DATASHEET - DILM7-01(24VDC)



Contactor, 3 pole, 380 V 400 V 3 kW, 1 NC, 24 V DC, DC operation, Screw terminals



Part no. DILM7-01(24VDC)

276600

EL Number

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(Norway)	
General specifications	
Product name	Eaton Moeller® series DILM contactor
Part no.	DILM7-01(24VDC)
EAN	4015082766009
Product Length/Depth	75 millimetre
Product height	68 millimetre
Product width	45 millimetre
Product weight	0.296 kilogram
Certifications	IEC/EN 60947 IEC/EN 60947-4-1 UL Category Control No.: NLDX VDE 0660 UL File No.: E29096 CSA File No.: 012528 CSA CE UL 60947-4-1 CSA Class No.: 2411-03, 3211-04 UL CSA-C22.2 No. 60947-4-1-14
Product Tradename	DILM
Product Type	Contactor
Product Sub Type	None
Catalog Notes	Contacts according to EN 50012 IE3-ready devices are identified by the logo on their packaging.
Features & Functions	
Fitted with:	Mirror contact Varistor suppressor circuit
General information	
Application	Contactors for Motors
Connection	Screw terminals
Degree of protection	IP20
Lifespan, mechanical	10,000,000 Operations (DC operated)
Operating frequency	9000 mechanical Operations/h (DC operated)
Overvoltage category	III
Pollution degree	3
Product category	Contactors
Protection	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
Rated impulse withstand voltage (Uimp)	8000 V AC
Resistance per pole	4.6 mΩ
Suitable for	Also motors with efficiency class IE3
Utilization category	AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-3: Normal AC induction motors: starting, switch off during running AC-1: Non-inductive or slightly inductive loads, resistance furnaces
Voltage type	DC
Ambient conditions, mechanical	
Shock resistance	5.7 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 3.4 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 3.4 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms

	5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-
Olimesta anninamental escalificaci	sinusoidal shock 10 ms
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
Electro magnetic compatibility	
Emitted interference	According to EN 60947-1
Interference immunity	According to EN 60947-1
Terminal capacities	
Terminal capacity (flexible with ferrule)	2 x (0.75 - 2.5) mm ² 1 x (0.75 - 2.5) mm ²
Terminal capacity (solid)	1 x (0.75 - 4) mm ² 2 x (0.75 - 2.5) mm ²
Terminal capacity (solid/stranded AWG)	Single 18 - 10, double 18 - 14
Stripping length (main cable)	10 mm
Stripping length (control circuit cable)	10 mm
Screw size	M3.5, Terminal screw
Screwdriver size	$0.8\times5.5/1\times6$ mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver
Tightening torque	1.2 Nm, Screw terminals
Electrical rating	
Rated breaking capacity at 220/230 V	70 A
Rated breaking capacity at 380/400 V	70 A
Rated breaking capacity at 500 V	50 A
Rated breaking capacity at 660/690 V	40 A
Rated operational current (Ie) at AC-1, 380 V, 400 V, 415 V	22 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V	7 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V	7 A
Rated operational current (Ie) at AC-3, 440 V	7 A
Rated operational current (Ie) at AC-3, 500 V	5 A
Rated operational current (le) at AC-3, 660 V, 690 V	4 A
Rated operational current (Ie) at AC-4, 220 V, 230 V, 240 V	5 A
Rated operational current (Ie) at AC-4, 440 V	5 A
Rated operational current (Ie) at AC-4, 500 V	4.5 A
Rated operational current (Ie) at AC-4, 660 V, 690 V	4 A
Rated operational current (Ie) at DC-1, 60 V	20 A
Rated operational current (Ie) at DC-1, 110 V	20 A
Rated operational current (Ie) at DC-1, 220 V	15 A
Rated insulation voltage (Ui)	690 V
Rated making capacity up to 690 V (cos phi to IEC/EN 60947)	112 A
Rated operational power at AC-3, 240 V, 50 Hz	2.2 kW
Rated operational power at AC-3, 380/400 V, 50 Hz	3 kW
Rated operational power at AC-3, 415 V, 50 Hz	4 kW
Rated operational power at AC-4, 220/230 V, 50 Hz	1 kW
Rated operational power at AC-4, 240 V, 50 Hz	1.5 kW
Rated operational power at AC-4, 415 V, 50 Hz	2.3 kW
Rated operational power at AC-4, 440 V, 50 Hz	2.4 kW
Rated operational power at AC-4, 500 V, 50 Hz	2.5 kW
Rated operational power at AC-4, 660/690 V, 50 Hz	2.9 kW
Rated operational voltage (Ue) at AC - max	690 V

Short-circuit current rating (basic rating)	45 A, max. Fuse, SCCR (UL/CSA) 60 A, max. CB, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA)
Short-circuit current rating (high fault at 480 V)	25 A, Class RK5/ 20 A Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 16 A, max. CB, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
Short-circuit current rating (high fault at 600 V)	30/100 kA, Fuse, SCCR (UL/CSA) 25 A, Class RK5/20 A, Class J, max. Fuse, SCCR (UL/CSA)
Short-circuit protection rating (type 1 coordination) at 400 V	35 A gG/gL
Short-circuit protection rating (type 1 coordination) at 690 V	20 A gG/gL
Short-circuit protection rating (type 2 coordination) at 400 V	20 A gG/gL
Short-circuit protection rating (type 2 coordination) at 690 V	16 A gG/gL
Conventional thermal current Ith	
Conventional thermal current ith (1-pole, enclosed)	45 A
Conventional thermal current ith (3-pole, enclosed)	18 A
Conventional thermal current ith at 55°C (3-pole, open)	21 A
Conventional thermal current ith of main contacts (1-pole, open)	50 A
Switching capacity	
Switching capacity (main contacts, general use)	20 A, Maximum motor rating (UL/CSA)
Switching capacity (auxiliary contacts, general use)	10 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)	P300, DC operated (UL/CSA) A600, AC operated (UL/CSA)
Magnet system	
Arcing time	10 ms
Drop-out voltage	At least smoothed two-phase bridge rectifier or three-phase rectifier 0.6 - 0.15 x UC, DC operated
Duty factor	100 %
Pick-up voltage	0.7 - 1.3 V DC x Uc (without auxiliary contact module and at ambient air temperatur + 40 °C) 0.8 - 1.1 V DC x Uc 0.85 - 1.1 V DC x Uc (only with auxiliary contact module with 3 or more N/C contacts)
Power consumption (pick-up) at DC	3 W
Power consumption (sealing) at DC	3 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
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	0.25 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase	1.5 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	1 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	2 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	3 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	5 HP
Communication	
Connection to SmartWire-DT	Yes In conjunction with DIL-SWD SmartWire DT contactor module
Contacts	
Number of contacts (normally closed contacts)	1
Number of auxiliary contacts (normally closed contacts)	1
Number of auxiliary contacts (normally open contacts)	0
Safety	

Special purpose ratings Special purpose rating of billate electrical declarage lamps 12. A (899 6915-2 phase, 277 6915-1 phase) 12. A (899 6915-2 phase, 277 6915-1 phase) 12. A (899 6915-2 ph. 10,000 pycles acc. to U1 1915, (ULCSA) A 7. T.A. 469 V 6915-2 ph. 10,000 pycles acc. to U1 1915, (ULCSA) 27. Fig. 291 V 81 H.3- ph. (ULCSA) 27. Fig. 291 V 81 H.3-ph. (ULCSA) 27. Fig. 291 V 81 H.3-ph. (ULCSA) 27. Fig. 291 V 8		400 V AC, Between the contacts, According to EN 61140
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Special purpose rating of tungston incandescent lamps 12 A, 600 V 60 Hz 2ghase, 347 V 60 Hz 1ghase, (ULCSA) Posign verification Equipment heat dissipation, current-dependent Pvid 0.3 W Heat dissipation capacity Pdiss 0.0 W Rated operational current for specified heat dissipation (In) Rated operations dissipation distinct in equirements. Meets the product standard's requirements. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs to be evaluated. Does not apply, since the entire switchgaar needs	Special purpose rating of refrigeration control (CSA only)	10 A, FLA 600 V 60 Hz 3phase; (CSA) 60 A, LRA 480 V 60 Hz 3phase; (CSA)
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Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Power contactor, AC switching (EC000066)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ecl@ss13-27-37-10-03 [AAB718020])			
ed 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
Number of normally closed contacts as main contact			0
Number of normally open contacts as main contact			3

Type of electrical connection of main circuit		Screw connection
Operating voltage AC 50 Hz	٧	24 - 690
Operating voltage AC 60 Hz	٧	24 - 690
Rated operation current le at AC-1, 400 V	Α	22
Rated operation current le at AC-3, 400 V	Α	7
Rated operation power at AC-3, 400 V	kW	3
Rated operation current le at AC-4, 400 V	Α	5
Rated operation power at AC-4, 400 V	kW	2.2
Rated operation power NEMA	kW	2.2
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as normally closed contact		1
Modular version		No
Width	mm	45
Height	mm	68
Depth	mm	75