

**Contactor, 3 pole, 380 V 400 V 7.5 kW, 1 N/O, 42 V 50 Hz, 48 V 60 Hz, AC operation, Push in terminals**

**Part no. DILM15-10(42V50HZ,48V60HZ)-PI  
199252**

<b>General specifications</b>		
Product name		Eaton Moeller® series DILM contactor
Part no.		DILM15-10(42V50HZ,48V60HZ)-PI
EAN		4015081973361
Product Length/Depth		75 millimetre
Product height		68 millimetre
Product width		45 millimetre
Product weight		0.225 kilogram
Certifications		VDE 0660 IEC/EN 60947 UL Category Control No.: NLDX CE marking UL File No.: E29096 CSA Class No.: 2411-03, 3211-04 CSA certified CSA File No.: 012528 UL Listed
Product Tradename		DILM
Product Type		Contactor
Product Sub Type		None
Catalog Notes		At maximum permissible ambient temperature (open.) Contacts according to EN 50012 Not suitable for motors with efficiency class IE3.
<b>General information</b>		
Application		Contactors for Motors
Degree of protection		IP20
Frame size		FS1
Lifespan, mechanical		10,000,000 Operations (AC operated)
Operating frequency		5000 mechanical Operations/h (AC 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)		6000 V AC
Resistance per pole		2.5 mΩ
Utilization category		AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-3: Normal AC induction motors: starting, switch off during running
Voltage type		AC
<b>Ambient conditions, mechanical</b>		
Shock resistance		10 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary 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-sinusoidal shock 10 ms 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 3.4 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms
<b>Climatic environmental conditions</b>		
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
<b>Electro magnetic compatibility</b>		
Emitted interference		According to EN 60947-1
Interference immunity		According to EN 60947-1
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		1 x (1 - 6) mm <sup>2</sup>
Terminal capacity (flexible)		2 x (0.5 - 2.5) mm <sup>2</sup> 1 x (0.5 - 2.5) mm <sup>2</sup>
Terminal capacity (solid)		1 x (0.5 - 0.25) mm <sup>2</sup> 2 x (0.5 - 2.5) mm <sup>2</sup> , Control circuit cables
Terminal capacity (solid/stranded AWG)		20 - 14
Stripping length (main cable)		10 mm
Screwdriver size		3 x 0.5 mm, Terminal screw 3.0 x 0.5 mm, Terminal screw
<b>Electrical rating</b>		
Rated breaking capacity at 220/230 V		124 A
Rated breaking capacity at 380/400 V		124 A
Rated breaking capacity at 500 V		100 A
Rated breaking capacity at 660/690 V		70 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		15.5 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		15.5 A
Rated operational current (Ie) at AC-3, 440 V		15.5 A
Rated operational current (Ie) at AC-3, 500 V		12.5 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		9 A
Rated operational current (Ie) at AC-4, 220 V, 230 V, 240 V		7 A
Rated operational current (Ie) at AC-4, 440 V		7 A
Rated operational current (Ie) at AC-4, 500 V		6 A
Rated operational current (Ie) at AC-4, 660 V, 690 V		5 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)		155 A
Rated operational power at AC-3, 240 V, 50 Hz		4.6 kW
Rated operational power at AC-3, 380/400 V, 50 Hz		7.5 kW
Rated operational power at AC-3, 415 V, 50 Hz		8 kW
Rated operational power at AC-4, 220/230 V, 50 Hz		2 kW
Rated operational power at AC-4, 240 V, 50 Hz		2.2 kW
Rated operational power at AC-4, 415 V, 50 Hz		3.4 kW
Rated operational power at AC-4, 440 V, 50 Hz		3.6 kW
Rated operational power at AC-4, 500 V, 50 Hz		3.5 kW
Rated operational power at AC-4, 660/690 V, 50 Hz		4.4 kW
Rated operational voltage (Ue) at AC - max		690 V
<b>Short-circuit rating</b>		
Short-circuit current rating (basic rating)		45 A, max. Fuse, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA) 60 A, max. CB, SCCR (UL/CSA)
Short-circuit current rating (high fault at 480 V)		30/100 kA, Fuse, SCCR (UL/CSA) 16 A, max. CB, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA) 25 A, Class RK5/ 20 A Class J, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault at 600 V)		25 A, Class RK5/20 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 25 A, Class RK5/45 A, Class J, max. Fuse, SCCR (UL/CSA) 25 A, Class RK5/60 A, Class J, max. Fuse, SCCR (UL/CSA)

Short-circuit protection rating (type 1 coordination) at 400 V		63 A gG/gL
Short-circuit protection rating (type 1 coordination) at 690 V		50 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		20 A gG/gL
<b>Conventional thermal current I<sub>th</sub></b>		
Conventional thermal current I <sub>th</sub> (1-pole, enclosed)		45 A
Conventional thermal current I <sub>th</sub> (3-pole, enclosed)		18 A
Conventional thermal current I <sub>th</sub> at 55°C (3-pole, open)		21 A
Conventional thermal current I <sub>th</sub> of main contacts (1-pole, open)		50 A
<b>Switching capacity</b>		
Switching capacity (main contacts, general use)		20 A, Maximum motor rating (UL/CSA)
Switching capacity (auxiliary contacts, general use)		1 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)		A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
<b>Magnet system</b>		
Arcing time		10 ms
Duty factor		100 %
Pick-up voltage		0.8 - 1.1 V AC x U <sub>c</sub>
Power consumption, pick-up, 50 Hz		24 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz
Power consumption, pick-up, 60 Hz		30 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz
Power consumption, sealing, 50 Hz		3.4 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz 1.4 W, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 50 Hz
Power consumption, sealing, 60 Hz		1.4 W, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz 4.4 VA, Dual-frequency coil in a cold state and 1.0 x U <sub>s</sub> , at 60 Hz
Rated control supply voltage (U <sub>s</sub> ) at AC, 50 Hz - min		42 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 50 Hz - max		42 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 60 Hz - min		48 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 60 Hz - max		48 V
Rated control supply voltage (U <sub>s</sub> ) at DC - min		0 V
Rated control supply voltage (U <sub>s</sub> ) at DC - max		0 V
Switching time (AC operated, make contacts, closing delay) - min		15 ms
Switching time (AC operated, make contacts, closing delay) - max		21 ms
Switching time (AC operated, make contacts, opening delay) - min		9 ms
Switching time (AC operated, make contacts, opening delay) - max		18 ms
<b>Motor rating</b>		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		1 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase		5 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		5 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		10 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		10 HP
<b>Communication</b>		
Connection		Push in terminals
Connection to SmartWire-DT		No
<b>Contacts</b>		
Number of contacts (normally open contacts)		1
Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		1
<b>Safety</b>		
Safe isolation		400 V AC, Between coil and contacts, According to EN 61140 400 V AC, Between the contacts, According to EN 61140
<b>Special purpose ratings</b>		
Special purpose rating of ballast electrical discharge lamps		20 A (480V 60Hz 3phase, 277V 60Hz 1phase) 20 A (600V 60Hz 3phase, 347V 60Hz 1phase)
Special purpose rating of definite purpose rating		15 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 90 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

Special purpose rating of elevator control			9 A, 600 V 60 Hz 3-ph, (UL/CSA) 11 A, 480 V 60 Hz 3-ph, (UL/CSA) 2 HP, 200 V 60 Hz 3-ph, (UL/CSA) 3 HP, 240 V 60 Hz 3-ph, (UL/CSA) 7.8 A, 200 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 600 V 60 Hz 3-ph, (UL/CSA) 9.6 A, 240 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA)
Special purpose rating of refrigeration control (CSA only)			10 A, FLA 480 V 60 Hz 3phase; (CSA) 10 A, FLA 600 V 60 Hz 3phase; (CSA) 60 A, LRA 480 V 60 Hz 3phase; (CSA) 60 A, LRA 600 V 60 Hz 3phase; (CSA)
Special purpose rating of resistance air heating			20 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 20 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
Special purpose rating of tungsten incandescent lamps			14 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 14 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
<b>Design verification</b>			
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) / Power contactor, AC switching (EC000066)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Power contactor, AC switching (ec1@ss10.0.1-27-37-10-03 [AAB718015])			
Rated control supply voltage Us at AC 50HZ	V		42 - 42
Rated control supply voltage Us at AC 60HZ	V		48 - 48
Rated control supply voltage Us at DC	V		0 - 0
Voltage type for actuating			AC
Rated operation current Ie at AC-1, 400 V	A		22
Rated operation current Ie at AC-3, 400 V	A		15.5
Rated operation power at AC-3, 400 V	kW		7.5
Rated operation current Ie at AC-4, 400 V	A		7
Rated operation power at AC-4, 400 V	kW		3
Rated operation power NEMA	kW		0
Modular version			No
Number of auxiliary contacts as normally open contact			1
Number of auxiliary contacts as normally closed contact			0
Type of electrical connection of main circuit			Spring clamp connection
Number of normally closed contacts as main contact			0

Number of normally open contacts as main contact			3
--------------------------------------------------	--	--	---