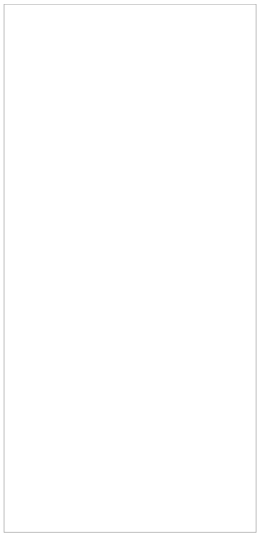

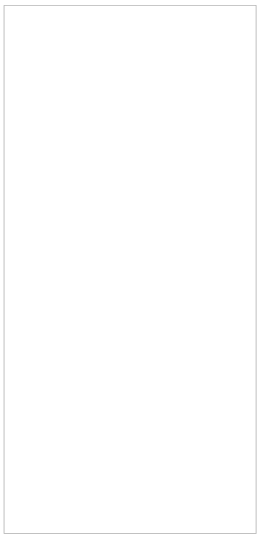

277908

Eaton Moeller® series DILM Contactor, 3 pole, 380
- 27 V DC, DC operation, Screw terminals DILM65(

Contact us about this product

Contact technical support

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

278458

Eaton Moeller® series ZB Overload relay, ZB65, Ir= 24 - 40 A, 1 N/O, 1 N/C, Direct mounting, IP00

278459

Eaton Moeller® series ZB Overload relay, ZB65, Ir= 40 - 57 A, 1 N/O, 1 N/C, Direct mounting, IP00

277946

Eaton Moeller® series DILM Au
contact module, 2 pole, Ith= 16
NC, Front fixing, Screw termina
- DILM170

View more | View less

GENERAL SPECIFICATIONS

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277908
MODEL CODE	DILM65(RDC24)
EAN	4015082779085
PRODUCT LENGTH/DEPTH	132.1 mm
PRODUCT HEIGHT	115 mm
PRODUCT WIDTH	55 mm
PRODUCT WEIGHT	1.052 kg
CERTIFICATIONS	CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLDX CE CSA Class No.: 2411-03, 3211-04 UL File No.: E29096 IEC/EN 60947 UL 60947-4-1 VDE 0660 UL IEC/EN 60947-4-1 CSA
CATALOG NOTES	Contacts according to EN 50012

FEATURES & FUNCTIONS

FITTED WITH:	Suppressor circuit in actuating electronics
NUMBER OF POLES	Three-pole

GENERAL

APPLICATION	Contactors for Motors
FRAME SIZE	FS3

Communication >

Contacts >

Safety >

Special purpose ratings >

Design verification >

LIFESPAN, MECHANICAL	10,000,000 Operations (DC operated)
OPERATING FREQUENCY	5000 mechanical Operations/h (DC operated)
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against di actuated from front (EN 50274)
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
RESISTANCE PER POLE	1.9 mΩ
SUITABLE FOR	Also motors with efficiency class IE3
UTILIZATION CATEGORY	AC-4: Normal AC induction motors: starting, plugg inching AC-1: Non-inductive or slightly inductive loads, res AC-3: Normal AC induction motors: starting, switc
VOLTAGE TYPE	DC

AMBIENT CONDITIONS, MECHANICAL

SHOCK RESISTANCE	5 g, N/C auxiliary contact, Mechanical, according to 27, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to I 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 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 27, Half-sinusoidal shock 10 ms 10 g, N/O main contact, Mechanical, according to I Half-sinusoidal shock 10 ms

CLIMATIC ENVIRONMENTAL CONDITIONS

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 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

ELECTRO MAGNETIC COMPATIBILITY

EMITTED INTERFERENCE	According to EN 60947-1
INTERFERENCE IMMUNITY	According to EN 60947-1

TERMINAL CAPACITIES

TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 9 x 0.8) mm (Number of segments x width cables
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	1 x (0.75 - 2.5) mm², Control circuit cables 1 x (0.75 - 35) mm², Main cables 2 x (0.75 - 25) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 4) mm², Control circuit cables 1 x (0.75 - 16) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables 2 x (0.75 - 16) mm², Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 14 - 1, double 14 - 2, Main cables 18 - 14, Control circuit cables
TERMINAL CAPACITY (STRANDED)	2 x (16 - 35) mm², Main cables 1 x (16 - 50) mm², Main cables
STRIPPING LENGTH (MAIN CABLE)	14 mm
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
SCREW SIZE	M3.5, Terminal screw, Control circuit cables M6, Terminal screw, Main cables
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Standard scre 2, Terminal screw, Pozidriv screwdriver
TIGHTENING TORQUE	3.3 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables

ELECTRICAL RATING

RATED BREAKING CAPACITY AT 220/230 V	650 A
RATED BREAKING CAPACITY AT 380/400 V	650 A
RATED BREAKING CAPACITY AT 500 V	650 A

RATED BREAKING CAPACITY AT 660/690 V	370 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	98 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	65 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	65 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	65 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	65 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	37 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	20 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	72 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	72 A
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	65 A
RATED INSULATION VOLTAGE (UI)	690 V
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	98 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	22 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	30 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	39 kW
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	7 kW
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	13 kW
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	14 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	16 kW
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	17 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V

SHORT-CIRCUIT RATING

SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	10 kA, SCCR (UL/CSA) 250 A, max. Fuse, SCCR (UL/CSA) 250 A, max. CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	100 A, max. CB, SCCR (UL/CSA) 30/100 kA, Fuse, SCCR (UL/CSA) 250/150 A, Class J, max. Fuse, SCCR (UL/CSA) 65 kA, CB, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	30/100 kA, Fuse, SCCR (UL/CSA) 30 kA, CB, SCCR (UL/CSA) 250/150 A, Class J, max. Fuse, SCCR (UL/CSA) 250 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	100 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	125 A gG/gL
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	80 A gG/gL

CONVENTIONAL THERMAL CURRENT

CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	180 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	72 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	83 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	200 A

SWITCHING CAPACITY

SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	88 A, Maximum motor rating (UL/CSA)

SWITCHING TIME

ARCING TIME	10 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS,	

CLOSING DELAY) - MAX	54 ms
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	24 ms

MAGNET SYSTEM

DROP-OUT VOLTAGE	At least smoothed two-phase bridge rectifier or three 0.6 - 0.15 x UC, DC operated
DUTY FACTOR	100 %
PICK-UP VOLTAGE	24 - 27 V DC (RDC 24) 0.7 - 1.2 V DC x Uc
POWER CONSUMPTION (PICK-UP) AT DC	24 W
POWER CONSUMPTION (SEALING) AT DC	1 W
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	27 V

MOTOR RATING

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	5 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	20 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	25 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	50 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	60 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 440 V AC, Between coil and contacts, According to

SPECIAL PURPOSE RATINGS

SPECIAL PURPOSE RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS	88 A (600V 60Hz 3phase, 347V 60Hz 1phase) 88 A (480V 60Hz 3phase, 277V 60Hz 1phase)
SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING	65 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. (UL/CSA) 390 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	10 HP, 200 V 60 Hz 3-ph, (UL/CSA) 32.2 A, 200 V 60 Hz 3-ph, (UL/CSA) 15 HP, 240 V 60 Hz 3-ph, (UL/CSA) 30 HP, 480 V 60 Hz 3-ph, (UL/CSA) 42 A, 240 V 60 Hz 3-ph, (UL/CSA) 41 A, 600 V 60 Hz 3-ph, (UL/CSA) 40 A, 480 V 60 Hz 3-ph, (UL/CSA) 40 HP, 600 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF RESISTANCE AIR HEATING	88 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (U 88 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (U
SPECIAL PURPOSE RATING OF TUNGSTEN INCANDESCENT LAMPS	88 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (U 88 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (U

DESIGN VERIFICATION

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	17.1 W

HEAT DISSIPATION CAPACITY PDISS	0 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	65 A
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
10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to
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
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
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to
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 Eaton will provide heat dissipation data for the devi
10.11 SHORT-CIRCUIT RATING	Is the panel builder's responsibility. The specificatio must be observed.
10.12 ELECTROMAGNETIC COMPATIBILITY	Is the panel builder's responsibility. The specificatio must be observed.
10.13 MECHANICAL FUNCTION	The device meets the requirements, provided the inf instruction leaflet (IL) is observed.

Catalogs

Certification reports

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

Installation videos

mCAD model

PEP Eco-passport

System overview

Wiring diagrams

Contact us

Eaton is an intelligent power management company dedicated to improving the quality of life and protecting the environment for people everywhere. We are guided by our commitment to do business right, to operate sustainably and to 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.