DATASHEET - DILMP125(RAC240)

Contactor, 4 pole, 125 A, RAC 240: 190 - 240 V 50/60 Hz, AC operation

Powering Business Worldwide™

Part no.	**DILMP125(RAC240)**
	109905
EL Number (Norway)	**4130408**

General specifications			
Product name			Eaton Moeller® series DILMP 4-pole contactor
Part no.			DILMP125(RAC240)
EAN			4015081094714
Product Length/Depth			160 millimetre
Product height			170 millimetre
Product width			122 millimetre
Product weight			2.73 kilogram
Certifications			CSA Class No.: 2411-03, 3211-04 IEC/EN 60947 CSA-C22.2 No. 60947-4-1-14 CE VDE 0660 UL Category Control No.: NLDX CSA CSA File No.: 012528 UL File No.: E29096 IEC/EN 60947-4-1 UL 60947-4-1 UL
Product Tradename			DILMP
Product Type			4-pole contactor
Product Sub Type			None
Catalog Notes			Contacts according to EN 50012
Features & Functions			
Fitted with:			Suppressor circuit in actuating electronics
General information			
Application			Contactors for 4 pole electric consumers
Degree of protection			IP00
Lifespan, mechanical			10,000,000 Operations (AC operated) 10,000,000 Operations (DC operated)
Operating frequency			3600 mechanical Operations/h (AC operated) 3600 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
Residual current			1 mA (with actuation of A1 - A2 by the electronics with "0" signal)
Resistance per pole			0.6 mΩ
Utilization category			AC-3: Normal AC induction motors: starting, switch off during running AC-1: Non-inductive or slightly inductive loads, resistance furnaces
Voltage type			AC
Ambient conditions, mechanical			
Shock resistance			5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 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
Climatic environmental conditions			
Altitude			Max. 2000 m
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, constant, to IEC 60068-2-3 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities	
Terminal capacity (copper band)	2 x (6 x 16 x 0.8) mm (Number of segments x width x thickness), Main cables
Terminal capacity (flexible with ferrule)	1 x (0.75 - 1.5) mm^2 2 x (0.75 - 1.5) mm^2
Terminal capacity (flexible)	1 x (0.75 - 2.5) mm^2 2 x (0.75 - 2.5) mm^2
Terminal capacity (solid)	2 x (0.75 - 4) mm^2, Control circuit cables 1 x (0.75 - 4) mm^2, Control circuit cables 1 x (0.75 - 2.5) mm^2
Terminal capacity (solid/stranded AWG)	8 - 3/0, Main cables 18 - 14, Control circuit cables
Terminal capacity (stranded)	2 x (16 - 95) mm^2, Main cables 1 x (16 - 120) mm^2, Main cables
Stripping length (main cable)	15 mm
Stripping length (control circuit cable)	10 mm
Screw size	M10, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables 5 mm AF, Hexagon socket-head spanner, Terminal screw, Main cables
Screwdriver size	0.8 x 5.5/1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver 2, Terminal screw, Control circuit cables, Pozidriv screwdriver
Tightening torque	14 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
Electrical rating	
Rated breaking capacity at 220/230 V	800 A
Rated breaking capacity at 380/400 V	800 A
Rated breaking capacity at 500 V	800 A
Rated breaking capacity at 660/690 V	650 A
Rated operational current (Ie) at AC-1, 380 V, 400 V, 415 V	125 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V	80 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V	80 A
Rated operational current (Ie) at AC-3, 440 V	80 A
Rated operational current (Ie) at AC-3, 500 V	80 A
Rated operational current (Ie) at AC-3, 660 V, 690 V	65 A
Rated operational current (Ie) at DC-1, 60 V	125 A
Rated operational current (Ie) at DC-1, 110 V	125 A
Rated operational current (Ie) at DC-1, 220 V	125 A
Rated insulation voltage (Ui)	690 V
Rated making capacity up to 690 V (cos phi to IEC/EN 60947)	1120 A
Rated operational power at AC-1, 220/230 V, 50 Hz	45 kW
Rated operational power at AC-1, 240 V, 50 Hz	49 kW
Rated operational power at AC-1, 380/400 V, 50 Hz	78 kW
Rated operational power at AC-1, 415 V, 50 Hz	85 kW
Rated operational power at AC-1, 440 V, 50 Hz	90 kW
Rated operational power at AC-1, 500 V, 50 Hz	103 kW
Rated operational power at AC-1, 690 V, 50 Hz	136 kW
Rated operational power at AC-3, 240 V, 50 Hz	27.5 kW
Rated operational power at AC-3, 380/400 V, 50 Hz	37 kW
Rated operational power at AC-3, 415 V, 50 Hz	48 kW
Rated operational power at AC-3, 440 V, 50 Hz	51 kW
Rated operational power at AC-3, 500 V, 50 Hz	58 kW
Rated operational power at AC-3, 690 V, 50 Hz	63 kW
Rated operational voltage (Ue) at AC - max	690 V
Short-circuit rating	

Short-circuit current rating (basic rating)	600 A, max. CB, SCCR (UL/CSA) 600 A, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit current rating (high fault at 480 V)	250 A, max. CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
Short-circuit current rating (high fault at 600 V)	30 kA, CB, SCCR (UL/CSA) 300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 350 A, max. CB, SCCR (UL/CSA)
Short-circuit protection rating (type 1 coordination) at 400 V	250 A gG/gL
Short-circuit protection rating (type 1 coordination) at 690 V	200 A gG/gL
Short-circuit protection rating (type 2 coordination) at 400 V	160 A gG/gL
Short-circuit protection rating (type 2 coordination) at 690 V	160 A gG/gL
Conventional thermal current Ith	
Conventional thermal current ith (1-pole, enclosed)	292 A
Conventional thermal current ith (3-pole, enclosed)	100 A
Conventional thermal current ith at 55°C (3-pole, open)	110 A
Conventional thermal current ith at 60°C (3-pole, open)	108 A
Conventional thermal current ith of main contacts (1-pole, open)	325 A
Switching capacity	
Switching capacity (main contacts, general use)	125 A, Maximum motor rating (UL/CSA)
Magnet system	
Drop-out voltage	AC operated: 0.6 - 0.25 x UC, AC operated
Duty factor	100 %
Pick-up voltage	0.8 - 1.15 V AC/DC x Us 0.8 - 1.15 V AC x Uc
Power consumption, pick-up, 50 Hz	180 VA, Dual-frequency coil in a cold state and 1.0 x Us
Power consumption, pick-up, 60 Hz	150 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 180 VA, Dual-frequency coil in a cold state and 1.0 x Us
Power consumption, sealing, 50 Hz	2.3 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz
Power consumption, sealing, 60 Hz	2.3 W, Dual-frequency coil in a cold state and 1.0 x Us 3.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
Rated control supply voltage (Us) at AC, 50 Hz - min	190 V
Rated control supply voltage (Us) at AC, 50 Hz - max	240 V
Rated control supply voltage (Us) at AC, 60 Hz - min	190 V
Rated control supply voltage (Us) at AC, 60 Hz - max	240 V
Rated control supply voltage (Us) at DC - min	0 V
Rated control supply voltage (Us) at DC - max	0 V
Switching time (AC operated, make contacts, closing delay) - min	28 ms
Switching time (AC operated, make contacts, closing delay) - max	33 ms
Switching time (AC operated, make contacts, opening delay) - min	35 ms
Switching time (AC operated, make contacts, opening delay) - max	41 ms
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	7.5 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase	25 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	15 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	30 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	60 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	75 HP
Communication	
Connection	Screw terminals
Connection to SmartWire-DT	No
Contacts	
Number of auxiliary contacts (normally closed contacts)	0
Number of auxiliary contacts (normally open contacts)	0
Safety	
Safe isolation	440 V AC, Between the contacts, According to EN 61140

			440 V AC, Between coil and contacts, According to EN 61140
Special purpose ratings			
Special purpose rating of ballast electrical discharge lamps			100 A (600V 60Hz 3phase, 347V 60Hz 1phase) 100 A (480V 60Hz 3phase, 277V 60Hz 1phase)
Special purpose rating of elevator control			68 A, 240 V 60 Hz 3-ph, (UL/CSA) 62.1 A, 200 V 60 Hz 3-ph, (UL/CSA) 25 HP, 240 V 60 Hz 3-ph, (UL/CSA) 50 HP, 480 V 60 Hz 3-ph, (UL/CSA) 60 HP, 600 V 60 Hz 3-ph, (UL/CSA) 20 HP, 200 V 60 Hz 3-ph, (UL/CSA) 62 A, 600 V 60 Hz 3-ph, (UL/CSA) 65 A, 480 V 60 Hz 3-ph, (UL/CSA)
Special purpose rating of refrigeration control (CSA only)			420 A, LRA 600 V 60 Hz 3phase; (CSA) 90 A, FLA 480 V 60 Hz 3phase; (CSA) 70 A, FLA 600 V 60 Hz 3phase; (CSA) 540 A, LRA 480 V 60 Hz 3phase; (CSA)
Special purpose rating of resistance air heating			100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA) 110 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)
Special purpose rating of tungsten incandescent lamps			100 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA) 100 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)
Design verification			
Equipment heat dissipation, current-dependent Pvid			22.2 W
Heat dissipation capacity Pdiss			0 W
Heat dissipation per pole, current-dependent Pvid			7.4 W
Rated operational current for specified heat dissipation (In)			125 A
Static heat dissipation, non-current-dependent Pvs			2.3 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 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])			
Rated control supply voltage AC 50 Hz		V	190 - 240
Rated control supply voltage AC 60 Hz		V	190 - 240
Rated control supply voltage DC		V	0 - 0
Voltage type for actuating			AC
Number of normally closed contacts as main contact			0
Number of normally open contacts as main contact			4
Type of electrical connection of main circuit			Screw connection

Operating voltage AC 50 Hz		V	230 - 690
Operating voltage AC 60 Hz		V	230 - 690
Rated operation current Ie at AC-1, 400 V		A	125
Rated operation current Ie at AC-3, 400 V		A	80
Rated operation power at AC-3, 400 V		kW	37
Rated operation current Ie at AC-4, 400 V		A	115
Rated operation power at AC-4, 400 V		kW	28
Rated operation power NEMA		kW	44.7
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as normally closed contact			0
Modular version			No
Width		mm	122
Height		mm	170
Depth		mm	160