Modulostar® CMS22

Modular fuse-holders

FUSE HOLDERS, FUSE BASES AND SUPPORTS

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.

TECHNICAL DATA OVERVIEW

Voltage AC	690 VAC
Voltage DC	690 VDC
Amper (A)	125 A
Rated operational current I_e	< / = 125A
SCCR	100kA
Mounting	Installation on to DIN rails to EN 60715
Product Size	For cylindrical fuse links 22x58
Number of poles	1 to 4 poles

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
- Shock and vibration tested for marine and railway applications

APPLICATIONS

- All circuits up to 690V for protection of motors, transformers, low voltage distribution, control circuits.
- Non-load operation

STANDARDS

- IEC 60269-2 and IEC 60947-3 Compliance
- RoHS Compliant
- Plastic material: NF 16101 & 16102 Requirement 2 Compliant

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PRODUCT RANGE


CMS222


CMS223


CMS223N

Modulostar® fuse-holders for 22x58 fuse-links, without indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
CMS22N	K331094	N	CMS22 neutral conductor	6	0.22 kg
CMS221	T331079	1	CMS22 single pole	6	0.22 kg
CMS221N	H331092	1 + N	CMS22 single pole + neutral conductor	3	0.47 kg
CMS222	Q331122	2	CMS22 double pole	3	0.44 kg
CMS223	E331135	3	CMS22 triple pole	2	0.66 kg
CMS223N	A331108	3 + N	CMS22 triple pole + neutral conductor	1	0.93 kg
CMS224	Q331099	4	CMS22 quadruple pole	1	0.88 kg


CMS221I

Modulostar® fuse-holders for 22x58 fuse-links, with indicator

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
CMS221I	B331086	1	CMS22 single pole	6	0.20 kg
CMS221NI	W1001462	1 + N	CMS22 single pole + neutral conductor	3	0.41 kg
CMS222I	D331134	2	CMS22 double pole	3	0.43 kg
CMS223I	L331095	3	CMS22 triple pole	2	0.66 kg
CMS223NI	N1001455	3 + N	CMS22 triple pole + neutral conductor	1	0.92 kg


CMS223P

Modulostar® fuse-holders for 22x58 fuse-links,for installation of indicator and/or auxiliary microswitch

Catalog number	Item number	Number of poles/phases	Design	Package	Weight
CMS221P	Y331083	1	CMS22 single pole	6	0.22 kg
CMS223P	V331126	3	CMS22 triple pole	2	0.64 kg
CMS223NP	M331073	3 + N	CMS22 triple pole + neutral conductor	1	0.92 kg


CMS223NM

Modulostar® fuse-holders for 22x58 fuse-links, with auxiliary microswitch

Catalog number	Item number	Number of poles/ phases	Design	Package	Weight
CMS221M	S331078	1	CMS22 single pole	6	0.22 kg
CMS221NM	W1016642	1 + N	CMS22 single pole + neutral conductor	3	0.43 kg
CMS222M	V331080	2	CMS22 double pole, two auxiliary microswitches	3	0.47 kg
CMS223M	B331109	3	CMS22 triple pole	2	0.66 kg
CMS223M2	C331087	3	CMS22 triple pole, two auxiliary microswitches	2	0.68 kg
CMS223NM	T331102	3 + N	CMS22 triple pole + neutral conductor	1	0.86 kg

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PRODUCT RANGE

Modulostar® fuse-holders for 22x58 fuse-links, with indicator and auxiliary microswitch

Catalog number	Item number	Number of poles/ phases	Design	Package	Weight
CMS221MI	N331074	1	CMS22 single pole	6	0.23 kg
CMS221NMI	N1016589	1 + N	CMS22 single pole + neutral conductor	3	0.5 kg
CMS222MI	P331098	2	CMS22 double pole, two auxiliary microswitches	3	0.46 kg
CMS223MI	E331112	3	CMS22 triple pole	2	0.66 kg
CMS223M2I	Q331076	3	CMS22 triple pole, two auxiliary microswitches	2	0.94 kg
CMS223NMI	W331104	3 + N	CMS22 triple pole + neutral conductor	1	0.93 kg

TECHNICAL DATA

	CMS22	CMS22I	CMS22P	CMS22M	CMS22MI
Size	22x58	22x58	22x58	22x58	22x58
Number of poles/phases	1, 1+N, 2, 3, 3+N, 4	1, 1+N, 2, 3, 3+N	1, 3+N, 3	1, 1+N, 2, 3, 3+N	1, 1+N, 2, 3, 3+N
Conventional free air thermal current with fuse links I_{th}	125 A	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	9.5 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	-	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	-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
Connection	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm² (16-1AWG) Multistrand wire = 35mm² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)				
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				
Shock	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				

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SPECIFIC USAGE CONDITIONS

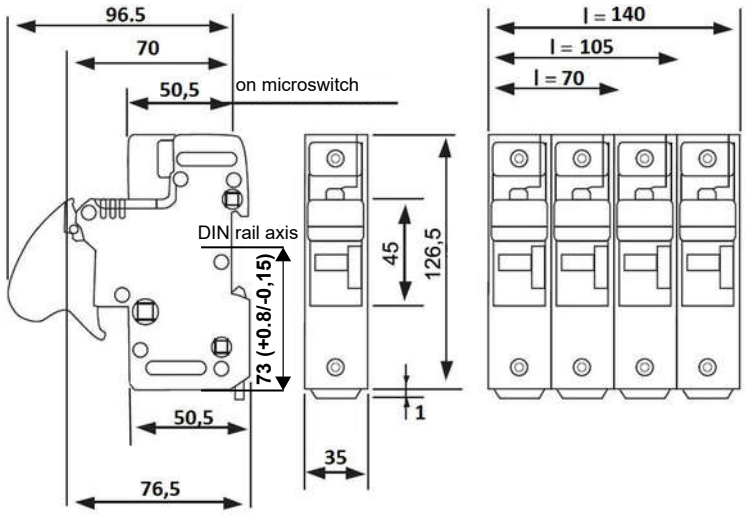
Ambient temperature	>20°C	30°C	40°C	50°C	60°C
Derating factor (I_e)	1	0.95	0.9	0.8	0.7

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	50 A	63 A	80 A	100 A	125 A	135 A
Max. operational current in fuse-holder	47 A	54 A	70 A	83 A	91 A	96 A
Cable wire section	10 mm²	16 mm²	25 mm²	35 mm²	50 mm²	50 mm²

DIMENSIONS

Modulostar® CMS22 fuse-holders for cylindrical fuse-links class 22x58mm



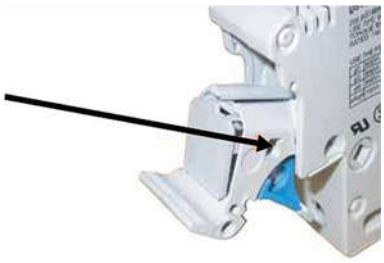
Dimensions in mm

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FUNCTIONS



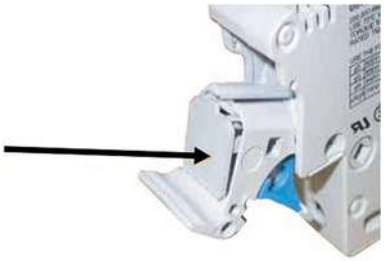
Indicator light kit for CMS22

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

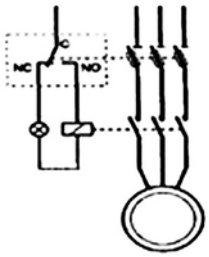
1. Carefully remove the cover with 2 screw drivers.



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.

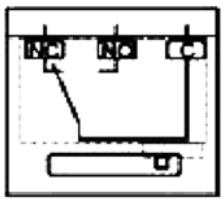
Presence: sends a signal when the holder is closed with no fuse in it.

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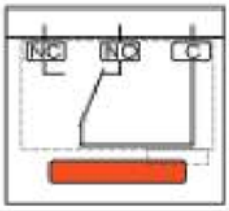
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With the fuse in the handle closed state



No fuse - Fuse blown handle open

Characteristics

Rated insulation voltage: 250VAC

Rated operational current following IEC 60947-5 & -1

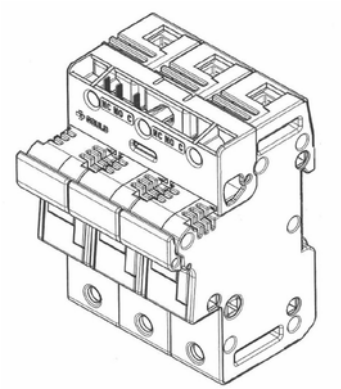
Utilization category AC15: 4A/24V, 4A/48V, 3A/127V, 2.5A/240V

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.

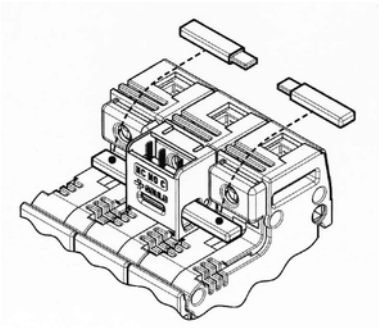
Connection: Faston lugs



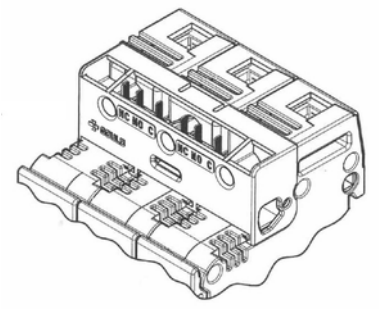
Auxiliary microswitch can only be mounted on previously prepared fuse disconnectors. Use of the auxiliary microswitch for fuse melting requires the use of fuses with strikers.

1 auxiliary microswitch

CMS22W2



CMS22W1 + CMS1422BP



2 auxiliary microswitches

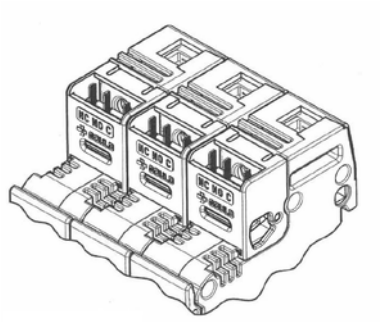
CMS22W3

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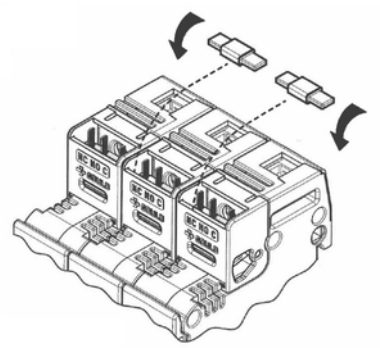
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FUNCTIONS



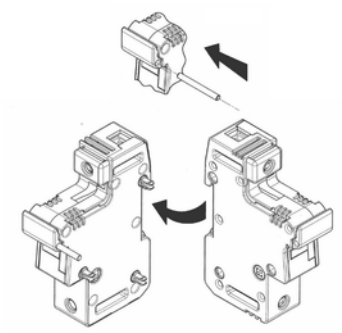
3 auxiliary microswitches

3 x CMS22W1



3 x CMS22W1 + 2 x CMS1422PTH

ACCESSORIES



Assembly kit

Kit for multi phase connection

Catalog number	Item number	Features	Package	Weight
CMS1422PAK	Z218223	links for connection of multipole units	10	2.1 g

Auxiliary Switches

Catalog number	Item number	Features	Package	Weight
CMS1422BP	F213629	Enlargement pin for auxiliary microswitch	10	1.5 g
CMS1422PTH	J214138	Auxiliary microswitch assembly pin (between 2 kits)	10	0.5 g
CMS22W1	E211581	Auxiliary microswitch kit 1 pole CMS22	1	20 g
CMS22W2	B331201	Auxiliary microswitch kit 2 poles CMS22	1	32 g
CMS22W3	N331189	2 Auxiliary microswitches kit 3 poles CMS22	1	35 g

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ACCESSORIES



LOCK

Locking devices

Catalog number	Item number	Features	Package	Weight
LOCK	M223525	Padlock	1	0.48 kg



TBB1A



TBB1C

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



TBB23A



TBB23C



Wiring bars / Insulated bus bars

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

Indication facilities

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

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