

DIL CONTACTORS

107016



Overview

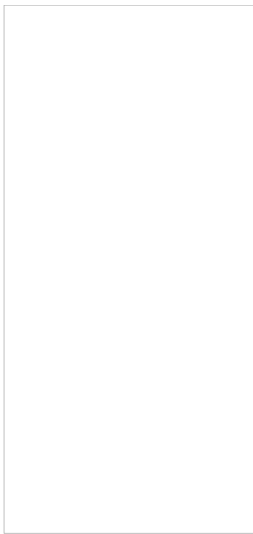


Specifications



Resources

How to



107016

Eaton Moeller® series DILM Contactor, 3 pole, 380 V AC, 16 A, 2 N/O, 2 NC, Front fixing, Screw terminals, DILM40 - DILM170



[WIN-WIN with Push-in Terminals](#)

[How to improve wiring](#)

Designed to work together

Discover other Eaton products and accessories built to enhance this product.

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

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GENERAL SPECIFICATIONS

General specifications

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PRODUCT NAME Eaton Moeller® series DILM contactor

CATALOG NUMBER 107016

Product specifications

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MODEL CODE DILM170(RDC24)

EAN 4015081067848

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 File No.: E29096
 VDE 0660
 IEC/EN 60947
 UL
 UL 60947-4-1
 CSA
 CSA File No.: 012528
 UL Category Control No.: NLDX
 CSA-C22.2 No. 60947-4-1-14
 CE
 CSA Class No.: 2411-03, 3211-04

CATALOG NOTES Contacts according to EN 50012

PRODUCT SPECIFICATIONS

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) 1 x (10 - 95) mm², Main cables
 2 x (0.75 - 2.5) mm², Control circuit cables
 2 x (10 - 70) mm², Main cables
 1 x (0.75 - 2.5) mm², Control circuit cables

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) 170 A

10.11 SHORT-CIRCUIT RATING Is the panel builder's responsibility. The specifications must be observed.

RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ 90 kW

CONVENTIONAL THERMAL CURRENT I_{TH} (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 width of cables)

RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 0 V

HZ - MIN	
CONVENTIONAL THERMAL CURRENT I_{TH} 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) 30/100 kA, Fuse, SCCR (UL/CSA) 250 A, max. CB, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
CONVENTIONAL THERMAL CURRENT I_{TH} AT 55°C (3-POLE, OPEN)	190 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	1500 A
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)
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	40 HP, 240 V 60 Hz 3-ph, (UL/CSA) 96 A, 480 V 60 Hz 3-ph, (UL/CSA) 104 A, 240 V 60 Hz 3-ph, (UL/CSA) 99 A, 600 V 60 Hz 3-ph, (UL/CSA) 30 HP, 200 V 60 Hz 3-ph, (UL/CSA) 92 A, 200 V 60 Hz 3-ph, (UL/CSA) 75 HP, 480 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
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)	Single 8...3/0, double 8...2/0, Main cables 18 - 14, Control circuit 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

TIGHTENING TORQUE	1.2 Nm, Screw terminals, Control circuit 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 (600V 60Hz 3phase, 347V 60Hz 1phase) 160 A (480V 60Hz 3phase, 277V 60Hz 1phase)
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	170 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. (UL/CSA) 1020 A, LRA 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	5 g, N/C 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 10 g, N/O main contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC 60068-2-27, Halfsinusoidal shock 10 ms when tabletop-mounted, Halfsinusoidal 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

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	27 V
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
UTILIZATION CATEGORY	AC-1: Non-inductive or slightly inductive loads, res AC-3: Normal AC induction motors: starting, swit AC-4: Normal AC induction motors: starting, plug 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 EN 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 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)
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	24 - 27 V DC (RDC 24) 0.7 - 1.2 V DC x U _c
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	225 A
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 4) mm ² , Control circuit cables 2 x (0.75 - 2.5) mm ² , Control circuit cables
NUMBER OF AUXILIARY CONTACTS (NORMALLY	~

CLOSED CONTACTS)	U
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 device
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	225 A, Maximum motor rating (UL/CSA)
CONVENTIONAL THERMAL CURRENT I_{TH} 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	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	170 A
CONVENTIONAL THERMAL CURRENT I_{TH} 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

107016



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.