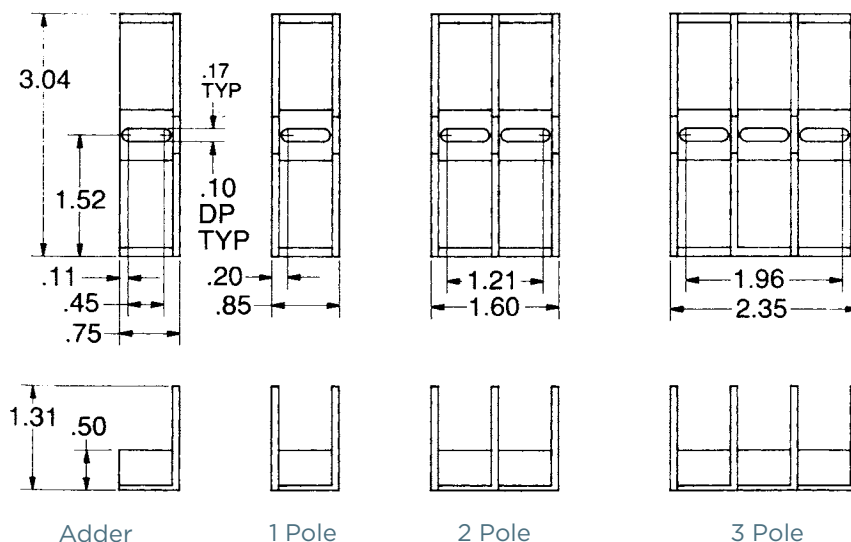
All fuse blocks meet the requirements of UL 4248

Midget Block

- UL Recognized Component guide IZLT2, File E52283
- CSA certified class 6225, File 32169



DIMENSIONS:



Midget

600V Fuse Blocks

600 VOLT, 30A MIDGET FUSE BLOCKS:

Connector		Poles*	Catalog No.	
Type	Wire Range		Midget	Listing
Screw w/ double quick connects at both ends	Cu #10-14	ADDER	30310	UL Rec. & CSA
		1	30311	
		2	30312	
		3	30313	
		4	30314	
Pressure plate (sems) w/double quick connects at both ends	Cu #10-14	ADDER	30320	UL Rec. & CSA
		1	30321	
		2	30322	
		3	30323	
		4	30324	
Copper box	Cu #6-14	ADDER	30350	UL Rec. & CSA
		1	30351	
		2	30352	
		3	30353	
		4	30354	

Note: To convert Midget adder pole to single pole, use end barrier #U09301.

* Available in any number of poles. Replace last digit in Catalog Number with number of poles needed.

Example: 303112 is a 12-pole screw/double QC connector Midget Fuse Block.

Total width of N poles = (N x .76) + .08 inches. 12 poles = (12 x .76") + .08" = 9.20".

Recommended mounting screws for all Midget fuse blocks: #8 (.164" dia.)

CLIP & CONNECTOR TYPES

30A MIDGET			
COPPER BOX CONNECTOR	SCREW WITH DOUBLE QUICK-CONNECTS	PRESSURE PLATE WITH DOUBLE QUICK-CONNECTS	PRESSURE PLATE WITH DOUBLE QUICK-CONNECTS (CLASS CC REJECTION END)
			

Fuse Clips for UL Cylindrical Fuses

30A & 60A Ø sizes 3/16", 1/4", 13/32" - 5mm, 6.35mm, 10mm

Mersen offers an extensive offer of fuse clips. Clips are made out of spring brass with tin plated finish and match perfectly our selection of fuses. They are designed to mount easily, to save space and provide tight contact. Choose from a wide range of traditional and space-saving fuse blocks, fuse clips and fuse holders.

FEATURES/BENEFITS: RECOMMENDED FOR USE WITH:

- Tin-plated spring brass
- Easy mounting
- Space saving
- Tight contact
- Non-spring reinforced
- Ferrule Fuses



RATINGS:

- **Volts:** 600V
- **Amps:** 60A Maximum

APPLICATIONS:

- All circuits up to 600 volts using high speed fuses for protection of small inverters, UPS systems, motor drives, etc.

APPROVALS:

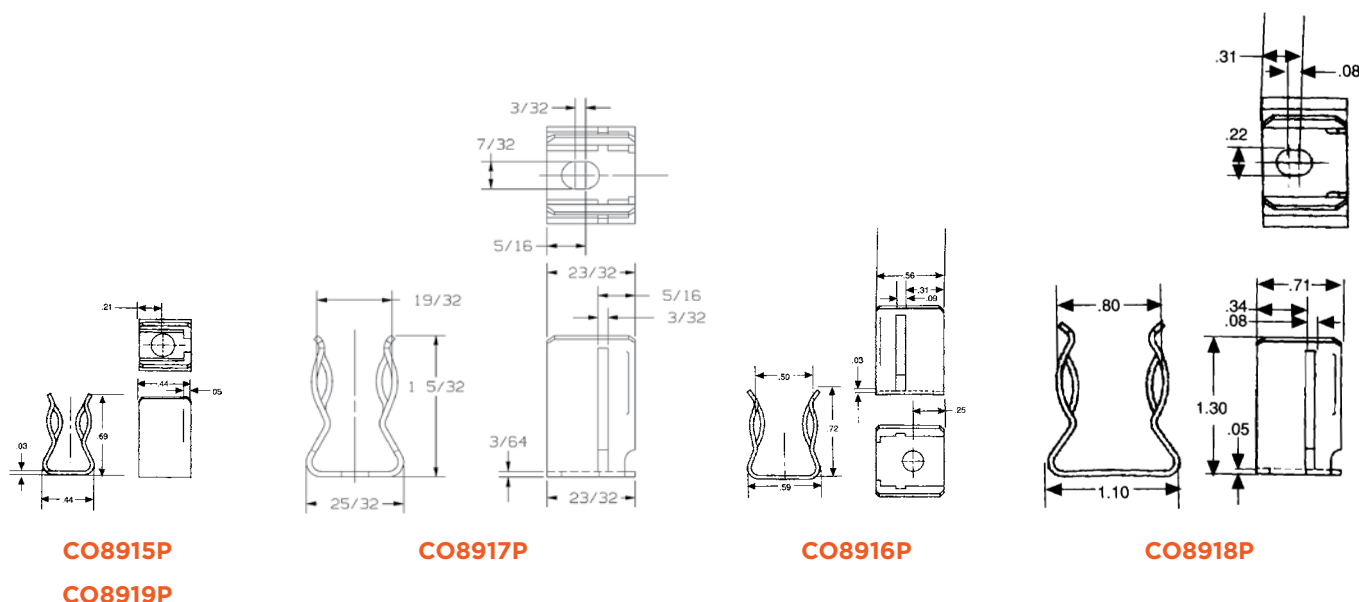
- UL Recognized guide IZLT2, File E52283



DIMENSIONS AND CATALOG NUMBERS:

Cat. No.	For Fuse Rating/Size			Mounting Details	
	Volts	Current Rating I _n [A]	Ferrule Dia.	Hole Size	Screw Size
C08915P	600	30	13/32"	.72 dia.	#8
C08919P	600	30	13/32"	.196 dia.	#10
C08916P	250	30	9/16"	.172 dia.	#8
C08917P	250	60	13/16"	.22 X .30"	#10
	600	30	13/16"	.22 X .30"	#10
C08918P	600	60	1-1/16"	.22 X .30"	#10

All clips are tin-plated copper alloy, non-spring reinforced.



Dimensions in inches

Fuse Clips for UL Cylindrical Fuses

30A & 60A Ø sizes 3/16", 1/4", 13/32" - 5mm, 6.35mm, 10mm

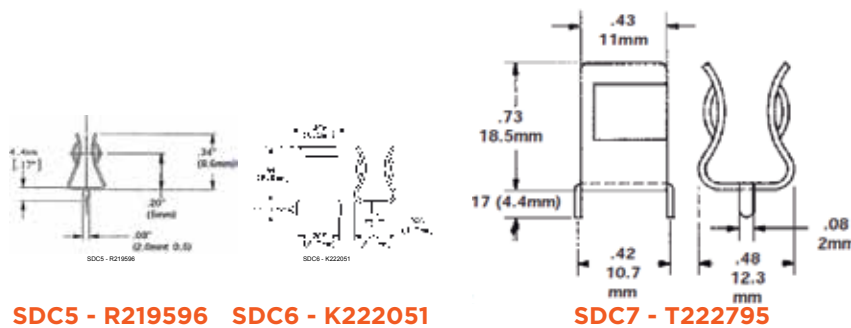
Fuse clips for 30 & 60 amps

Catalog number	Reference number	For fuse rating - size	Mounting details: hole/screw size
C08915P	R215479	30A - 13/32"	.172" dia. - #8
C08916P	V215988	30A - 9/16"	.172" dia. - #8
C08917P	R216491	30A or 60A - 13/16"	.22"x.30" - #10
C08918P	F217010	60A - 13/16"	.22"x.30" - #10
C08919P	P217524	30A - 13/32"	.196" dia. - #10

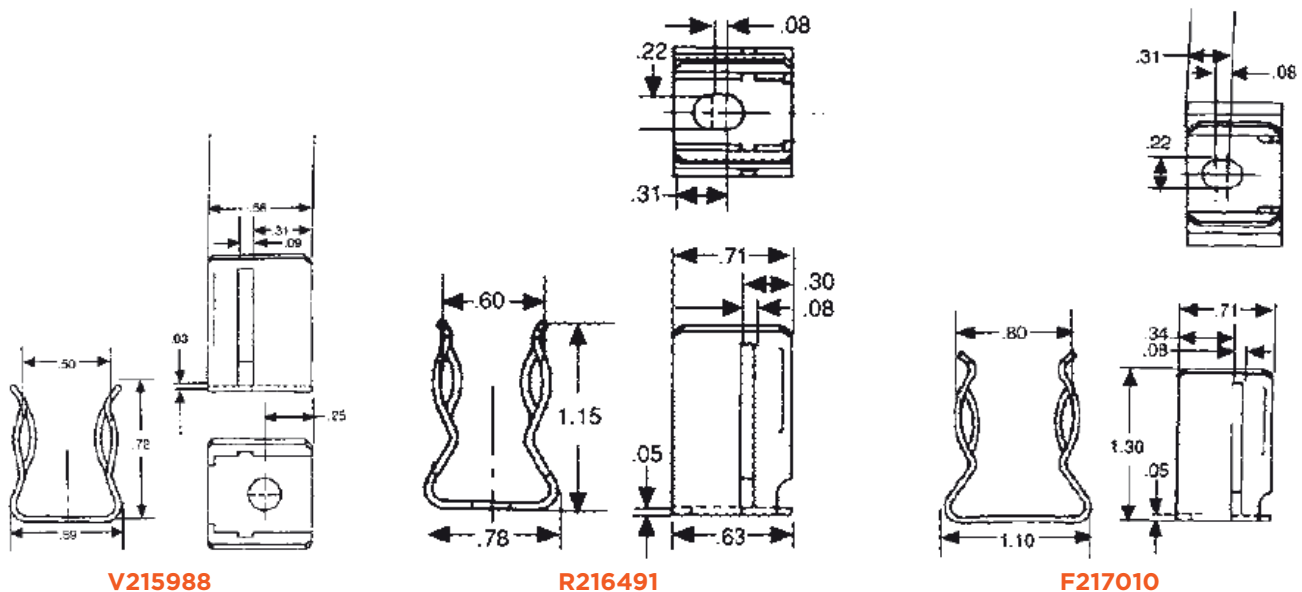
Fuse clips for PC Board

Catalog number	Reference number	For fuse rating - size
SDC5	R219596	10A max - 13/64"
SDC6	K222051	15A max - 1/4"
SDC7	T222795	30A max - 13/32"

DIMENSIONS



Dimensions in inches (mm)



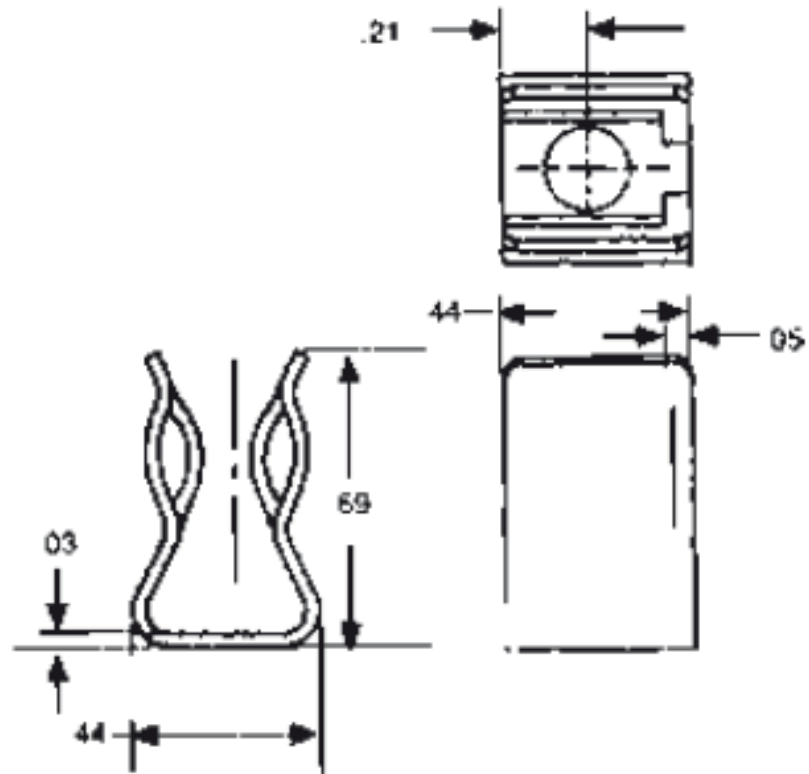
Dimensions in inches

Fuse Clips for UL Cylindrical Fuses

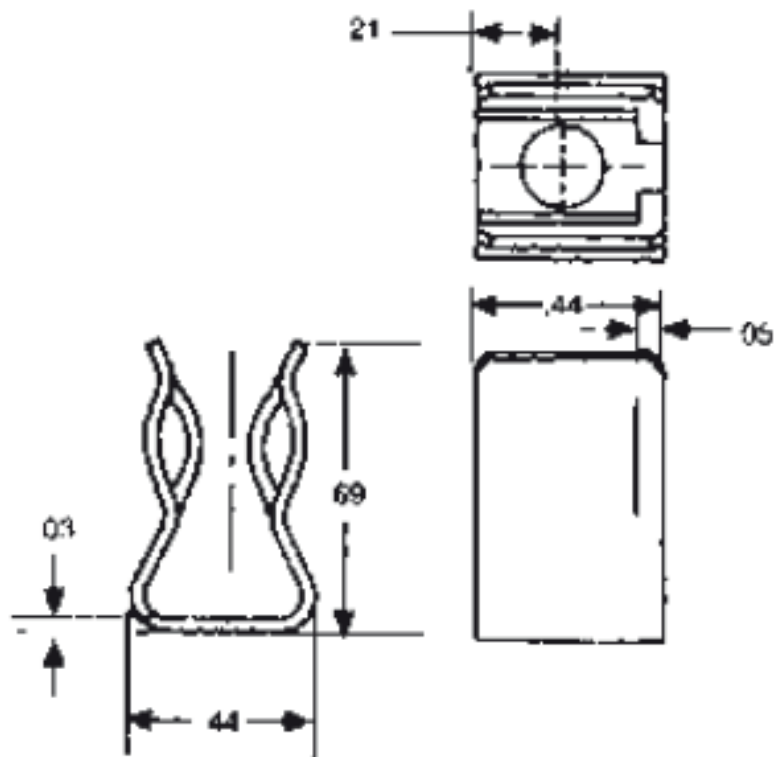
30A & 60A Ø sizes 3/16", 1/4", 13/32" - 5mm, 6.35mm, 10mm

DIMENSIONS

R215479



P217524



Fuse Clips for IEC Cylindrical Fuses

Ø sizes 10, 14, 20, 22, 27, 36, 45, 55

Mersen offers an extensive offer of fuse clips for low voltage and high voltage cylindrical fuses. They match perfectly our selection of fuses. They are designed to mount easily, to save space and provide tight contact. Choose from a wide range of traditional and space-saving fuse blocks, fuse clips and fuse holders.

FEATURES/BENEFITS: RECOMMENDED FOR USE WITH:

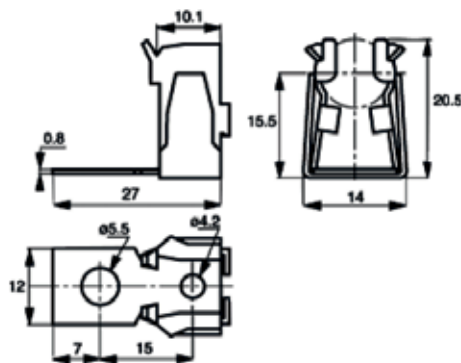
- Silver plated copper clips: extremely high thermal and electric conductivity (except nickel plated copper for MR20)
- Stainless steel pressure springs: highly resistant to salt spray
- Screwing on isolators mounting type
- Screwing on bars or insulated bars mounting type
- Welding on P.C.B. mounting type (MR 10 CI)

- Ferrule Fuses

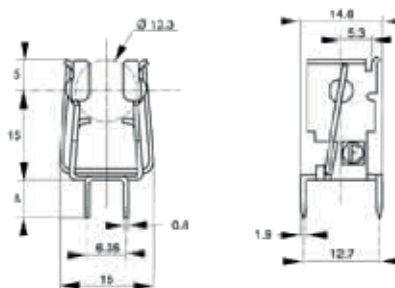


DIMENSIONS

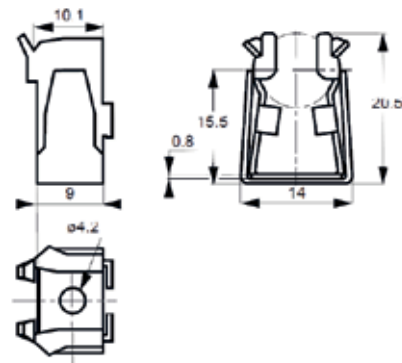
MR10RESSORT



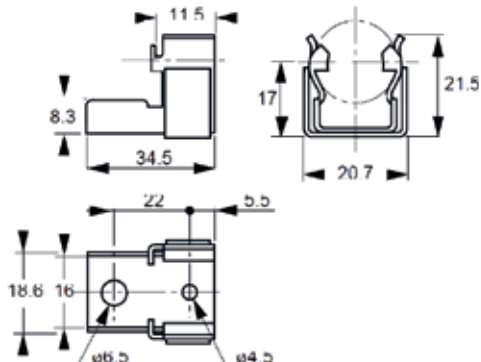
MR10CIRESSORT



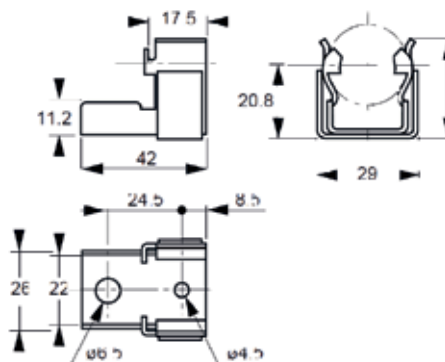
MR10RESSORTSP



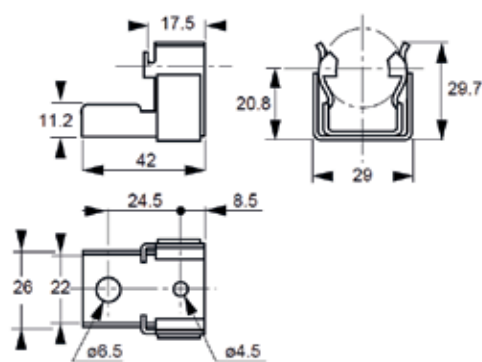
MR14SPRING



MR20.6RESSORT



MR22SPRING



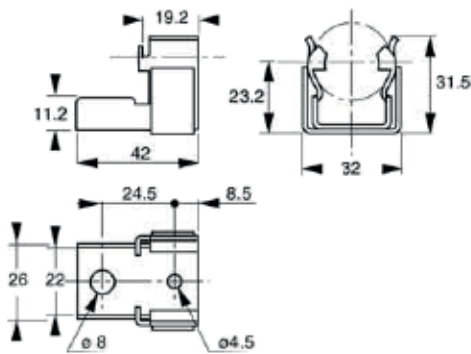
Dimensions in mm

Fuse Clips for IEC Cylindrical Fuses

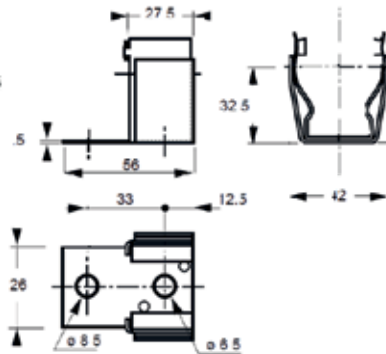
Ø sizes 10, 14, 20, 22, 27, 36, 45, 55

DIMENSIONS

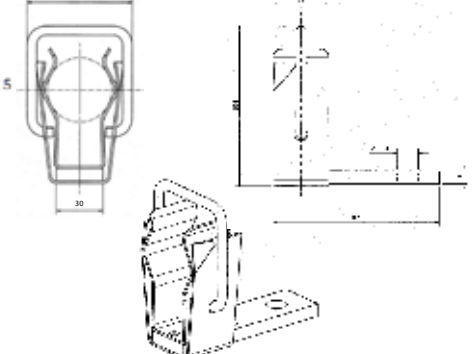
MR27RESSORT



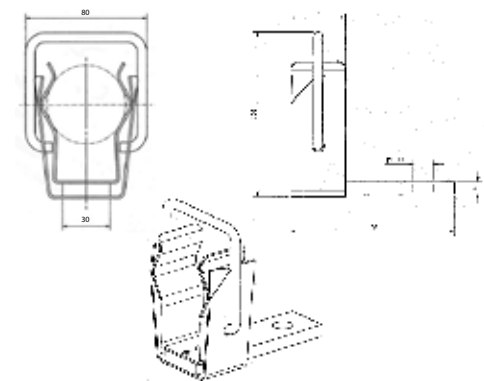
MR36R



MR45

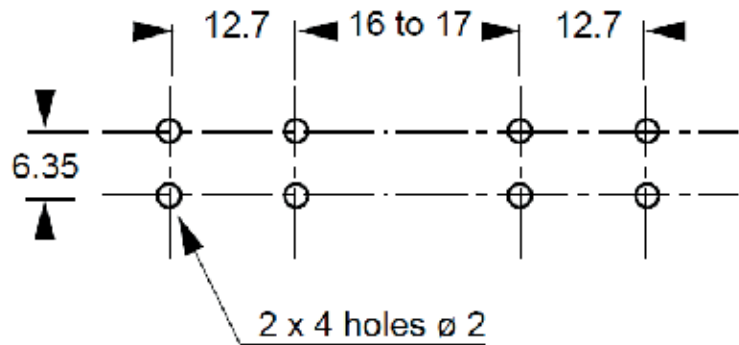


MR55

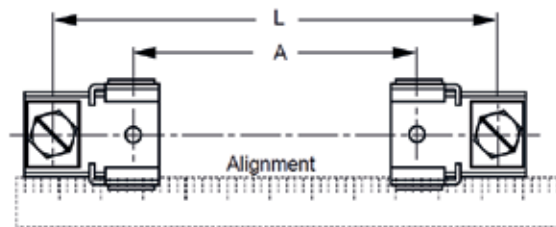


Mounting Instructions

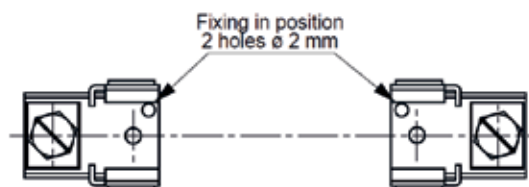
P.C.B. Drilling for MR10 CI clip (10x38 size fuse)



Clip Mounting



Fuse size	A	L
10 x 38	31	61
10 x 180	173	203
36 x 127	100	166
36 x 190	165	231
36 x 250	223	289
45 x 192	228	363
45 x 292	328	463
45 x 367	403	538
45 x 442	478	613
45 x 537	573	708
55 x 259	228	363
55 x 520	489	624



Dimensions in mm

Mounting of two elastic stop pins of 2 mm dia. for fixing clips in position

Fuse Clips for IEC Cylindrical Fuses

Ø sizes 10, 14, 20, 22, 27, 36, 45, 55

MR 10 and MR 10 CI

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR10RESSORT	B098004	32	32 A	6 mm ²	20	7 g
MR10CIRESSORT	Y098507	32	32 A	6 mm ²	1000	4.5 g
MR10RESSORTSP	C098994	32	32 A	6 mm ²	20	5.7 g

MR 14

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR14SPRING	G098170	63	63 A	10 mm ²	10	16 g

MR 20

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR20RESSORT	H099988	125	125 A	35 mm ²	20	40 g

MR 22

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR22SPRING	K098909	135	135 A	35 mm ²	20	40 g

MR 27

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR27RESSORT	Y092734	250	250 A	120 mm ²	20	50 g

MR 36

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR36R	M091275	250	250 A	120 mm ²	1	85 g

MR 45

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR45R	L096472	315	315 A	185 mm ²	1	0.44 kg
MR45SPL	S210236	315	315 A	185 mm ²	1	0.23 kg

MR 55

Catalog number	Item number	Current Rating I_n (A)	Maximum RMS continuous current through IN rated current fuses	Recommended copper cable section	Package	Weight
MR55R	L078969	315	315 A	185 mm ²	1	0.45 kg

AC & DC Square Body Fuse Bases

Bases for PSC ranges: SI TT, SI 000/00, SI DIN

These fuse bases are to be used with blade and bracket-type fuses as per DIN 43653 standard:

- Sizes 000 - 00, 80 mm between axes
- Sizes 0 - 1 - 2 - 3, 80 and 110 mm between axes

FEATURES/BENEFITS: RECOMMENDED FOR USE WITH:

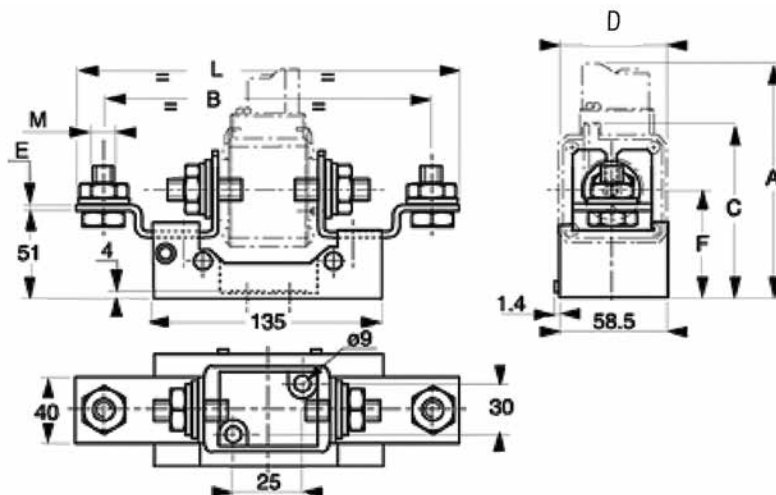
- Mounting in one-pole fuse holder simplifies fuse replacement for installations connected with cable and bars
- Finger safe version available
- For TTF stud-type fuses
- For TTF version, studs are delivered with the fuse holder

DIMENSIONS:

Standard Version SI Fuse Holders: SI TT

Designation	A	B	C	D	E	G	L	M	F	Catalog No.
SI TT 30/31	118[30]	170	83 [30]	42[30]	4	50.6	202	M8	57	
	123[31]		88 [31]	51[31]						
SI TT 70/71	118[70]	193	83 [70]	42[70]	4	74	225	M8	67	
	123[71]		88 [71]	51[71]						
SI TT 32/33	137[32]	170	93 [32]	60[32]	6	50.6	202	M10 [32]	57	
	145[33]		109 [33]	75[33]				M12 [33]		
SI TT 72/73	137[72]	193	93 [72]	60[72]	6	71	225	M10 [32]	67	
	145[73]		109 [73]	75[73]				M12 [33]		

Partition mounting not possible. Panel drilling: 25x30 mm



AC & DC Square Body Fuse Bases

Bases for PSC ranges: SI TT, SI 000/00, SI DIN

DIMENSIONS:

Standard Version SI Fuse Holders: SI 00 DIN 80 and SI 000 DIN 80

Designation	A	B	C	D	E	G	L	Fuse Sizes	Catalog No.
SI 000 DIN 80	100	80	80	19	25	80	100	000-17x49-27x60 DIN 80	
SI 00 DIN 80	133	130			46.5	79	148	00-27x60 DIN 80	

Partition mounting only for SI 00 DIN 80

* Electrical connection of fuse and fuse holder via supplied studs, nuts and washers

Maximum recommended tightening torque: Nm for M8 screws.

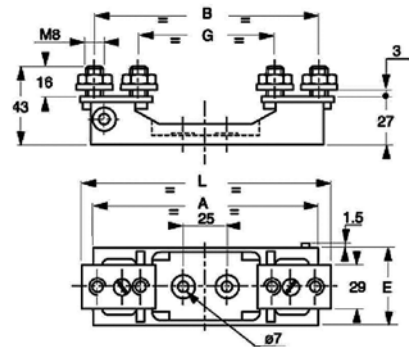
26 Nm for M10 screws.

46 Nm for M12 screws.

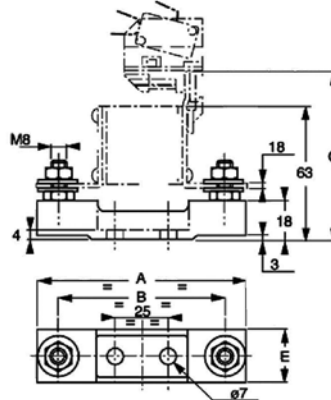
- Fixing of base on plate or bar via screws not supplied.

M6 for SI 000 and SI 00 Tightening torque 7 ± 1.5 Nm. M8 for SI TT Tightening torque 10 ± 2 Nm.

SI 00 DIN 80

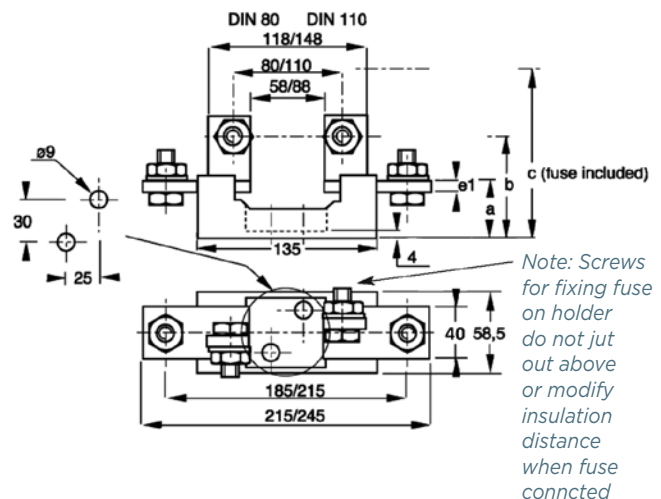


SI 000 DIN 80



Standard Version SI Fuse Holders: SI DIN 80-110

Designation	a	e1	b	c	Fuse Sizes	Catalog No.
SI DIN 80 630	40	5	68	93.5	30 D08	
				99.0	31 D08	
				103.5	32 D08	
				110.3	33 D08	
SI DIN 110 630	40	5	68	93.5	30-70 D11	
				99.0	31-71 D11	
				103.5	32-72 D11	
				110.3	33-73 D11	
SI DIN 80 1 250	45	10	73	98.5	30 D08	
				104	31 D08	
				108.5	32 D08	
				115.3	33 D08	
SI DIN 110 1 250	45	10	73	98.5	30-70 D11	
				104	31-71 D11	
				108.5	32-72 D11	
				115.3	33-73 D11	



Partition mounting impossible

* Electrical connection of fuse and wires by M10x30 screws made in plated steel minimum 8-8 class.

Screws included. Maximum recommended tightening torque: 44 Nm for M10 screw.

- Fixing of base with screws not supplied: M8. Tightening torque 10 ± 2 Nm.

AC & DC Square Body Fuse Bases

Bases for PSC ranges: SI TT, SI 000/00, SI DIN

REFERENCE AND CATALOG NUMBERS:

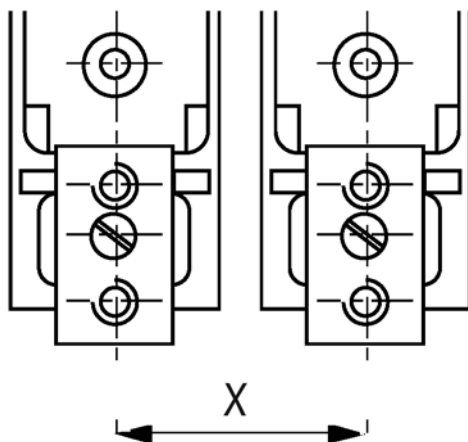
Standard Version SI Fuse Holders

Designation	Ref. Number	Weight (g)	Packaging	Catalog Number
SI TT 30/31	B 301232	1 960	1	SITT30/31
SI TT 70/71	C 301233	1 960	1	SITT70/71
SI TT 32/33	D 301234	2 900	1	SITT32/33
SI TT 72/73	E 301235	2 900	1	SITT72/73
SI 000 DIN 80	C 220710	90	12	SI000DN80
SI 00 DIN 80	Q 098040	205	3	SI00DN80
C - CLO*	M 091344	37	2	CLO
SI DIN 80 630	L 098772	625	1	SIDN80630A
SI DIN 110 630	F 098031	625	1	SIDN110630A
SI DIN 80 1250	F 098560	885	1	SIDN801250A
SI DIN 110 1250	L 091941	885	1	SIDN1101250A

* Necessary for SI 00 DIN 80 one-pole mounting.

DISTANCE "X" BETWEEN POLES AXES (WITHOUT PARTITION):

Designation	Fuse Sizes	Operating Voltage U				
		400 V	500 V	690 V	1000 V	1250 V
SI TT 30/31	30-31	58.5	61	65	71	76
SI TT 70/71	70-71					
SI TT 32/33	32-33	79.5	84.5	88.5	94.5	99.5
SI TT 72/73	72-73					
SI 000 DIN 80	000	25	35	39	45	50
SI 00 DIN 80	00	46.5	46.5	46.5	50	55
SI DIN 80 630 630-1250	30-31	58.5	61	65	71	76
	70-71	79.5	84.5	88.5	94.5	99.5
SI DIN 110 630-1250	30-31-70-71	58.5	61	65	71	76
	32-33-72-73	79.5	84.5	88.5	94.5	99.5



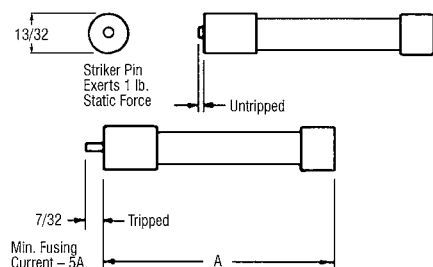
Blown Fuse Indicators

TRIGGER® INDICATOR

The Trigger Indicator (catalog number suffix TI) is available on many blade type fuses, primarily Form 101 high speed fuses and some Class L fuses. The TI allows blown fuses to be identified visually, eliminating the need for resistance or continuity testing.

SHAWMUT TRIGGER®

The Shawmut Trigger Indicator is a field-mountable blown-fuse indicator which is wired in parallel with the fuse to be monitored. The striker pin exerts a static force of one pound and may be used to actuate a switch. It is available in 130 volt (TI-130), 600 volt (TI-600), and 1500 volt (TI-1500) ratings. The TI-600 Trigger is a UL Listed accessory. The Shawmut Trigger is not a fuse and should only be used in parallel with fuses rated 70A or higher. To mount the Trigger, use two midget fuse clips (for 13/32" diameter fuses) found in the Fuse Clip section.



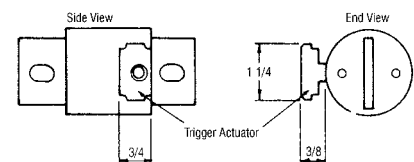
CATALOG NUMBERS

Cat No.	Volts	Length A-In.
TI-130	0-130	2
TI-600	0-600	2
TI-1500	0-1500	3-1/2



TRIGGER® ACTUATOR

The Trigger Actuator (catalog number suffix TA) has two functions and is an option available on many Amp-Trap® fuses. First, it provides visual indication of an open fuse and second, it provides a mount for an Add-On-Switch (AOS-) which can indicate a blown fuse via a signal light or initiate appropriate control action. The Trigger Actuator has no measurable I²t or arc voltage effect on fuses rated 65A or higher. It will add 2 to 5 amperes of long term rating and requires a minimum circuit voltage of 5 to 10 volts to activate.



Blown Fuse Indicators

ADD-ON SWITCH

Add-On-Switches contain one single-pole double-throw contact rated 4 amperes resistive and 1 ampere inductive at 250V AC maximum. Two versions of the Add-On-Switch are available. Catalog number AOS-S has screw terminals. Catalog number AOS-Q accommodates push-on connectors.



IL INDICATOR

The “IL” indicator, developed from proven designs, provides a blown fuse indication system which does not sacrifice the excellent I²t characteristics of Mersen fuses. Its low voltage design requires just 0.9 volts to activate the indicator, thus insuring reliable fuse performance under all conditions. The red pop up button is located in the center of the fuse body for ease of visibility and optimum voltage isolation. Interference with busbar and cable connection is significantly less than other designs. The addition of the “IL” indicator provides blown fuse indication on virtually all Mersen fuses. Optional auxiliary microswitches for remote signaling are also available for use with the “IL” indicator.



APPROVALS:

- UL Recognized



FEATURES/BENEFITS:

- Visual indication or remote signaling
- Optional auxiliary microswitches
- Same size for all fuses
- Retains optimum performance
- Operation at all times above 0.9 volts

HIGHLIGHTS:

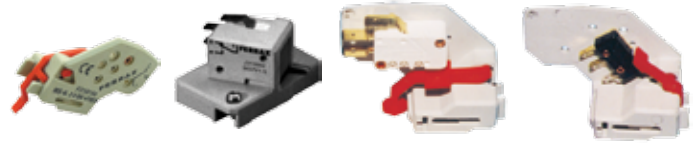
- Low voltage design
- Center location
- Rugged construction
- Proven reliability
- AC or DC

For blown fuse indication on general purpose fuses, please consult factory.

Square Body Fuse Microswitches and Studs

Microswitch systems adapted to the following fuses:

- PSC sizes 30, 31, 32, 33 / 70, 71, 72, 73
- Blade-type PSC (PA) sizes 0-1, 2-3 / 70, 71, 72, 73
- PSC sizes 000 / 00



MS 3V FUSE SIZES: 30 - 33

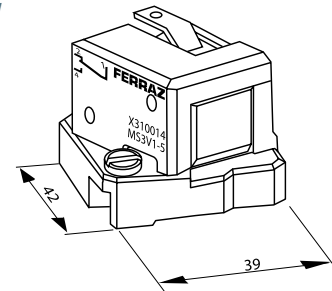
Fuse Size	Description	Ref. No.	Indication Style	Weight (g)
30, 31 32, 33	MS 3V 1-5 (fig.1)	X310014	Standard NO-NC	34
	MS 3V 1-5 BS (3)	W310013	Low Level NO-NC	34
	MS 3V 1-9 BS (4)	T310011	Low Level NO-NC	44
	MS 3V 1-5 ET (fig.3)	R310009	Low Level NO-NC	34

(3) Same as fig. 1

(4) Same dimensions as fig. 1 but with 2 microswitches side by side

(9) Watertightness class

Fig. 1



MS 7V1 FUSE SIZES: 70 - 73

Fuse Size	Description	Ref. No.	Indication Style	Weight (g)
70, 71 72, 73	MS 7V 1-5 (fig.4)	J310002	Standard NO-NC	45
	MS 7V 1-5 BS (7)	K310003	Low level NO-NC	45
	MS 7V 1-9 BS (8)	P310007	Double pole NO-NC Low level	55
	MS 7V 1-5 ET (fig.5)	S310010	Low level NO-NC	55

(7) Same as fig. 4

(8) Same dimensions as fig. 4 but with 2 microswitches side by side

(9) Watertightness class

Attention: Microswitch systems exclusively designed for Mersen PSC fuses are fitted with a patented trip-indicator, saving the use of an EDV.

Fig. 2

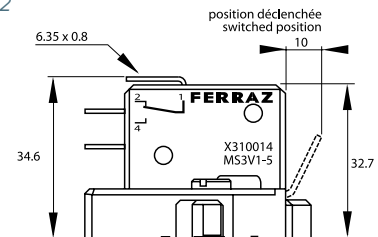
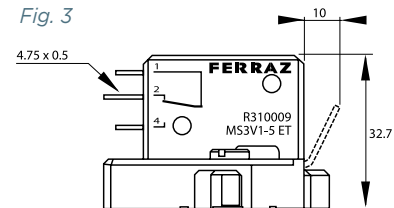


Fig. 3



STANDARD THREADED STUDS

Size	Reference No. Per Pair	Ref. and Dimension Per Pair of Studs	Weight (g)	Max Stud Mounting Torque (Nm)*	Max Nut Tightening Torque (Nm)*		
					Fig. 1	Fig. 2	Fig. 3
70 & 71	S098801	HC M8 X 30 & M 8 X 35	23	13	13.5	13.5	13.5
72	T098802	HC M 10 X 30 & M 10 X 50	40	15	26	26	26
73	V098803	HC M 12 X 35 & M 12 X 50	60		46	46	15
2X72	W098804	HC M 10 X 50	50		26	26	26
2X73	X098805	HC M 12 X 50	70		46	46	15

Packaging: 6 pairs

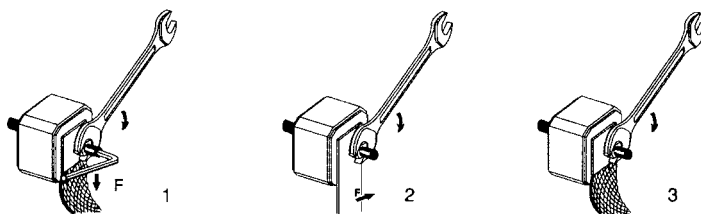


Fig. 4

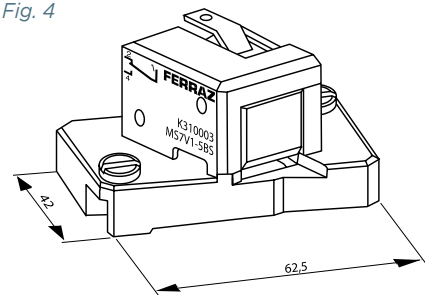
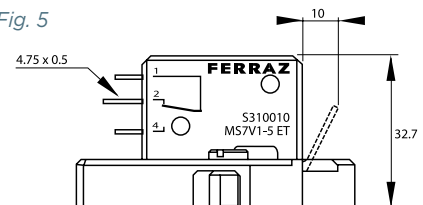


Fig. 5

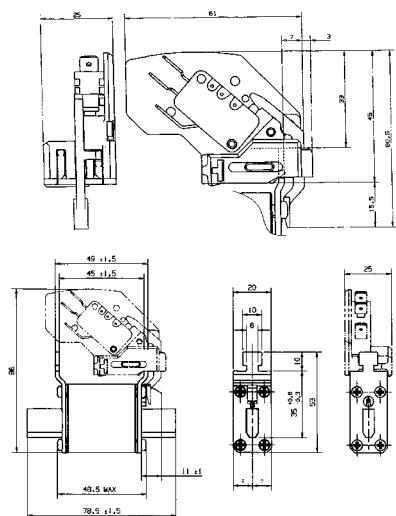


Square Body Fuse Microswitches and Studs

MS INDICATION SYSTEM FOR 000 & 00 FUSES AS PER DIN 43653 AND DIN 43620 TERMINALS

Automatically resettable, these microswitch systems indicate fuse presence (PRES) and proper mounting. In case of improper mounting or fuse melting, terminals 1-4 closed.

Catalog Number	Reference No.	Weight [g]
MS 4L 2-5 B6 + PRES (fig. 1) (1)	F210156	30
MS 4L 2-5 B2 + PRES (fig. 2) (2)	G210157	26



(1) 6.3mm Clips

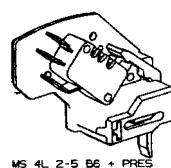


Fig. 1

(2) 2.8mm Clips

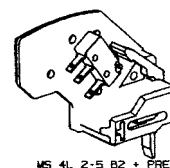
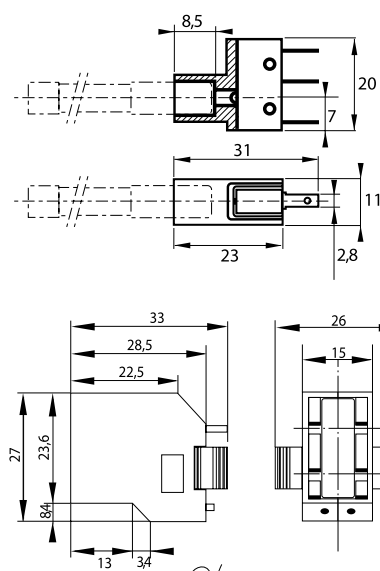


Fig. 2

MC INDICATION SYSTEM FOR BS 88-4 BLOWN FUSE TRIP-INDICATOR



Catalog Number	Reference No.	Weight [g]
MC 6,3 GR 2-5 N with external trip-indicator	Y310015	10

Catalog Number	Reference No.	Weight [g]
MC 36 GR 2-5 for British standard fuses with internal indicator 27 and 36	P092496	10

Protistor® Fuse Microswitches

Microswitch systems for round and square-body fuses (not for PSC fuses)

The Protistor fuse microswitch is a remote signaling system designed to fit on round and square body Protistor fuses (not for PSC fuses) that are equipped with microswitch support. It indicates fuse status and has a manual reset feature.

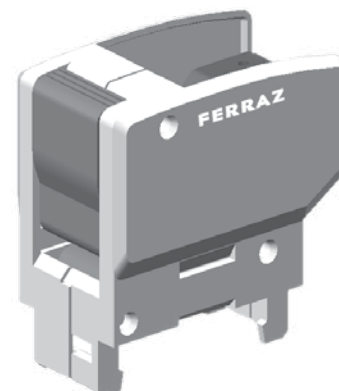
FEATURES/BENEFITS:

- Remote signaling systems for fitting on Mersen fuses equipped with microswitch support
- Indication of fuse status
- Manual reset
- Standard and low current models with different insulation ratings
- Watertight types for use in corrosive atmospheres

NOTE (2): The 26.4 dimension is the same with 1 or 2 separated circuits NO-NC.
Tests with sine vibrations carried out at ambient with scanning of the three main holder axes.

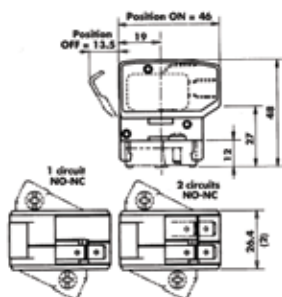
Spectrum: 1st segment (2 to 16 Hz) constant trip $x = 5 \text{ mm peak}$.
2nd segment (16 to 250 Hz) constant acceleration $y + 5 \text{ g peak}$

Exponential scanning speed: 1 octave per min.
Duration: 2 hours per axis.



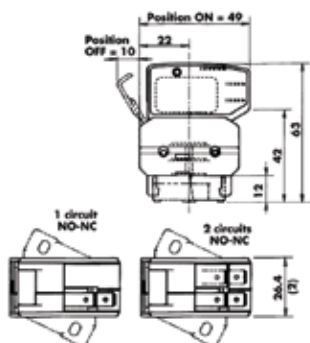
DIMENSIONS:

Remote Signaling with 1250VAC/DC Insulation Voltage



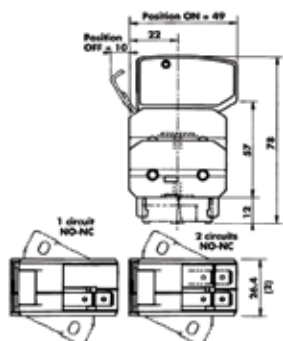
Quantity of NO-NC separated circuits	Contact	Catalog Number	Ref. Number	Weight [g]	Pack. [1]
1	standard	MC3E 1-5N	D310020	39.5	3
1	low level	MC3E 1-5NBS	E310021	39.5	3
2	low level	MC3E 1-9NBS	F310022	45.7	3
1	watertight	MC3E 1-5NET	L310027	40.2	3

Remote Signaling with Insulation Voltage up to 2200VAC/DC



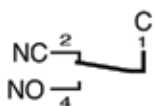
Quantity of NO-NC separated circuits	Contact	Catalog Number	Ref. Number	Weight [g]	Pack. [1]
1	standard	MCR3E 1-5N	G310023	51.7	1
1	low level	MC3RE 1-5NBS	P310030	51.7	1
2	low level	MCR3E 1-9NBS	H310024	58.0	1
1	watertight	MCR3E 1-5NET	Q310031	52.5	1

Remote Signaling with Insulation Voltage up to 6000VAC/DC

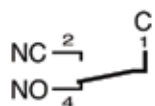


Quantity of NO-NC separated circuits	Contact	Catalog Number	Ref. Number	Weight [g]	Pack. [1]
1	low level	MC2R3E 1-5NBS	J310025	64.0	1
1	watertight	MC2R3E 1-5NET	N310029	64.8	1
2	low level	MC2R3E 1-9NBS	K310026	70.3	1

Electrical diagram of each microswitch circuit



Non-blown fuse
Microswitch ON



Blown fuse
Microswitch OFF

All of these signaling systems are resettable and fitted with silver-plated 3-terminal microswitch C, NO and NC. The C terminal is on the top and connection is made via 6.35 mm clips except for watertight models whose clips are 4.8 mm wide



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