Contactor relay, 48 V DC, 3 N/O, 1 NC, Screw terminals, DC operation



Part no. DILA-31(48VDC) 276380

General specifications	
Product name	Eaton Moeller® series DILA Control Relay
Part no.	DILA-31(48VDC)
EAN	4015082763800
Product Length/Depth	75 millimetre
Product height	68 millimetre
Product width	45 millimetre
Product weight	0.294 kilogram
Certifications	UL File No.: E29184 CSA File No.: 012528 UL Category Control No.: NKCR UL 508 CSA CSA CSA CSA CIass No.: 3211-03 IEC/EN 60947 VDE 0660 CE IEC/EN 60947-4-1 EN 60947-5-1 UL CSA-C22.2 No. 14-05
Product Tradename	DILA
Product Type	Control Relay
Product Sub Type	None
Catalog Notes	Coil terminal markings according to EN 50005 Contact numbers according to EN 50011 Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.
Features & Functions	
Features	Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contac module
Fitted with:	Suppressor circuit Positive operation contacts Built-in suppressor circuit
General information	
Application	Contactor relays
Degree of protection	IP20
Shock resistance	7 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 5 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
Lifespan, mechanical	20,000,000 Operations (DC operated)
Mounting method	DIN-rail/screw
Operating frequency	9000 Operations/h
Overvoltage category	III
Pollution degree	3
Product category	DILA relays
Protection	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Rated impulse withstand voltage (Uimp)	6000 V AC
Voltage type	DC
Climatic environmental conditions	
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	60 °C
Ambient operating temperature (enclosed) - min	25 °C
Ambient operating temperature (enclosed) - max	40 °C

Ambient storage temperature - max	80 °C
Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
Ferminal capacities	
Terminal capacity (flexible with ferrule)	$1 \times (0.75 - 2.5)$ mm ² , Screw terminals $2 \times (0.75 - 2.5)$ mm ² , Screw terminals
Terminal capacity (solid)	$1 \times (0.75 - 4) \text{ mm}^2$, Screw terminals $2 \times (0.75 - 2.5) \text{ mm}^2$, Screw terminals
Terminal capacity (solid/stranded AWG)	18 - 14, Screw terminals
Stripping length (main cable)	10 mm
Screw size	M3.5, Terminal screw
Screwdriver size	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
Tightening torque	1.2 Nm, Screw terminals
Electrical rating	
Conventional thermal current ith at 60°C (3-pole, open)	16 A
Rated operational current (le)	5 A at 220 V, DC L/R \leq 15 ms (with 3 contacts in series) 1 A at 220 V, DC L/R \leq 50 ms (with 3 contacts in series) 1 A at 220 V, DC L/R \leq 15 ms (with 1 contact in series) 3 A at 110 V, DC L/R \leq 15 ms (with 1 contact in series) 4 A at 24 V, DC L/R \leq 50 ms (with 3 contacts in series) 10 A at 24 V, DC L/R \leq 50 ms (with 1 contact in series) 2 A at 110 V, DC L/R \leq 50 ms (with 3 contacts in series) 6 A at 110 V, DC L/R \leq 50 ms (with 3 contacts in series) 4 A at 60 V, DC L/R \leq 50 ms (with 3 contacts in series) 6 A at 60 V, DC L/R \leq 15 ms (with 3 contacts in series) 10 A at 60 V, DC L/R \leq 15 ms (with 1 contact in series) 10 A at 60 V, DC L/R \leq 15 ms (with 2 contacts in series) 16 A
Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V	4 A
Rated operational current (le) at AC-15, 380 V, 400 V, 415 V	4 A
Rated operational current (Ie) at AC-15, 500 V	1.5 A
Rated insulation voltage (Ui)	690 V
Rated operational voltage (Ue) at AC - max	690 V
Short-circuit protection rating without welding	10 A gG/gL, 500 V, Max. Fuse, Contacts
Safe isolation	400 V AC, Between coil and auxiliary contacts, According to EN 61140 400 V AC, Between auxiliary contacts, According to EN 61140
Switching capacity (auxiliary contacts, general use) Switching capacity (auxiliary contacts, pilot duty)	1 A, 250 V DC, (UL/CSA) 15 A, 600 V AC, (UL/CSA) P300, DC operated (UL/CSA)
	A600, AC operated (UL/CSA)
Magnet system	
Duty factor	100 %
Pick-up voltage	0.8 - 1.1 V DC x Uc 0.7 - 1.3 V DC x Uc (at 24 V: without auxiliary contact module and at ambient air temperature + 40 °C)
Power consumption (pick-up) at DC	2.6 W
Power consumption (sealing) at DC	2.6 W
Rated control supply voltage (Us) at AC, 50 Hz - min	0 V
Rated control supply voltage (Us) at AC, 50 Hz - max	0 V
Rated control supply voltage (Us) at AC, 60 Hz - min	0 V
Rated control supply voltage (Us) at AC, 60 Hz - max	0 V
Rated control supply voltage (Us) at DC - min	48 V
Rated control supply voltage (Us) at DC - max	48 V
Switching time (DC operated, make contacts, closing delay) - max	31 ms
Switching time (DC operated, make contacts, opening delay) - max	12 ms
Voltage tolerance	Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectificati
Communication	
Connection to SmartWire-DT	No
Contacts	
Code number	31E
Control circuit reliability	$\lambda < 5$ x 10-7 (1 failure at 2,000,000 operations for U# = 24 V DC, Umin = 17 V, Imin = mA)

Number of contacts (normally open contacts) Number of auxiliary contacts (normally open contacts) Number of auxiliary contacts (normally open contacts) Pesign verification Equipment heat dissipation, current-dependent Pvid Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (no current-dependent Pvid Rated operational current for specified heat dissipation (no current-dependent Pvid Rated operational current for specified heat dissipation (no) Rated operational of termal stability of enclosures Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Rated operational current and conductors Rated product standard's requirements.		
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Number of auxiliary contacts (normally open contacts) 3	Number of contacts (normally open contacts)	3
Design verification	Number of auxiliary contacts (normally closed contacts)	1
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10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 1 Is the panel builder's responsibility. 1 Is the panel builder is responsibility. The panel builder is responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility The device meets the requirements, provided the information in the instruction	10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
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observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction	10.11 Short-circuit rating	
	10.12 Electromagnetic compatibility	
	10.13 Mechanical function	

Technical data ETIM 9.0

Tooliiiodi data ETIW 0.0				
Low-voltage industrial components (EG000017) / Contactor relay (EC000196)				
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ecl@ss13-27-37-10-01 [AAB716019])				
Rated control supply voltage AC 50 Hz		V	0 - 0	
Rated control supply voltage AC 60 Hz		V	0 - 0	
Rated control supply voltage DC		V	48 - 48	
Voltage type for actuating			DC	
Rated operation current		Α	16	
Rated operation current le, 400 V		Α	4	
Mounting method			DIN-rail/screw	
With LED indication			No	
Suitable for manual operation			No	
Interface			No	
Number of auxiliary contacts as normally closed contact			1	
Number of auxiliary contacts as normally open contact			3	
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	
Operating voltage AC 50 Hz		V	17 - 500	
Operating voltage AC 60 Hz		V	17 - 500	
Operating voltage DC		V	24 - 220	

Voltage type (operating voltage)		AC/DC
Rated switch current	Α	16
Connection type auxiliary circuit		Screw connection
Width	mm	45
Height	mm	68
Depth	mm	75