



Contactor monitoring device, 24 V DC

Part no. CMD(24VDC)
Article no. 106170
Catalog No. CMDTD

Technical data

General

Standards			IEC/EN 60947 UL CSA
Lifespan, mechanical			
AC operated	Operations	x 10 ⁶	10
DC operated	Operations	x 10 ⁶	3
Maximum operating frequency		Ops./h	
Motor rating AC-1 500 V	Operations	x 10 ⁶	9000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Storage		°C	- 40 - 80
Open		°C	-25 - +50
Mounting position			As required
Mechanical shock resistance (IEC/EN 60068-2-27)			
Half-sinusoidal shock, 10 ms			
N/O contact		g	4
N/C contact		g	4
Degree of Protection			IP20
Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Weight		kg	0.1
Terminal capacities		mm ²	
Solid		mm ²	1 x (0.75...2.5) 2 x (0.75...1.5)
Flexible with ferrule		mm ²	1 x (0.75...1.5) 2 x (0.75...1.5)
Solid or stranded		AWG	18...14
Terminal screw			M3.5
Pozidriv screwdriver		Size	2
Standard screwdriver		mm	0.8 x 5.5 1 x 6
Max. tightening torque		Nm	1.2

Contacts

Rated impulse withstand voltage	U _{imp}	V AC	8000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U _i	V AC	100
Rated operational voltage	U _e	V	24 DC
Short-circuit rating without welding			
Short-circuit protection maximum fuse			
500 V		A gG/gL	2

Magnet systems

Voltage tolerance			
Pick-up voltage		x U _s	
AC operated		V AC	
	Pick-up	x U _c	0.85 - 1.1
DC operated	Pick-up	x U _c	
	Pick-up	x U _c	0.85 - 1.1

Power consumption				
AC operated	Sealing	VA		4
AC	Sealing	W		4
DC operated	Pull-in = sealing	W		4
duty factor		% DF		100
contact changeover time				
CMD	t _u	ms		< 100

Notes

Notes For rated operational current: Making and breaking conditions to DC-13, L/R constant as stated
 Max. fuses for short-circuit protection: Transparent overlay "Fuses" for time/current characteristics (please enquire)
 For pick-up voltage, DC operated: Pure DC, AC bridge rectifier or smoothed double-wave rectification.

Design verification as per IEC/EN 61439

Technical data for design verification				
Rated operational current for specified heat dissipation	I _n	A		0
Heat dissipation per pole, current-dependent	P _{vid}	W		0
Equipment heat dissipation, current-dependent	P _{vid}	W		0
Static heat dissipation, non-current-dependent	P _{vs}	W		2.29
Heat dissipation capacity	P _{diss}	W		0
Operating ambient temperature min.		°C		-25
Operating ambient temperature max.		°C		50
IEC/EN 61439 design verification				
10.2 Strength of materials and parts				
10.2.2 Corrosion resistance				Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures				Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat				Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects				Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation				Meets the product standard's requirements.
10.2.5 Lifting				Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact				Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions				Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES				Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances				Meets the product standard's requirements.
10.5 Protection against electric shock				Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components				Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections				Is the panel builder's responsibility.
10.8 Connections for external conductors				Is the panel builder's responsibility.
10.9 Insulation properties				
10.9.2 Power-frequency electric strength				Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage				Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material				Is the panel builder's responsibility.
10.10 Temperature rise				The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating				Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility				Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function				The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 6.0

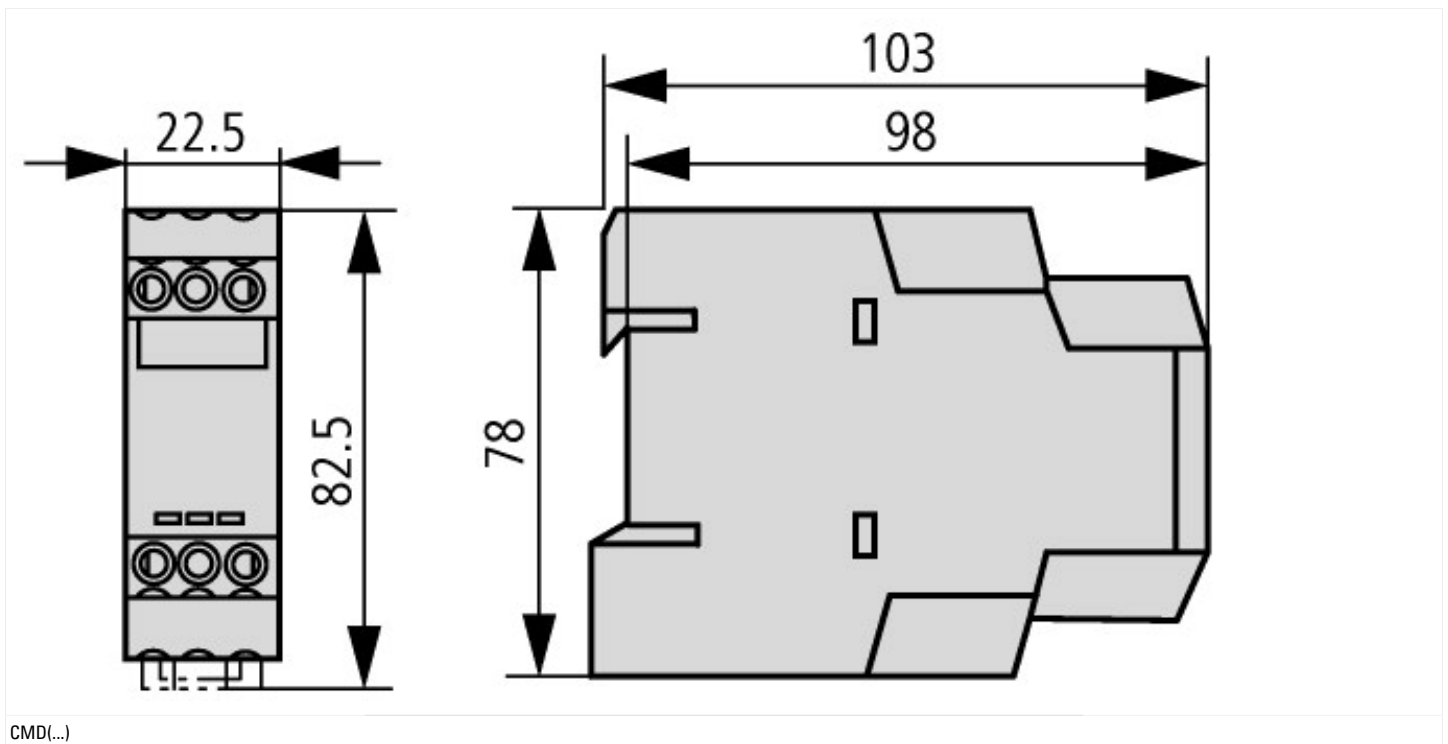
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)				
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss8.1-27-37-10-01 [AAB716011])				
Rated control supply voltage Us at AC 50HZ		V		0 - 0
Rated control supply voltage Us at AC 60HZ		V		0 - 0
Rated control supply voltage Us at DC		V		24 - 24

Voltage type for actuating		DC
Rated operation current I_e , 400 V	A	0
Connection type auxiliary circuit		Screw connection
Mounting method		DIN rail
Interface		No
Number of auxiliary contacts as normally closed contact		1
Number of auxiliary contacts as normally open contact		1
Number of auxiliary contacts as normally closed contact, delayed switching		0
Number of auxiliary contacts as normally open contact, leading		0
With LED indication		Yes
Number of auxiliary contacts as change-over contact		0
Manual operation possible		No

Approvals

Product Standards		IEC/EN 60947-4-1; CSA-C22.2 No. 14-10; ANSI/UL 508; CE marking
CSA File No.		012528
CSA Class No.		3211-04, 3211-84 (Certified to US Standards)
North America Certification		CSA certified

Dimensions



Additional product information (links)

IL04913001Z (AWA2441-2321) Contactor monitoring device	
IL04913001Z (AWA2441-2321) Contactor monitoring device	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04913001Z2012_10.pdf
MN04913001Z (AWB2441-1595) CMD (24VDC) contactor monitoring devices	
MN04913001Z (AWB2441-1595) Schützüberwachungsrelais CMD(24VDC) - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04913001Z_DE.pdf
MN04913001Z (AWB2441-1595) CMD (24VDC) contactor monitoring devices - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04913001Z_EN.pdf
MN04913001Z (AWB2441-1595) Relais de surveillance contacteur CMD(24VDC) - français	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04913001Z_FR.pdf
MN04913001Z (AWB2441-1595) Relè di monitoraggio stato CMD(24VDC) - italiano	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04913001Z_IT.pdf
circuit diagrams: DOL starters, reversing starters	http://ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=5.69