DATASHEET - DILA-31(24VDC)



Contactor relay, 24 V DC, 3 N/O, 1 NC, Screw terminals, DC operation

Part no. DILA-31(24VDC)

276379 4130206

EL Number

(Norway)

(Norway)	
General specifications	
Product name	Eaton Moeller® series DILA Control relay
Part no.	DILA-31(24VDC)
EAN	4015082763794
Product Length/Depth	75 millimetre
Product height	68 millimetre
Product width	45 millimetre
Product weight	0.296 kilogram
Certifications	IEC/EN 60947-4-1 UL Category Control No.: NKCR CSA UL CSA File No.: 012528 UL File No.: E29184 CE VDE 0660 CSA Class No.: 3211-03 UL 508 IEC/EN 60947 CSA-C22.2 No. 14-05 EN 60947-5-1
Product Tradename	DILA
Product Type	Control relay
Product Sub Type	None
Features & Functions	
Features	Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module
Fitted with:	Suppressor circuit Positive operation contacts Built-in suppressor circuit
General information	
Application	Contactor relays
Connection	Screw terminals
Degree of protection	IP20
Shock resistance	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 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
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 - min	40 °C

Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities	
Terminal capacity (flexible with ferrule)	1 x $(0.75 - 2.5)$ mm ² , Screw terminals 2 x $(0.75 - 2.5)$ 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)	16 A 4 A at 24 V, DC L/R \leq 50 ms (with 3 contacts in series) 3 A at 110 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) 6 A at 110 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) 2 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) 1 A at 220 V, DC L/R \leq 50 ms (with 3 contacts in series) 6 A at 60 V, DC L/R \leq 15 ms (with 1 contact in series) 5 A at 220 V, DC L/R \leq 15 ms (with 1 contact in series) 5 A at 220 V, DC L/R \leq 15 ms (with 3 contacts in series) 10 A at 24 V, DC L/R \leq 15 ms (with 1 contact in series)
Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V	4 A
Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V	4 A
Rated operational current (le) 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)	15 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
Magnet system	
Duty factor	100 %
Pick-up voltage	0.7 - 1.3 V DC \times Uc (at 24 V: without auxiliary contact module and at ambient air temperature + 40 $^{\circ}$ C) 0.8 - 1.1 V DC \times Uc
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	24 V
Rated control supply voltage (Us) at DC - max	24 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	Yes In conjunction with DIL-SWD SmartWire DT contactor module
Contacts	
Code number	31E
Control circuit reliability	λ < 5 x 10-7 (1 failure at 2,000,000 operations for U# = 24 V DC, Umin = 17 V, Imin = 5 mA)
Number of auxiliary contacts (change-over contacts)	0

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 sequirements. Rest the product standard's requirements. Rest the product standard's requirements		
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Design verification	Number of auxiliary contacts (normally closed contacts)	1
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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. The panel builder is responsibility. The panel builder is responsibility of 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	10.8 Connections for external conductors	Is the panel builder's responsibility.
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	10.12 Electromagnetic compatibility	
	10.13 Mechanical function	

Technical data ETIM 9.0

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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	24 - 24			
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