

Contactor relay, 24 V DC, 2 N/O, 2 NC, Push in terminals, DC operation

Part no. **DILA-22(24VDC)-PI**
199218

General specifications	
Product name	Eaton Moeller® series DILA Control Relay
Part no.	DILA-22(24VDC)-PI
EAN	4015081973026
Product Length/Depth	75 millimetre
Product height	68 millimetre
Product width	45 millimetre
Product weight	0.287 kilogram
Certifications	VDE 0660 IEC/EN 60947 EN 60947-5-1 UL Category Control No.: NKCR CSA File No.: 012528 CSA UL File No.: E29184 UL 508 UL CE marking CSA Class No.: 3211-03 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 contact module
Fitted with:	Positive operation contacts Suppressor circuit Built-in suppressor circuit Varistor 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
Oversupply voltage 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

Ambient storage temperature - max	80 °C	
Climatic proofing	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78	
Terminal capacities		
Terminal capacity (flexible with ferrule)	2 x (0.5 - 1.5) mm ² 1 x (0.5 - 1.5) mm ² , Control circuit cables	
Terminal capacity (solid)	1 x (0.5 - 0.25) mm ² 2 x (0.5 - 2.5) mm ² , Control circuit cables	
Terminal capacity (solid/stranded AWG)	20 - 14	
Stripping length (main cable)	10 mm	
Screwdriver size	3.0 x 0.5 mm, Terminal screw	
Electrical rating		
Rated operational current (Ie)	10 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series) 1 A at 220 V, DC L/R ≤ 15 ms (with 1 contact in series) 6 A at 60 V, DC L/R ≤ 15 ms (with 1 contact in series) 3 A at 110 V, DC L/R ≤ 15 ms (with 1 contact in series) 5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series) 6 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series) 10 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series) 4 A at 24 V, DC L/R ≤ 50 ms (with 3 contacts in series) 4 A at 60 V, DC L/R ≤ 50 ms (with 3 contacts in series) 2 A at 110 V, DC L/R ≤ 50 ms (with 3 contacts in series) 1 A at 220 V, DC L/R ≤ 50 ms (with 3 contacts in series) 16 A	
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 (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)	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 x Uc (at 24 V: without auxiliary contact module and at ambient air temperature + 40 °C) 0.8 - 1.1 V DC x Uc	
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 rectification	
Communication		
Connection	Push in terminals	
Connection to SmartWire-DT	In conjunction with DIL-SWD SmartWire DT contactor module Yes	
Contacts		
Code number	22E	
Control circuit reliability	< 2 λ, < 1 failure at 100,000,000 Operations (at U# = 24 V DC, Umin = 17 V, Imin = 5.4 mA)	
Number of auxiliary contacts (change-over contacts)	0	
Number of contacts (normally closed contacts)	2	
Number of contacts (normally open contacts)	2	
Number of auxiliary contacts (normally closed contacts)	2	
Number of auxiliary contacts (normally open contacts)	2	

Design verification

Equipment heat dissipation, current-dependent Pvid	0 W
Heat dissipation capacity Pdiss	0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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	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 Ie, 400 V	A	4
Connection type auxiliary circuit		Spring clamp connection
Mounting method		DIN-rail/screw
Interface		No
Number of auxiliary contacts as normally closed contact		2
Number of auxiliary contacts as normally open contact		2
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		No
Suitable for manual operation		No