

IEC Low Voltage General Purpose Protection

Modular fuse-holders

Modulostar® CMS22

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 indicators, 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.



Benefits

- Finger safe
- Optional visual blown fuse indicator & microswitch
- Din rail mounting
- Modular design
- Lockable
- Multi-pole assembly kit available
- Sealable in closed and open position

Applications

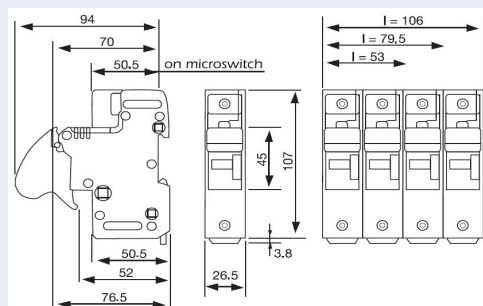
- All circuits up to 690V for protection of motors, transformers, low voltage distribution, control circuits.
- Non-load operation.

Modulostar® fuse-holders for 22x58 fuse-links without striker

No of Poles	Catalog Number w/o indicator light	Reference Number w/o indicator light	Catalog Number with indicator light	Reference Number with indicator light	No of Mod. (17.5mm)	Pack.
N	CMS22N	K331094	-	-	1.5	6
1	CMS221	T331079	CMS221I	B331086	1.5	6
1 + N	CMS221N	H331092	CMS221NI	W1001462	3	3
2	CMS222	Q331122	CMS222I	D331134	3	3
3	CMS223	E331135	CMS223I	L331095	4.5	2
3 + N	CMS223N	B331109	CMS223NI	N1001455	6	1
4	CMS224	Q331099	-	-	6	1

Models cannot be equipped with indicator kit and microswitch kit.

Dimensions (mm)



Recommended fuse usage

- 22x58 aM, gG fuse-links with and w/o striker
- 22x58 gR fuse-links with and w/o striker

Ratings

- $U_i = 690V$ AC/DC
- $I_{th} = 125A$, $I_e < / = 125A$
- Max. fuse power loss = 9.5W
- Utilization category: AC20B/DC20B
- $U_{imp} = 8KV$
- Protection: IP20
- Voltage limit for blown fuse indicator: 230 to 690V AC/DC

Approvals

- 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



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Modulostar® fuse-holders for all types of 22x58 fuse-links

No of Poles	Catalog Number w/o indicator light	Reference Number w/o indicator light	Catalog Number with auxiliary microswitch	Reference Number with auxiliary microswitch	Catalog Number with auxiliary microswitch & indicator light	Reference Number with auxiliary microswitch & indicator light	No of Mod. (17.5mm)	Pack.
1	CMS221P	Y331083	CMS221M	S331078	CMS221MI	N331074	1.5	6
1 + N	-	-	CMS221NM	W1016642	CMS221NMI	N1016589	3	3
2*	-	-	CMS222M	V331080	CMS222MI	P331098	3	3
3	CMS223P	V331126	CMS223M	B331109	CMS223MI	E331112	4.5	2
3*	-	-	CMS223M2*	C331087*	CMS223M2I*	Q331076*	6	2
3 + N	CMS223NP	M331073	CMS223NM	T331102	CMS223NMI	W331104	6	1

*Two auxiliary microswitches (see instructions for mounting) - The auxiliary microswitch function requires use of fuses with strikers. Models without indicator light and with auxiliary microswitch can be equipped with indicator kit and auxiliary microswitch kit.

Technical characteristics

Shock and vibration

Vibration withstand on the 3 main axis*:

- Sinusoidal vibration testing according to IEC 60068-2-6
13 to 100Hz y= 0.7g peak according to french marine application
2 to 13Hz x= 1 mm peak
- Random vibration testing according to IEC 61373
Category 1 Class B

Shock withstand on the 3 main axis*:

- Shock testing according to IEC 60068-2-27 15g/11ms/18 shocks
- Shock testing according to IEC 61373 Category 1 Class B

*For specific usage please contact us

Connection

Max. tightening torque: 4Nm (35lbs.-in.)

Wire range

- Rigid wire = 1.5-50mm² (16-1AWG)
- Multistrand wire = 35mm² (3AWG)

PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)

Plastic material

Plastic material UL94V2 mini

Flame retardant materials with glow wire flammability index to 960°C

Operating temperature: -25°C to +60°C (1)

Storage temperature: -25°C to +80°C

(1) See derating table

Specific usage conditions

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

No of poles	1 to 3	4 to 6	>= 7
Derating factor of current (Ith)	1	0.95	0.9

Nominal Current (A) of fuse-link gR	Max. operational current in fuse-holder (A)	Cable wire section (mm ²)
50	47	10
63	54	16
80	70	25
100	83	35
125	91	50
135	96	50

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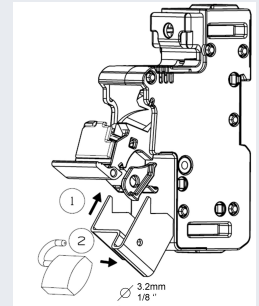
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Modulostar® CMS22



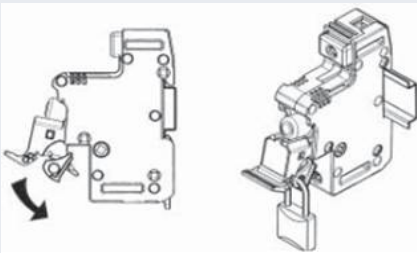
Accessories

Description	Catalog Number	Reference Number	Max. rms current (A)	No of Mod. (17.5mm)	No of Poles	Pack.
Tag and lockout	TAGLOCKCMS22	V1015928	-	-	-	1
Auxiliary microswitch kit 1 pole CMS22	CMS22W1	E211581	-	1.5	1	1
Auxiliary microswitch kit 3 poles CMS22	CMS22W2	B331201	-	4.5	3	1
2 Auxiliary microswitch kit 3 poles CMS22	CMS22W3	N331189	-	4.5	3	1
Auxiliary microswitch assembly pin (between 2 kits)	CMS1422PTH	J214138	-	-	-	10
Enlargement pin for auxiliary microswitch	CMS1422BP	F213629	-	-	-	10
Multi-pole assembly kit	CMS1422PAK	Z218223	-	-	-	10
Indicator light kit	CMS1422LHI	A225653	-	-	-	1
Lock	LOCK	M223525	-	-	-	1
Wiring bar for 6 CMS22 2 poles	CMS22BB2F6	C210314	150	-	-	5
Wiring bar for 12 CMS22 1 pole	CMS22BB1F12	B210313	90	-	-	5
Single-pole terminal, side	TBB1C	E210316	90	-	-	50
2/3-pole terminal, side	TBB23C	G210318	90	-	-	50
Single-pole terminal, axial	TBB1A	D210315	90	-	-	50
2/3-pole terminal, axial	TBB23A	F210317	90	-	-	50



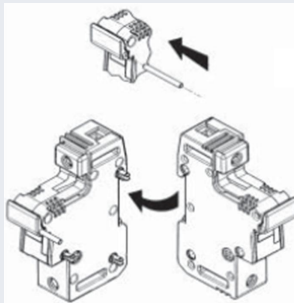
TAGLOCKCMS22

Locking system



Locking Reference Number: M223525

Multi-pole assembly



Assembly kit: Z218223
NB: 6 poles maximum



Wiring bars

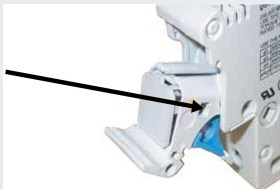
Each bag of kits is sufficient for:

- 10 multi-pole assemblies
- 10 two-pole assemblies
- 5 three-pole assemblies
- 3 four-pole assemblies

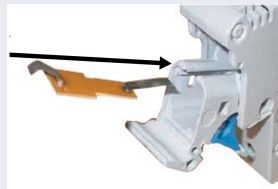
Indicator light kit for CMS22

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

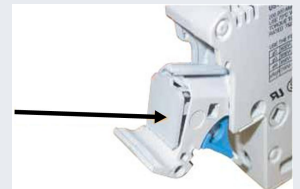
1. Carefully remove the cover with 2 screw drivers



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



3. Put the cover back on



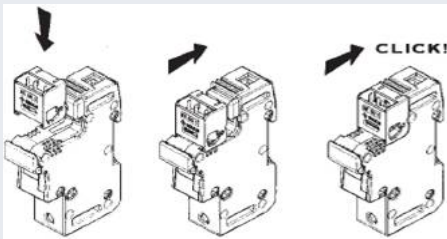
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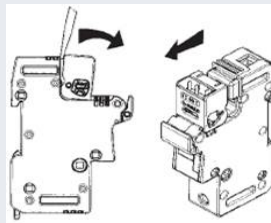
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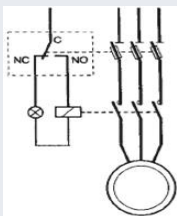
Mounting auxiliary microswitches



Dismounting auxiliary microswitches



Auxiliary microswitch functions

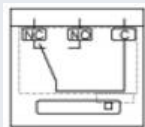


Fuse melting: A fuse-holder containing a fuse with a striker sends out a signal when the fuse element melts.

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.

Characteristics of the auxiliary microswitch



With the fuse in the handle closed state

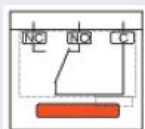
Rated insulation voltage: 250VAC

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



No fuse - Fuse blown handle open

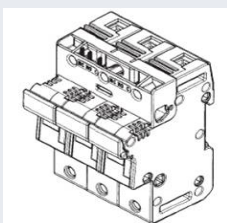
Auxiliary microswitch is designed to operate equally well on dual-current (1mA 4V minimum) or medium-current (5A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Connection: Faston lugs

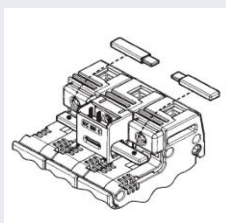
Microswitch options

Auxiliary microswitches 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

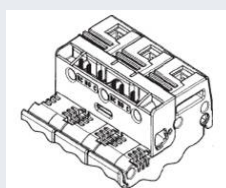


B331201



E211581 + F213629

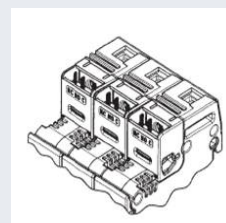
2 auxiliary microswitches



N331189

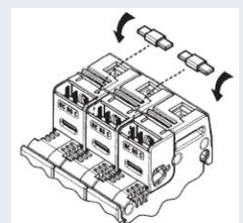
3 auxiliary microswitches

Independent



3 x E211581

Mechanically interconnected



3 x E211581 + 2 x J214138