

UltraSafe™ US14

Modular fuse-holders

FUSE HOLDERS, FUSE BASES AND SUPPORTS

UL/CSA FUSE HOLDERS



The innovative and comprehensive UltraSafe™ range of Mersen fuse-holders.

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.

TECHNICAL DATA OVERVIEW

UL ratings AC	800 VAC, 50 A, 50 kA
UL ratings DC	1000 VDC, 50 A, 50 kA
Voltage AC	750 VAC
Voltage DC	750 VDC
Amper (A)	50 A
SCCR	100 kA
Mounting	Installation on to DIN rails to EN 60716
Product Size	for cylindrical fuse links 14x51
Number of Poles	1 to 4 poles, 1+N, 3+N

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

APPLICATIONS

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

STANDARDS

- 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



PRODUCT RANGE



US143

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

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
US141	Z331153	1	US14 single pole	0.143 kg	6
US141N	D331157	1 + N	US14 single pole + neutral conductor	0.2966 kg	3
US142	G331137	2	US14 double pole	0.2833 kg	3
US143	N331143	3	US14 triple pole	0.43 kg	2
US143N	X331151	3 + N	US14 triple pole + neutral conductor	0.6 kg	1



US141I

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

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
US141I	A331154	1	US14 single pole	0.1433 kg	6
US142I	H331138	2	US14 double pole	0.3 kg	3
US143I	P331144	3	US14 triple pole	0.435 kg	2
US143NI	R227922	3 + N	US14 triple pole + neutral conductor	-	1



US142M2

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

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
US141M	B331155	1	US14 single pole, 1 microswitch	0.1525 kg	6
US142M	J331139	2	US14 double pole, 2 microswitches	0.3076 kg	3
US142M2	L331141	2	US14 double pole, 2 connected microswitches	0.3076 kg	3
US143M	Q331145	3	US14 triple pole	0.4475 kg	2
US143M2	T331148	3	US14 triple pole, 2 connected microswitches	0.4525 kg	2
US143NM	Y331152	3 + N	US14 triple pole + neutral conductor, 3 microswitches	0.623 kg	1



US143MI

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

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
US141MI	C331156	1	US14 single pole	0.1533 kg	6
US142MI	K331140	2	US14 double pole	0.31 kg	3
US142M2I	M331142	2	US14 double pole	0.2833 kg	3
US143MI	S331147	3	US14 triple pole	0.455 kg	2
US143M2I	W331150	3	US14 triple pole	0.455 kg	2

TECHNICAL DATA

	US14	US14I	US14M	US14MI
Size	14x51mm	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
Connection	Max. tightening torque: 3.5Nm (30lbs-in) rigid wire = 1.5-35mm ² (16-3AWG) multistrand wire = 25mm ² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) rigid wire = 1.5-35mm ² (16-3AWG) multistrand wire = 25mm ² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) rigid wire = 1.5-35mm ² (16-3AWG) multistrand wire = 25mm ² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)	Max. tightening torque: 3.5Nm (30lbs-in) rigid wire = 1.5-35mm ² (16-3AWG) multistrand wire = 25mm ² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (max. diameter 6mm)
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

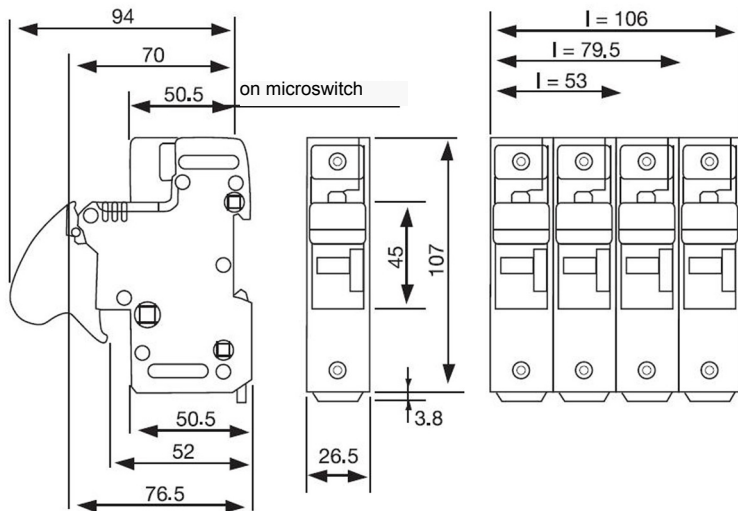
SPECIFIC USAGE CONDITIONS

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

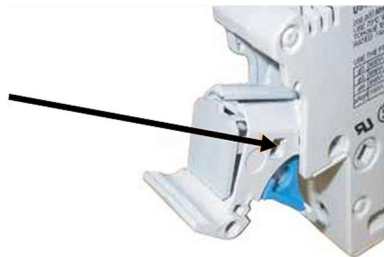
No of poles (side by side)	1 to 3	4 to 6	>= 7
Derating factor of current (I_{th})	1	0.95	0.9

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 mm ²	6 mm ²	10 mm ²	10 mm ²	16 mm ²

DIMENSIONS



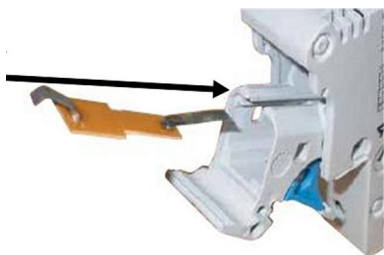
FUNCTIONS



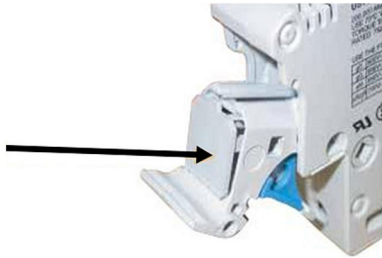
Indicator light kit for US14

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

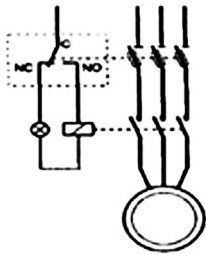
1. Carefully remove the cover with 2 screw drivers.



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.

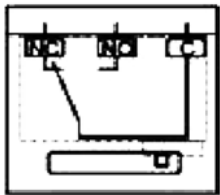


Auxiliary microswitch functions

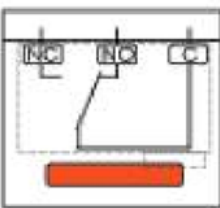
Fuse melting: a fuse-holder containing a fuse with a striker sends out a signal when the fuse element melts.

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

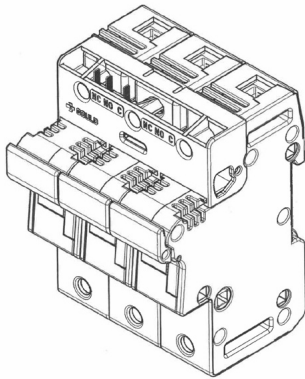
Utilization category AC15: 4A/24V, 4A/48V, 3A/127V, 2.5A/240V

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.

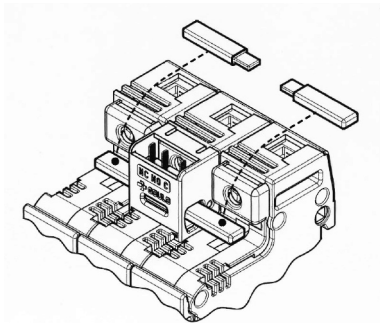
Connection: Faston lugs



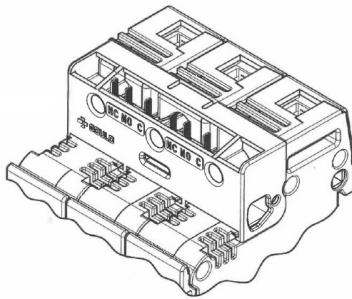
Auxiliary microswitch can only be mounted on previously prepared fuse disconnectors. Use of the auxiliary microswitch for fuse melting requires the use of fuses with strikers.

1 auxiliary microswitch

USMSW2

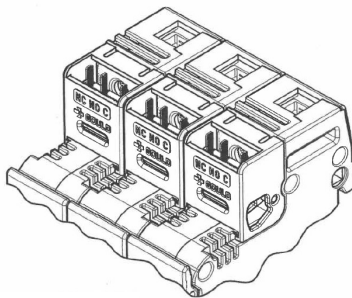


USMSW1 + US1422BP



2 auxiliary microswitches

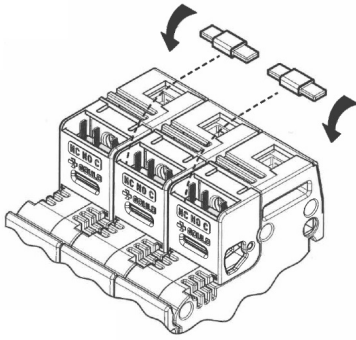
USMSW3



3 auxiliary microswitches

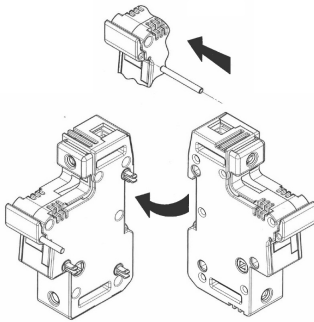
Independent

3 X USMSW1



Mechanically interconnected
3 X USMSW1 + 2 X US1422PTH

ACCESSORIES



Multiphase connection kit

Kit for multi phase connection

Catalog number	Reference number	Design	Weight	Package
US14PAK	X227927	links for connection of multipole units	2.5 g	10

Auxiliary Switches

Catalog number	Reference number	Design	Weight	Package
USMSW1	Y227928	Auxiliary contact kit 1 pole US14	25 g	1
USMSW2	Z227929	Auxiliary contact kit 3 poles US14	20 g	1
USMSW3	A227930	2 Auxiliary contact kit 3 poles US14	27 g	1
US14S1P	Y227928	1 pole microswitch	25 g	1
US1422BP	F213629	Enlargement pin for auxiliary microswitch	1.5 g	10
US1422PTH	J214138	Auxiliary microswitch assembly pin (between 2 kits)	0.5 g	10
US14S3P	Z227929	3 pole microswitch	20 g	1
US14S3P2	A227930	3 pole 2 microswitches	27 g	1

Locking devices

Catalog number	Reference number	Description	Weight	Package
TAGLOCKUS14	T1015927	Locking kit (Tag and lockout)	-	1
LOCK	M223525	Padlock	0.475 kg	1



LOCK

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

ACCESSORIES



TBB1A



TBB1C



TBB23A

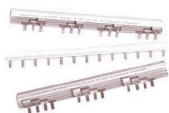


TBB23C

Power supply

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

Wiring bars / Insulated bus bars



Catalog number	Reference number	Design	Application	Weight	Package
CMS14BB3F4	A210312	triple pole	Max. rms current 100A, for installation of 4 modules	122 g	5
CMS14BB2F6	Z210311	double pole	Max. rms current 63A, for installation of 6 modules	100 g	5
CMS14BB1F12	Y210310	single pole	Max. rms current 63A, for installation of 12 modules	47.4 g	5

Indication facilities

Catalog number	Reference number	Description	Weight	Package
CMS1422LHI	A225653	Indicator light kit	10 g	1