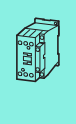


**CMD**

**Description, ordering**



**General**

For safety-related off switching to safety category 3 and 4 according to EN 954-1, at present two contactors must be used in series. Especially with larger contactors this is an expensive solution.

**Application**

This is where the CMD can be used. The function of the CMD is to monitor the main contacts of a contactor against welding. For this the control voltage of the contactor is compared with the state of the main contacts which is reliably monitored using a mirror contact (IEC EN 60947-4-1 Annex F). If the coil is de-energized and the contactor does not drop out the CMD trips the upstream circuit-breaker/motor protective circuit breaker/switch-disconnector via a shunt release.

**Safety**

The CMD has a safety-compliant design so that in safety combinations with a circuit-breaker/motor protective circuit breaker/switch disconnector the reliable switch off in the case of a "welded contactor" can be guaranteed. In this application it replaces the series connection of a second contactor. As a component it conforms to safety category 3 according to EN 954-1 and EN ISO 13849.

**Mounting**

The CMD can be combined with the following Eaton components:

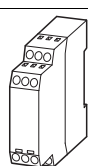
- Contactors:
  - DILEM
  - DILM7 to DILM150
  - DILM185(-S) to DILM500(-S):
  - DILM580 to DILM1600
  - DILH1400 ... DILH2000
  - SE-1A-PKZ2 and S-PKZ2
- Motor-protective circuit-breakers/ circuit-breakers:
  - PKZ2 + U-PKZ2(18VDC)
  - NZM1 + NZM1-XUVL
  - NZM2 + NZM2/3-XUV
  - NZM3 + NZM2/3-XUV
  - NZM4 + NZM4-XUV
  - N1 + NZM1-XUVL
  - N2 + NZM2/3-XUV
  - N3 + NZM2/3-XUV
  - N4 + NZM4-XUV

For the wiring of the CMD the auxiliary N/C contact, mirror contact must be according to IEC/EN 60947-4-1 and the auxiliary N/O contact must be interlocked and opposing according to IEC/EN 60947-5-1. Also the auxiliary N/C contact for the feedback circuit must have a mirror contact function according to IEC/EN 60947-4-1.

Auxiliary contact requirements per contactor:

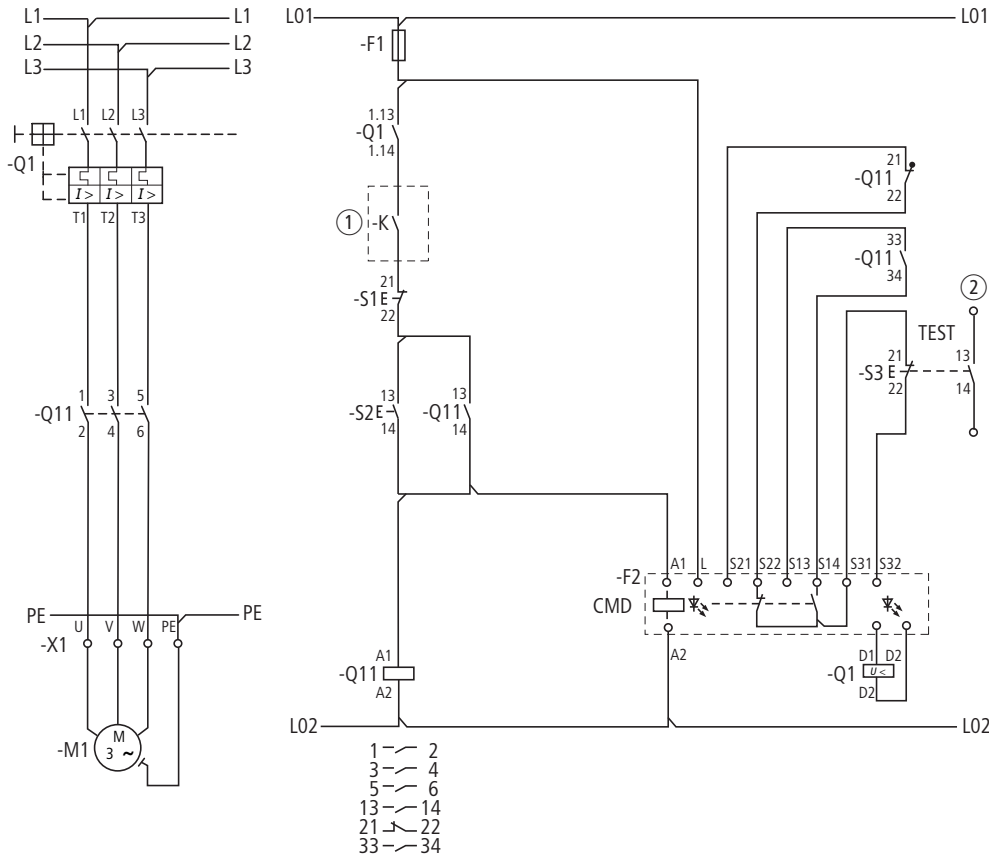
	CMD	Self maintaining	Feedback circuit	Electrical interlock
DOL starter	1 N/O + 1 N/C	1S	1 B	
Reversing starter	1 N/O + 1 N/C	1S	1 B	1 B

**Ordering**

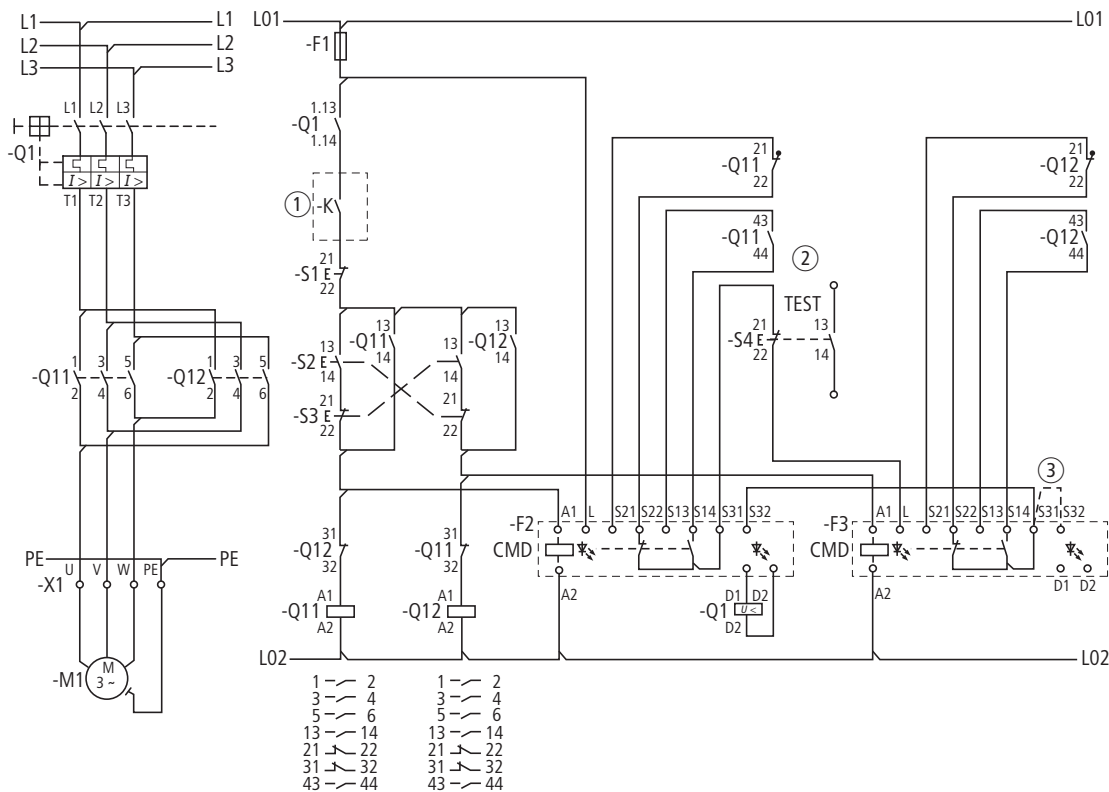
	Part no. Article no.	Price See Price List	Std. pack
CMD contactor monitoring device			
	<b>CMD(24VDC)</b> 106170		1 Off
	<b>CMD(220-240VAC)</b> 106172		1 Off

Engineering

DOL starter



Reversing starter



- ① Switching by safety relay of safety PLC
- ② Signal contact to PLC evaluation
- ③ CMD (24VDC)

AC	DILEM-10(...)	DILEM-01(...)	DILEM12-10(...)	DILEM12-01(...)	DILEM4(...)
	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>
<b>Standard voltages</b>	See price list	See price list	See price list	See price list	See price list
24V 50Hz	010005	010086	127067	127083	014754
48V 50Hz	010020	010294	–	–	–
240V 50Hz	010032	010151	–	–	014305
115V 60Hz	010024	010470	–	–	–
42V 50Hz, 48V 60Hz	051782	051791	–	–	–
110V 50Hz, 120V 60Hz	051783	051792	127072	127088	051801
190V 50Hz, 220V 60Hz	051784	051793	–	–	–
220V 50Hz, 240V 60Hz	051785	051794	–	–	051803
230V 50Hz, 240V 60Hz	051786	051795	–	–	051804
380V 50Hz, 440V 60Hz	051787	051796	–	–	–
400V 50Hz, 440V 60Hz	051788	051797	–	–	051806
415V 50Hz, 480V 60Hz	051789	–	–	–	–
24V 50/60Hz	021417	020402	127079	127095	022044
42V 50/60Hz	032174	033233	–	–	–
110V 50/60Hz	021455	020436	127081	127097	–
230V 50/60Hz	052302	051114	127082	127098	052506
DC	DILEM-10-G(...)	DILEM-01-G(...)	DILEM12-10-G(...)	DILEM12-01-G(...)	DILEM4-G(...)
	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>	Article no. <sup>1)</sup>
<b>Standard voltages</b>	See price list	See price list	See price list	See price list	See price list
12V DC	079594	079642	–	–	079680
24V DC	010213	010343	127132	127137	012701
48V DC	010245	010496	–	–	–
110V DC	010309	010136	–	–	–
220V DC	010325	010168	–	–	–

**Notes**

<sup>1)</sup> To obtain the article number for ordering, read under selected part number and actuating voltage from the table. Devices with **dual-voltage coils** are to be ordered under a **single** article number.

