

Modulostar® CMS22

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.
- Non-load operation.

Technical data overview

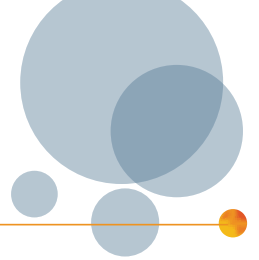
Voltage AC	690 VAC
Voltage DC	690 VDC
Amper (A)	125 A
Rated operational current I_n	< / = 125A
Product Size	for cylindrical fuse links 22x58
Mounting	Installation on to DIN rails to EN 60715
SCCR	100kA
Number of Poles	1 to 4 poles



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



CMS221



CMS222



CMS223



CMS223N



CMS221I

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

Catalog number	Reference number	Number of poles/ phases	Design	Weight	Package
CMS22N	K331094	N	CMS22 neutral conductor	218 g	6
CMS221	T331079	1	CMS22 single pole	218 g	6
CMS221N	H331092	1 + N	CMS22 single pole + neutral conductor	466.6 g	3
CMS222	Q331122	2	CMS22 double pole	440 g	3
CMS223	E331135	3	CMS22 triple pole	660 g	2
CMS223N	A331108	3 + N	CMS22 triple pole + neutral conductor	930 g	1
CMS224	Q331099	4	CMS22 quarduple pole	880 g	1

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

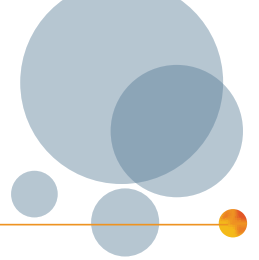
Catalog number	Reference number	Number of poles/ phases	Design	Weight	Package
CMS221I	B331086	1	CMS22 single pole	218 g	6
CMS221NI	W1001462	1 + N	CMS22 single pole + neutral conductor	466.6 g	3
CMS222I	D331134	2	CMS22 double pole	428.3 g	3
CMS223I	L331095	3	CMS22 triple pole	660 g	2
CMS223NI	N1001455	3 + N	CMS22 triple pole + neutral conductor	920 g	1

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

Catalog number	Reference number	Number of poles/phases	Design	Package
CMS221P	Y331083	1	CMS22 single pole	6
CMS223NP	M331073	3 + N	CMS22 triple pole + neutral conductor	1
CMS223P	V331126	3	CMS22 triple pole	2

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

Catalog number	Reference number	Number of poles/ phases	Design	Weight	Package
CMS221M	S331078	1	CMS22 single pole	218 g	6
CMS221NM	W1016642	1 + N	CMS22 single pole + neutral conductor	-	3
CMS222M	V331080	2	CMS22 double pole, two auxiliary microswitches	466.6 g	3
CMS223M	B331109	3	CMS22 triple pole	660 g	2
CMS223M2	C331087	3	CMS22 triple pole, two auxiliary microswitches	-	2
CMS223NM	T331102	3 + N	CMS22 triple pole + neutral conductor	861 g	1



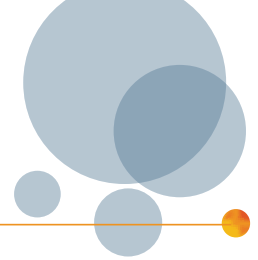
Product range

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

Catalog number	Reference number	Number of poles/ phases	Design	Weight	Package
CMS221MI	N331074	1	CMS22 single pole	228.3 g	6
CMS221NMI	N1016589	1 + N	CMS22 single pole + neutral conductor	-	3
CMS222MI	P331098	2	CMS22 double pole, two auxiliary microswitches	455 g	3
CMS223MI	E331112	3	CMS22 triple pole	660 g	2
CMS223M2I	Q331076	3	CMS22 triple pole, two auxiliary microswitches	-	2
CMS223NMI	W331104	3 + N	CMS22 triple pole + neutral conductor	930 g	1

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
Connection	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm ² (16-1AWG) Multistrand wire = 35mm ² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm ² (16-1AWG) Multistrand wire = 35mm ² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm ² (16-1AWG) Multistrand wire = 35mm ² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm ² (16-1AWG) Multistrand wire = 35mm ² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)	Max. tightening torque: 4Nm (35lbs.-in) Rigid wire = 1.5-50mm ² (16-1AWG) Multistrand wire = 35mm ² (3AWG) PZ2 or flat 6.5x1.2mm screw drivers recommended (max. diameter 7mm)
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



Technical Data

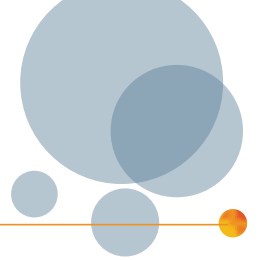
	CMS22	CMS22I	CMS22P	CMS22M	CMS22MI
Storage temperature	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C	-25°C to 80°C
Vibration	Withstand on the 3 main axis*: Sinusoidal vibration testing according to IEC 60068-2-6 2 to 13Hz x= 1 mm peak 13 to 100Hz y= 0.7g peak according to french marine application 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

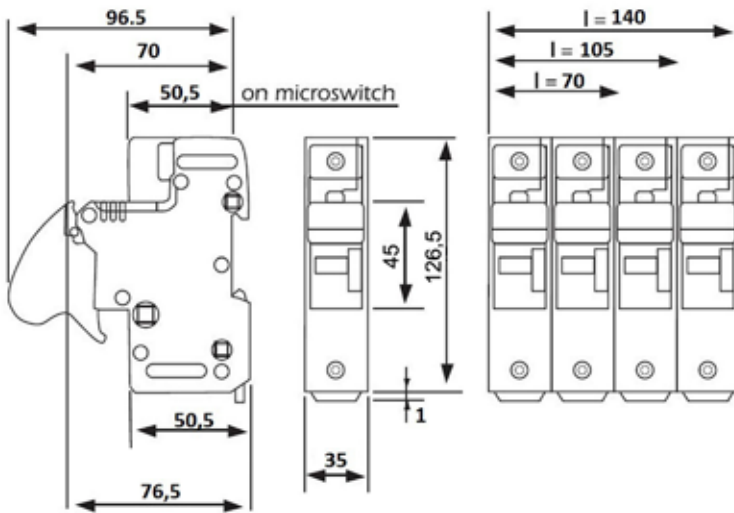
Ambient temperature	>20°C	30°C	40°C	50°C	60°C
Derating factor (I_e)	1	0.95	0.9	0.8	0.7

No of poles (side by side)	1 to 3	4 to 6	>= 7
Derating factor of current (I_m)	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 mm ²	16 mm ²	25 mm ²	35 mm ²	50 mm ²	50 mm ²



Dimensions



Functions



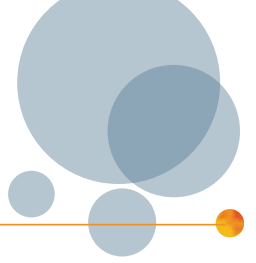
Indicator light kit for CMS22

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.



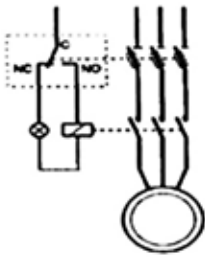
2. Slip the indicator light's to insert into the rails, being careful not to twist the contact tabs.



Functions



3. Put the cover back on.

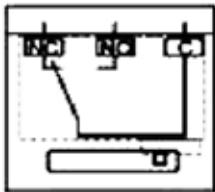


Auxiliary microswitch functions

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.



Characteristics

With the fuse in the handle closed state

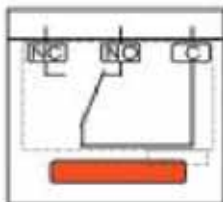
Rated insulation voltage: 250VAC

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

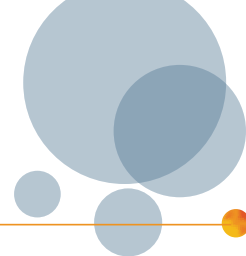
Minimum operational current and voltage: 1mA/4V AC or DC



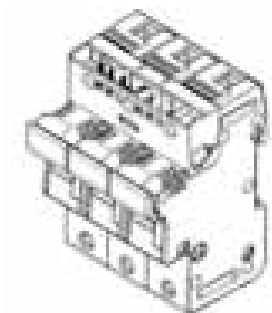
No fuse - Fuse blown handle open

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

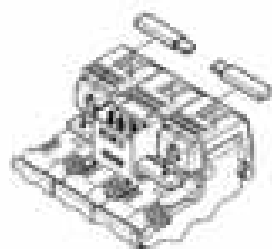


Functions



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.

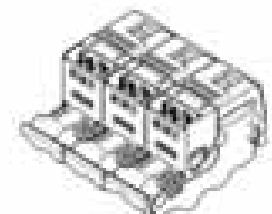
1 auxiliary microswitch
CMS22W2



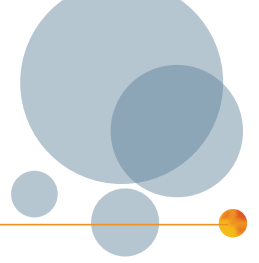
CMS22W1 + CMS1422BP



2 auxiliary microswitches
CMS22W3



3 auxiliary microswitches
3 x CMS22W1

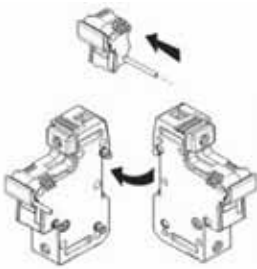


Functions



3 x CMS22W1 + 2 x CMS1422PTH

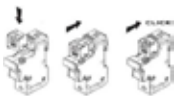
Accessories



Kit for multi phase connection

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

Assembly kit



CMS22W1

Auxiliary Switches

Catalog number	Reference number	Design	Package
CMS22W1	E211581	Auxiliary microswitch kit 1 pole CMS22	1
CMS22W2	B331201	Auxiliary microswitch kit 3 poles CMS22	1
CMS22W3	N331189	2 Auxiliary microswitches kit 3 poles CMS22	1
CMS1422PTH	J214138	Auxiliary microswitch assembly pin (between 2kits)	10
CMS1422BP	F213629	Enlargement pin for auxiliary microswitch	10



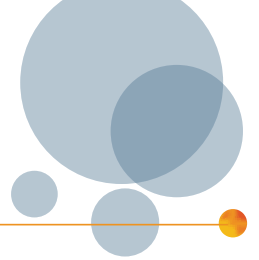
LOCK

TAGLOCKCMS22

Locking devices

Catalog number	Reference number	Design	Weight kg ¹⁾	Package
LOCK	M223525	Padlock	0.042	1
TAGLOCKCMS22	V1015928	Locking kit (Tag and lockout)	-	1

1) weight in kg per piece or set including package



Accessories



TBB1A



TBB1C



TBB23A



TBB23C

Power supply

Catalog number	Reference number	Design	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



Wiring bars / Insulated bus bars

Catalog number	Reference number	Design	Application	Weight kg ¹⁾	Package
CMS22BB2F6	C2100314	double pole	Max. rms current 150A, for installation of 6 modules	-	5
CMS22BB1F12	B210313	single pole	Max. rms current 90A, for installation of 12 modules	-	5

Indication facilities

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

1) weight in kg per piece or set including package