107019

Eaton Moeller® series DILM Contactor, 3 pole, 380
200 - 240 V DC, DC operation, Screw terminals

WIN-WIN with Push-in Terminals

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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

278464

Eaton Moeller® series ZB Overload relay, ZB150, Ir= 70 - 100 A, 1 N/O, 1 N/C, Direct mounting, IP00

278425

Eaton Moeller® series DILM Au
contact module, 2 pole, Ith= 10
NC, Side mounted, Screw termi
DILM40 - DILM225A, -SI

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GENERAL SPECIFICATIONS

General specifications >

Product specifications >

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	107019
MODEL CODE	DILM170(RDC240)
EAN	4015081067879
PRODUCT LENGTH/DEPTH	160 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	2.25 kg
CERTIFICATIONS	IEC/EN 60947-4-1 UL Category Control No.: NLDX CE VDE 0660 UL 60947-4-1 UL File No.: E29096 IEC/EN 60947 CSA CSA Class No.: 2411-03, 3211-04 UL CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14
CATALOG NOTES	Contacts according to EN 50012

PRODUCT SPECIFICATIONS

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 2.5) mm², Control circuit cables 1 x (0.75 - 2.5) mm², Control circuit cables 2 x (10 - 70) mm², Main cables 1 x (10 - 95) mm², Main cables
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	170 A
10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility. The specificatio must be observed.
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	90 kW
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	166 A
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	33 kW
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	65 A
TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 16 x 0.8) mm (Number of segments x widt cables
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50	0 V

HZ - MIN	
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	185 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) 65 kA, CB, SCCR (UL/CSA) 250 A, max. CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	190 A
RATED OPERATIONAL POWER (NEMA)	93 kW
OPERATING VOLTAGE AT DC - MAX	240 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	1500 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	1320 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	90 A
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	30 HP, 200 V 60 Hz 3-ph, (UL/CSA) 100 HP, 600 V 60 Hz 3-ph, (UL/CSA) 92 A, 200 V 60 Hz 3-ph, (UL/CSA) 40 HP, 240 V 60 Hz 3-ph, (UL/CSA) 75 HP, 480 V 60 Hz 3-ph, (UL/CSA) 99 A, 600 V 60 Hz 3-ph, (UL/CSA) 104 A, 240 V 60 Hz 3-ph, (UL/CSA) 96 A, 480 V 60 Hz 3-ph, (UL/CSA)
OPERATING VOLTAGE AT DC - MIN	200 V
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	10 HP
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	41 kW
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
POWER CONSUMPTION (SEALING) AT DC	1.9 W

NUMBER OF POLES	Three-pole
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
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 Motors
OPERATING FREQUENCY	3000 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 CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	65 A
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	96 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 CURRENT (IE) AT AC-4, 500 V	65 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	57 kW
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables Single 8…3/0, double 8…2/0, Main cables
10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH	Is the panel builder's responsibility.
DEGREE OF PROTECTION	IP00
OVERVOLTAGE CATEGORY	III
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
POLLUTION DEGREE	3
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	225 A
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
CONNECTION	Screw terminals
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
	1.2 Nm. Screw terminals. Control circuit cables

TIGHTENING TORQUE	14 Nm, Screw terminals, Main cables
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	48 kW
FRAME SIZE	FS4
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	415 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	100 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	170 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 (480V 60Hz 3phase, 277V 60Hz 1phase) 160 A (600V 60Hz 3phase, 347V 60Hz 1phase)
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	1020 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles ac (UL/CSA) 170 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. (UL/CSA)
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	120 kW
SHOCK RESISTANCE	10 g, N/O main contact, Mechanical, according to I Half-sinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to when tabletop-mounted, Half-sinusoidal shock 10 m 7 g, N/O auxiliary contact, Mechanical, according to when tabletop-mounted, Half-sinusoidal shock 10 m 10 g, N/O main contact, Mechanical, according to I when tabletop-mounted, Half-sinusoidal shock 10 m 5 g, N/C auxiliary contact, Mechanical, according to 27, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to 27, Half-sinusoidal shock 10 ms
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	160 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	60 HP
DROP-OUT VOLTAGE	0.6 - 0.15 x UC, DC operated At least smoothed two-phase bridge rectifier or three
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 specificatio must be observed.
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	90 A, FLA 600 V 60 Hz 3phase; (CSA) 540 A, LRA 480 V 60 Hz 3phase; (CSA) 90 A, FLA 480 V 60 Hz 3phase; (CSA) 540 A, LRA 600 V 60 Hz 3phase; (CSA)
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to
STRIPPING LENGTH (MAIN CABLE)	24 mm
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	160 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (160 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	200 V
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	350 A, max. CB, SCCR (UL/CSA) 300/600 A, Class J, max. Fuse, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 30 kA, CB, SCCR (UL/CSA)
10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS	Is the panel builder's responsibility.
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
RATED BREAKING CAPACITY AT 220/230 V	1500 A
SCREW SIZE	M3.5, Terminal screw, Control circuit cables M10, Terminal screw, Main cables 5 mm AF, Hexagon socket-head spanner, Terminal
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	65 A
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	250 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	105 kW
TERMINAL CAPACITY (STRANDED)	2 x (16 - 70) mm², Main cables 1 x (16 - 95) mm², Main cables
RATED BREAKING CAPACITY AT 500 V	1500 A
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	100 kW
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

EMITTED INTERFERENCE	According to EN 60947-1
CONNECTION TO SMARTWIRE-DT	No
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1.9 W
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	240 V
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switc AC-1: Non-inductive or slightly inductive loads, re AC-4: Normal AC induction motors: starting, plugg inching
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	170 A
10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to
SAFE ISOLATION	690 V AC, Between coil and contacts, According to 690 V AC, Between the contacts, According to EN
OPERATING VOLTAGE AT AC, 50 HZ - MIN	230 V
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	13.7 W
ACTUATING VOLTAGE	RDC 240: 200 - 240 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
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	50 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	41.1 W
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	50 HP
PICK-UP VOLTAGE	200 - 240 V DC (RDC 240) 0.7 - 1.2 V DC x Uc
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	225 A
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 4) mm², Control circuit cables 2 x (0.75 - 2.5) mm², Control circuit cables
NUMBER OF AUXILIARY CONTACTS (NORMALLY	0

CLOSED CONTACTS)	0
INTERFERENCE IMMUNITY	According to EN 60947-1
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 (DC operated)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	250 A gG/gL
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	2100 A
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	47 kW
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	160 A
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	20 kW
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 devi
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	225 A, Maximum motor rating (UL/CSA)
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	200 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	170 A
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	30 HP
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Control circui screwdriver 2, Terminal screw, Control circuit cables, Pozidriv
DUTY FACTOR	100 %
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	170 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	460 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60	

HZ - MAX	0 V
ARCING TIME	15 ms
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	39 kW
RATED INSULATION VOLTAGE (UI)	690 V
ALTITUDE	Max. 2000 m

Catalogs

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

Installation videos

mCAD model

System overview

Wiring diagrams

107019

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help our customers manage power—today and well into the future. By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy and helping to solve the world's most urgent power management challenges.