Modulostar® CMS14

Modular fuse-holders

IEC Cylindrical Fuse Holders

The innovative and comprehensive Modulostar® 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 IEC version or IEC + UL version. Multi-pole units can also be field assembled by ordering pin-ties assembly kit. In size 14 or 22, the range also 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
- 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 690V for protection of motors, transformers, low voltage distribution, control circuits, drive protection
- Non-load operation

Technical data overview

Voltage AC	690 VAC
Voltage DC	690 VDC
Amper (A)	50 A
Rated operational current I_e	</= 50A
SCCR	100kA
Mounting	Installation on to DIN rails to EN 60715
Product Size	For cylindrical fuse links 14x51 AM, gG and 14x51 Mersen Protistor fuse-links
Number of Poles	1 to 4 poles

Standards

IEC 60269-2 and IEC 60947-3 Compliance

RoHS Compliant

Plastic material: NF 16101 & 16102 Requirement 2 Compliant

Shock and vibration tested for marine and railway applications

Product range


CMS141


CMS142


CMS143N

Modulostar® fuse-holders for 14x51 fuse-links, without indicator

Catalog number	Reference number	Number of poles/ phases	Standard complience	Weight	Package
CMS14N	T331056	N	CMS 14 neutral conductor	140 g	6
CMS141	A331016	1	CMS 14 single pole	140 g	6
CMS141N	T331010	1 + N	CMS 14 single pole + neutral conductor	285 g	3
CMS142	R331031	2	CMS 14 double pole	266.6 g	3
CMS143	S331032	3	CMS 14 triple pole	420 g	2
CMS143N	D331042	3 + N	CMS 14 triple pole + neutral conductor	560 g	1
CMS144	F331021	4	CMS 14 quadruple pole	570 g	1


CMS141I

Modulostar® fuse-holders for 14x51 fuse-links, with indicator

Catalog number	Reference number	Number of poles/ phases	Standard complience	Weight	Package
CMS141I	L331049	1	CMS 14 single pole	140 g	6
CMS141NI	M331050	1 + N	CMS 14 single pole + neutral conductor	297 g	3
CMS142I	M331004	2	CMS 14 double pole	285 g	3
CMS143I	K331071	3	CMS 14 triple pole	425 g	2
CMS143NI	Q331007	3 + N	CMS 14 triple pole + neutral conductor	566 g	1

Modulostar® fuse-holders for 14x51 fuse-links, for installation of indicator and/or auxiliary micro switch

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
CMS141P	W331058	1	CMS14 single pole	140 g	6
CMS141NP	X331059	1 + N	CMS14 single pole + neutral conductor	298.3 g	3
CMS142P	G331022	2	CMS14 double pole, two auxiliary microswitches	291.6 g	3
CMS143P	R331054	3	CMS14 triple pole	430 g	2
CMS143NP	Z331015	3 + N	CMS14 triple pole + neutral conductor	560 g	1

Modulostar® fuse-holders for 14x51 fuse-links, with auxiliary microswitch

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
CMS141M	Z331038	1	CMS14 single pole	150 g	6
CMS141NM	L331026	1 + N	CMS14 single pole + neutral conductor	313.3 g	3
CMS142M	A331062	2	CMS14 double pole, two auxiliary microswitches	285 g	3
CMS143M	F331067	3	CMS14 triple pole	430 g	2
CMS143M2	H331069	3	CMS14 triple pole, two auxiliary microswitches	430 g	2
CMS143NM	E331043	3 + N	CMS14 triple pole + neutral conductor	610 g	1

Product range

Modulostar® fuse-holders for 14x51 fuse-links, with indicator and auxiliary microswitch

Catalog number	Reference number	Number of poles/phases	Design	Weight	Package
CMS141MI	S331055	1	CMS14 single pole	155 g	6
CMS141NMI	Q331030	1 + N	CMS14 single pole + neutral conductor	304.6 g	3
CMS142MI	X331036	2	CMS14 double pole, two auxiliary microswitches	285 g	3
CMS143MI	P331006	3	CMS14 triple pole	447.5 g	2
CMS143M2I	Y331037	3	CMS14 triple pole, two auxiliary microswitches	430 g	2
CMS143NMI	H331000	3 + N	CMS14 triple pole + neutral conductor	566 g	1

Technical Data

	CMS14	CMS14I	CMS14P	CMS14M	CMS14MI
Size	14x51	14x51	14x51	14x51	14x51
Number of poles/phases	1, 1+N, 2, 3, 3+N, 4	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3, 3+N
Conventional free air thermal current with fuse links I_{th}	50 A	50 A	50 A	50 A	50 A
Power dissipation at I_{th}	5 W	5 W	5 W	5 W	5 W
Utilisation category	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B	AC20B/DC20B
Rated insulation voltage U_i	690 V	690 V	690 V	690 V	690 V
SCCR	100 kA	100 kA	100 kA	100 kA	100 kA
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV	8 kV
Degree of protection	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	Can receive an indicator and/or an auxiliary microswitch	with auxiliary micro-switch	with indicator and auxiliary microswitch
Connection	Max. tightening torque: 3.5Nm (30lbs.-in) Rigid wire = 1.5-35mm² (16-3AWG) Multistrand wire = 25mm² (4AWG) PZ2 or flat 5.5x1mm screw drivers recom-mended (max. diameter 6mm)	max. tightening torque: 3.5Nm (30lbs.-in) rigid wire = 1.5-35mm² (16-3AWG) multistrand wire = 25mm² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (mx. diameter 6mm)	max. tightening torque: 3.5Nm (30lbs.-in) rigid wire = 1.5-35mm² (16-3AWG) multistrand wire = 25mm² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (mx. diameter 6mm)	max. tightening torque: 3.5Nm (30lbs.-in) rigid wire = 1.5-35mm² (16-3AWG) multistrand wire = 25mm² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (mx. diameter 6mm)	max. tightening torque: 3.5Nm (30lbs.-in) rigid wire = 1.5-35mm² (16-3AWG) multistrand wire = 25mm² (4AWG) PZ2 or flat 5.5x1mm screw drivers recommended (mx. diameter 6mm)
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
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
Vibration	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application Random vibration testing according to IEC 61373 Category 1 Class B	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application Random vibration testing according to IEC 61373 Category 1 Class B	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application Random vibration testing according to IEC 61373 Category 1 Class B	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application Random vibration testing according to IEC 61373 Category 1 Class B	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application Random vibration testing according to IEC 61373 Category 1 Class B
Shock	Shock testing according to IEC 61373 Category 1 Class B Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks	Shock testing according to IEC 61373 Category 1 Class B Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks	Shock testing according to IEC 61373 Category 1 Class B Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks	Shock testing according to IEC 61373 Category 1 Class B Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks	Shock testing according to IEC 61373 Category 1 Class B Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks
	* for specific usage please contact us	* for specific usage please contact us	* for specific usage please contact us	* for specific usage please contact us	* for specific usage please contact us

Specific usage conditions

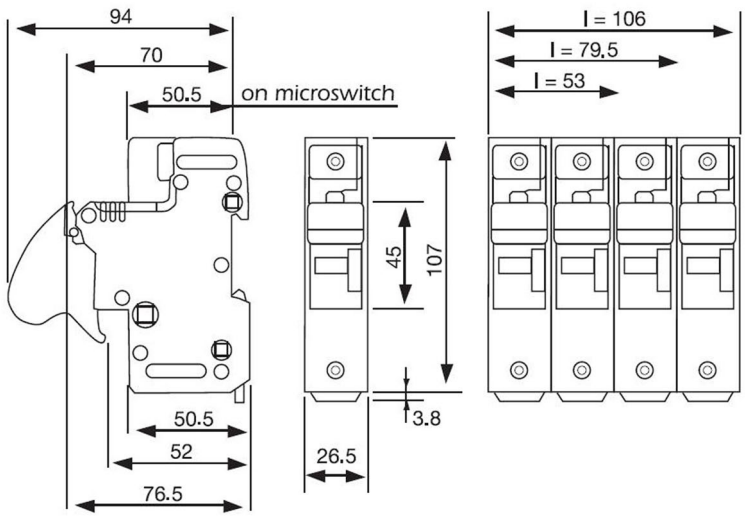
Ambient temperature	>20°C	30°C	40°C	50°C	60°C
Derating factor (I_e)	1	0.95	0.9	0.8	0.7

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

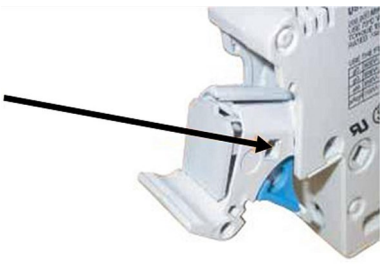
Nominal current of fuse-link gR	25 A	32 A	40 A	50 A	63 A
Max. operational current in fuse-holder	23 A	28 A	34 A	40 A	46 A
Cable wire section	4 mm²	6 mm²	10 mm²	10 mm²	16 mm²

Dimensions

in mm



Functions

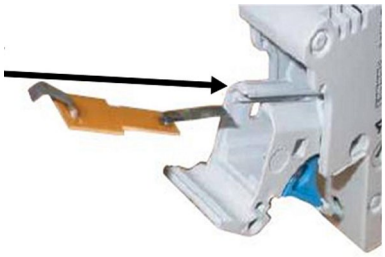


Indicator light kit for CMS14

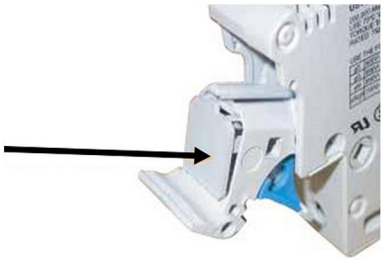
With the indicator light a blown fuse can be quickly located if power is still on.

1. Carefully remove the cover with 2 screw drivers.

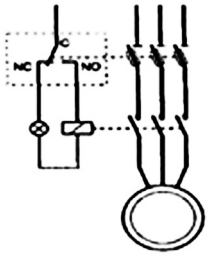
Functions



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.



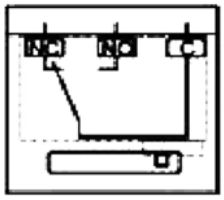
Auxiliary microswitch functions

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

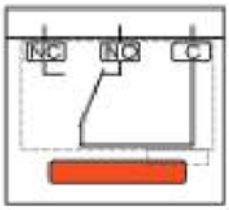
Pre-isolation: when opening the fuse-holder, the microswitch sends a signal before the opening of the main contacts.

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

Functions



With the fuse in the handle closed state



No fuse - Fuse blown handle open

Characteristics

Rated insulation voltage: 250VAC

Rated operational current following IEC 60947-5 & -1

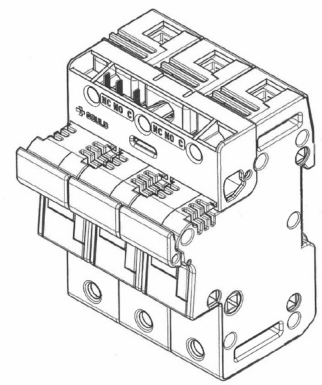
Utilization category AC15: 4A/24V, 4A/48V, 3A/127V, 2.5A/240V

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.

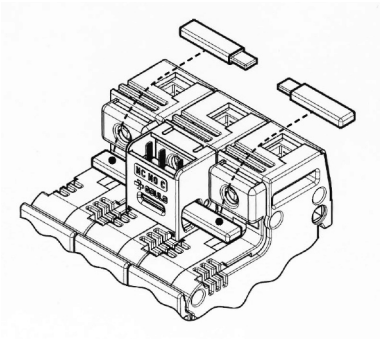
Connection: Faston lugs



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.

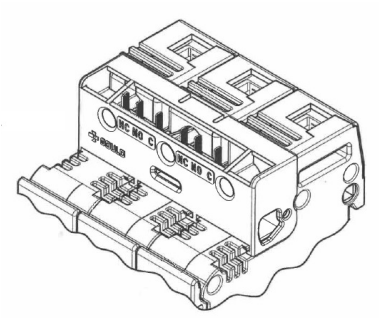
1 auxiliary microswitch

CMS14W2

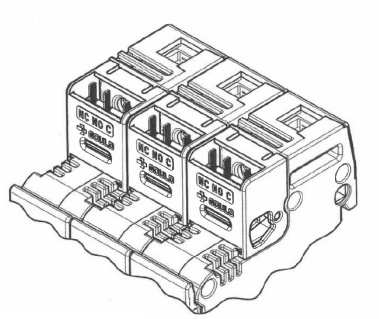


CMS14W1 + CMS1422BP

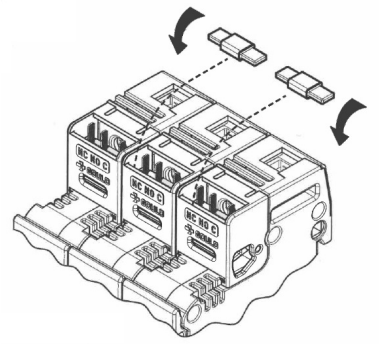
Functions



2 auxiliary microswitches
CMS14W3

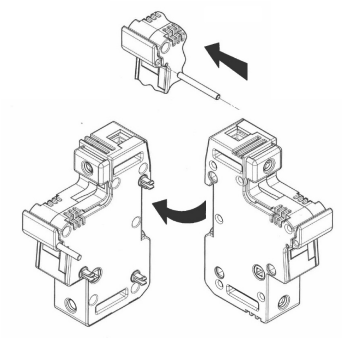


3 auxiliary microswitches
Independent
3 x CMS14W1



Mechanically interconnected
3 x CMS14W1 + 2 X CMS1422PTH

Accessories



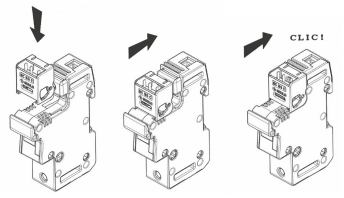
Assembly kit

Kit for multi phase connection

Catalog number	Reference number	Description	Weight kg[1)]	Package
CMS1422PAK	Z218223	links for connection of multipole units	0,0021	10

1) weight in kg per piece or set including package

Accessories



Auxiliary Switches

Catalog number	Reference number	Description	Package
CMS14W1	M218741	Auxiliary microswitch kit 1 pole CMS14	1
CMS14W2	J331185	Auxiliary microswitch kit 3 poles CMS14	1
CMS14W3	Z331176	2 Auxiliary microswitches kit 3 poles CMS14	1
CMS1422PTH	J214138	Auxiliary microswitch assembly pin (between 2 kits)	10
CMS1422BP	F213629	Enlargement pin for auxiliary microswitch	10

LOCK

Locking devices

Catalog number	Reference number	Description	Weight kg[1)]	Package
LOCK	M223525	Padlock	0.042	1
TAGLOCKCMS14	T1015927	Locking kit (Tag and lockout)	-	1

TBB1A

TBB1C

Power supply

Catalog number	Reference number	Description	Application	Weight kg[1)]	Package
TBB1A	D210315	1 phase axial incoming power supply	Max. rms current 90A	0.010	50
TBB1C	E210316	1 phase lateral incoming power supply	Max. rms current 90A	0.010	50
TBB23A	F210317	2 & 3 phases axial incoming power supply	Max. rms current 90A	0.023	50
TBB23C	G210318	2 & 3 phases lateral incoming power supply	Max. rms current 90A	0.023	50

TBB23A

TBB23C

Wiring bars / Insulated bus bars

Catalog number	Reference number	Design	Application	Weight kg[1)]	Package
CMS14BB3F4	A210312	triple pole	Max. rms current 100A, for installation of 4 modules	0,1228	5
CMS14BB2F6	Z210311	double pole	Max. rms current 63A, for installation of 6 modules	0,1006	5
CMS14BB1F12	Y210310	single pole	Max. rms current 63A, for installation of 12 modules	0,0474	5

Indication facilities

Catalog number	Reference number	Description	Package
CMS1422LHI	A225653	Indicator light kit	1

1) weight in kg per piece or set including package