

DIL CONTACTORS
109930


Overview


Specifications


Resources

How to

109930

Eaton Moeller® series DILMP Contactor, 4 pole, 20A
DC operation



 WIN-WIN with Push-in Terminals

 How to improve wiring

Photo is representative

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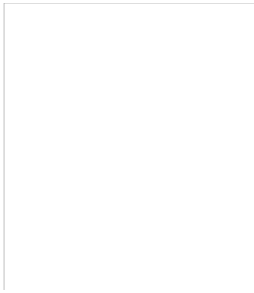


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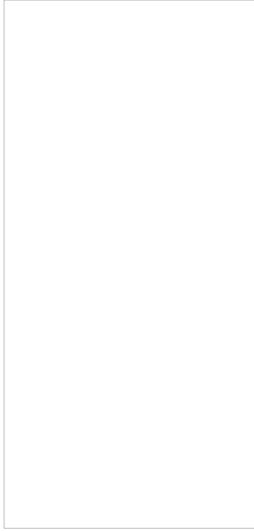


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Designed to work together

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277950

Eaton Moeller® series DILM Auxiliary contact module, 4 pole, Ith= 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILM40 - DILM170

277946

Eaton Moeller® series DILM Auxiliary contact module, 2 pole, Ith= 16 A, 1 N/O, 1 NC, Front fixing, Screw terminals, DILM40 - DILM170

278425

Eaton Moeller® series DILM Auxiliary contact module, 2 pole, Ith= 10 A, 1 N/O, 1 NC, Side mounted, Screw terminals, DILM40 - DILM225A, -SI

277949

Eaton Moeller® series DILM Auxiliary contact module, 4 pole, Ith= 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILM40 - DILM170

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GENERAL SPECIFICATIONS

General specifications	>	PRODUCT NAME	Eaton Moeller® series DILMP 4-pole contactor
		CATALOG NUMBER	109930
Product specifications	>	MODEL CODE	DILMP200(RDC24)
		EAN	4015081094967
		PRODUCT LENGTH/DEPTH	160 mm
		PRODUCT HEIGHT	170 mm
		PRODUCT WIDTH	122 mm
		PRODUCT WEIGHT	2.73 kg
		CERTIFICATIONS	CE CSA-C22.2 No. 60947-4-1-14 IEC/EN 60947 UL Category Control No.: NLDX CSA CSA File No.: 012528 UL 60947-4-1 CSA Class No.: 2411-03, 3211-04 UL File No.: E29096 VDE 0660 IEC/EN 60947-4-1 UL
		CATALOG NOTES	Also tested according to AC-3e.

PRODUCT SPECIFICATIONS

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 1.5) mm ² 2 x (0.75 - 1.5) mm ²
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	200 A
10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility. The specifications must be observed.
RATED OPERATIONAL POWER AT AC-1, 380/400 V, 50 HZ	125 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	55 kW
CONVENTIONAL THERMAL CURRENT I_{th} (3-POLE, ENCLOSED)	160 A

RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	75 kW
TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 16 x 0.8) mm (Number of segments x width of cables)
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	172 A
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	300/300 A, Class J, max. Fuse, SCCR (UL/CSA) 250 A, max. CB, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	180 A
RATED OPERATIONAL POWER (NEMA)	93 kW
OPERATING VOLTAGE AT DC - MAX	27 V
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
FITTED WITH:	Suppressor circuit in actuating electronics
RATED BREAKING CAPACITY AT 380/400 V	1150 A
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	600 A, max. Fuse, SCCR (UL/CSA) 600 A, max. CB, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED BREAKING CAPACITY AT 660/690 V	800 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	200 A
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	96 A, 480 V 60 Hz 3-ph, (UL/CSA) 30 HP, 200 V 60 Hz 3-ph, (UL/CSA) 75 HP, 480 V 60 Hz 3-ph, (UL/CSA) 40 HP, 240 V 60 Hz 3-ph, (UL/CSA) 99 A, 600 V 60 Hz 3-ph, (UL/CSA) 92 A, 200 V 60 Hz 3-ph, (UL/CSA) 104 A, 240 V 60 Hz 3-ph, (UL/CSA) 100 HP, 600 V 60 Hz 3-ph, (UL/CSA)
OPERATING VOLTAGE AT DC - MIN	24 V
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	10 HP

ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
POWER CONSUMPTION (SEALING) AT DC	1.9 W
NUMBER OF POLES	Four-pole
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
TERMINAL CAPACITY (FLEXIBLE)	1 x (0.75 - 2.5) mm ² 2 x (0.75 - 2.5) mm ²
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to
10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to
APPLICATION	Contactors for 4 pole electric consumers
OPERATING FREQUENCY	3600 mechanical Operations/h (AC operated) 3600 mechanical Operations/h (DC operated)
VOLTAGE TYPE	DC
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	250 A gG/gL
PRODUCT CATEGORY	Contactors
RATED OPERATIONAL POWER AT AC-1, 500 V, 50 HZ	165 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	90 kW
HEAT DISSIPATION CAPACITY PDISS	0 W
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	125 HP
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	160 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, 160 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase,
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	40 kW
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables 8 - 3/0, Main cables
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
DEGREE OF PROTECTION	IP00
OVERVOLTAGE CATEGORY	III
RATED OPERATIONAL POWER AT AC-1, 440 V, 50 HZ	145 kW
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
POLLUTION DEGREE	3
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	200 A

RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
CONNECTION	Screw terminals
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
TIGHTENING TORQUE	14 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	464 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	93 A
10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	Meets the product standard's requirements.
10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	115 A
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	250 A gG/gL
SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	160 A (600V 60Hz 3phase, 347V 60Hz 1phase) 160 A (480V 60Hz 3phase, 277V 60Hz 1phase)
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	85 kW
SHOCK RESISTANCE	5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	200 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	60 HP
DROP-OUT VOLTAGE	0.2 - 0.6 x UC, DC operated
RESISTANCE PER POLE	0.6 mΩ
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
OPERATING VOLTAGE AT AC, 50 HZ - MAX	690 V
10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility. The specifications must be observed.

540 A, LRA 600 V 60 Hz 3phase; (CSA)

SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	90 A, FLA 600 V 60 Hz 3phase; (CSA) 90 A, FLA 480 V 60 Hz 3phase; (CSA) 540 A, LRA 480 V 60 Hz 3phase; (CSA)
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to
STRIPPING LENGTH (MAIN CABLE)	15 mm
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	160 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, 160 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase,
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
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)
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	4
RATED BREAKING CAPACITY AT 220/230 V	1150 A
SCREW SIZE	M10, Terminal screw, Main cables 5 mm AF, Hexagon socket-head spanner, Terminal M3.5, Terminal screw, Control circuit cables
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	136 A
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	200 A gG/gL
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	125 HP
PROTECTION	Finger and back-of-hand proof Protection against di actuated from front (EN 50274)
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	75 kW
TERMINAL CAPACITY (STRANDED)	1 x (16 - 120) mm ² , Main cables 2 x (16 - 95) mm ² , Main cables
RATED BREAKING CAPACITY AT 500 V	1150 A
RATED OPERATIONAL POWER AT AC-1, 415 V, 50 HZ	137 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	70 kW
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-3
CONNECTION TO SMARTWIRE-DT	No
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1.9 W
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	27 V

10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	AC-1: Non-inductive or slightly inductive loads, re AC-3: Normal AC induction motors: starting, switc
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	115 A
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 440 V AC, Between coil and contacts, According to
OPERATING VOLTAGE AT AC, 50 HZ - MIN	230 V
RATED OPERATIONAL POWER AT AC-1, 220/230 V, 50 HZ	72 kW
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the inf instruction leaflet (IL) is observed.
10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL	Is the panel builder's responsibility.
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	19 W
ACTUATING VOLTAGE	RDC 24: 24 - 27 V DC
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	30 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	35 ms
RESIDUAL CURRENT	1 mA (with actuation of A1 - A2 by the electronics)
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	57 W
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	40 HP
PICK-UP VOLTAGE	0.8 - 1.1 V AC/DC x Us 0.7 - 1.2 V DC x Uc
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	200 A
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 4) mm ² , Control circuit cables 2 x (0.75 - 4) mm ² , Control circuit cables 1 x (0.75 - 2.5) mm ²
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
RATED OPERATIONAL POWER AT AC-1, 240 V, 50 HZ	79 kW
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.

LIFESPAN, MECHANICAL	10,000,000 Operations (AC operated) 10,000,000 Operations (DC operated)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	200 A gG/gL
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	1800 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	200 A
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	Is the panel builder's responsibility.
POWER CONSUMPTION (PICK-UP) AT DC	149 W
10.10 TEMPERATURE RISE	The panel builder is responsible for the temperature Eaton will provide heat dissipation data for the device
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	180 A, Maximum motor rating (UL/CSA)
CONVENTIONAL THERMAL CURRENT I_{TH} AT 50°C (3-POLE, OPEN)	188 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	115 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	30 HP
SCREWDRIVER SIZE	2, Terminal screw, Control circuit cables, Pozidriv 0.8 x 5.5/1 x 6 mm, Terminal screw, Control circuit screwdriver
DUTY FACTOR	100 %
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	115 A
CONVENTIONAL THERMAL CURRENT I_{TH} OF MAIN CONTACTS (1-POLE, OPEN)	516 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
ARCING TIME	15 ms
RATED OPERATIONAL POWER AT AC-1, 690 V, 50 HZ	217 kW
RATED INSULATION VOLTAGE (UI)	690 V
ALTITUDE	Max. 2000 m

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

Installation videos

mCAD model

Wiring diagrams

109930



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