DATASHEET - CMD(220-240VAC)



Contactor monitoring device, 220-240VAC

Part no.	**CMD(220-240VAC)**
Catalog No.	**106172**
Alternate Catalog No.	**CMDB**

Technical data

General

Standards			IEC/EN 60947-5-1 UL CSA
Lifespan, mechanical			
AC operated	Operations	x 10^6	10
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			
Open		°C	-5 - +50
Storage		°C	- 40 - 80
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	0.14
Terminal capacities		mm^2	
Solid		mm^2	1 x (0.5…2.5) 2 x (0.5…1.5)
Flexible with ferrule		mm^2	1 x (0.5…2.5) 2 x (0.5…1.5)
Solid or stranded		AWG	Single 20 - 14/Double 20 - 16
Stripping length		mm	6
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	4000
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V AC	250
Rated operational voltage	U_e	V	240 AC
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
duty factor		% DF	100
contact changeover time			
CMD	t_u	ms	< 100 ± 20 %

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	3.68
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature min.		°C	-5
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 8.0

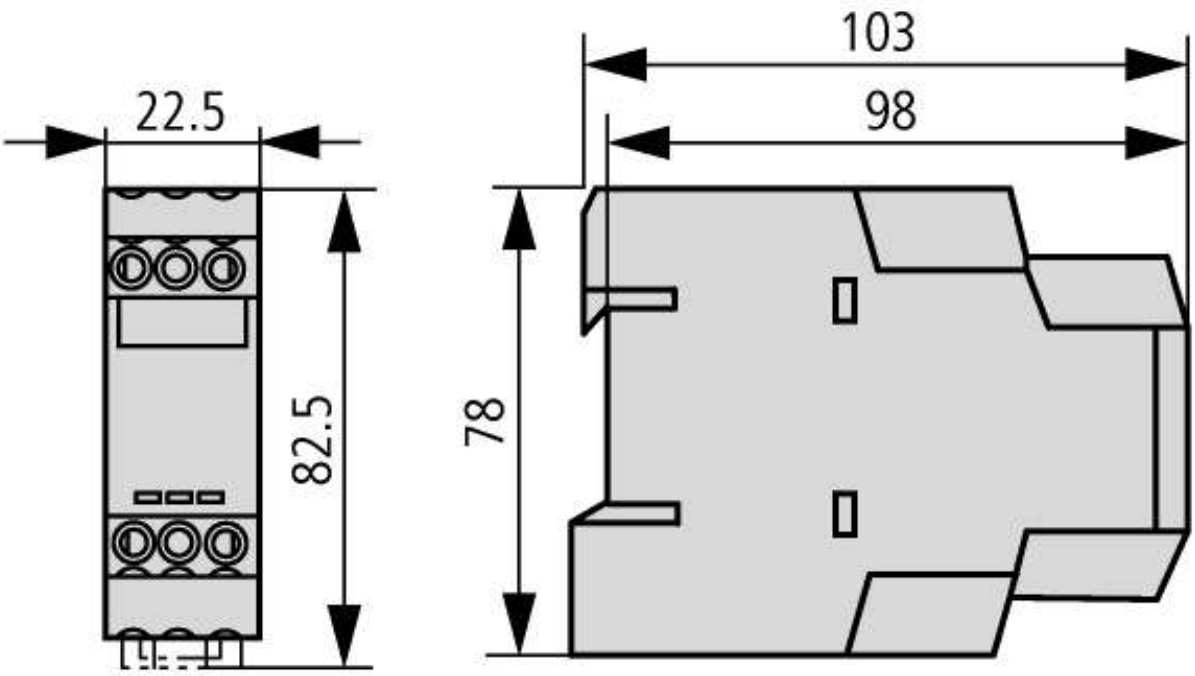
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss10.0.1-27-37-10-01 [AAB716014])			
Rated control supply voltage Us at AC 50HZ		V	220 - 240
Rated control supply voltage Us at AC 60HZ		V	220 - 240
Rated control supply voltage Us at DC		V	0 - 0
Voltage type for actuating			AC
Rated operation current Ie, 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
Number of auxiliary contacts as change-over contact	0
With LED indication	Yes
Suitable for manual operation	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



CMD(...)

Additional product information (links)

IL04913001Z (AWA2441-2321) Contactor monitoring device	
IL04913001Z (AWA2441-2321) Contactor monitoring device	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL04913001Z2021_10.pdf
MN121002ZU-DE/EN Contactor monitoring device CMD(220-240VAC)	
MN121002ZU-DE/EN Contactor monitoring device CMD(220-240VAC) - Deutsch / English	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN121002ZU_DE_EN.pdf
circuit diagrams: DOL starters, reversing starters	http://ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=5.69

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