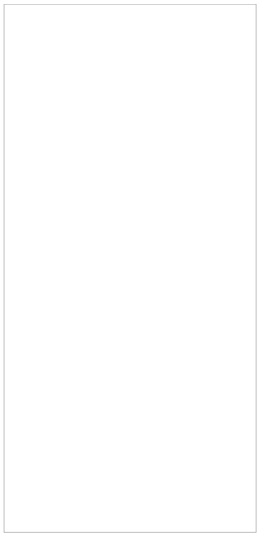
DIL CONTACTORS

277832



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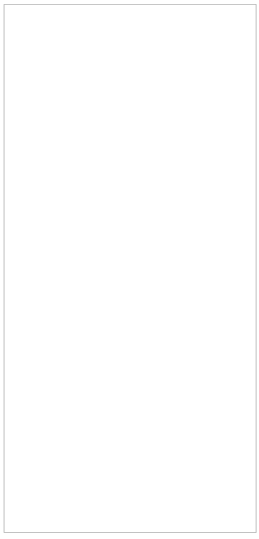

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277832

Eaton Moeller® series DILM Contactor, 3 pole, 380 Hz, 440 V 60 Hz, AC operation, Screw terminals

WIN-WIN with Push-in Terminals

How to improve wiring

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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

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General specifications >

Product specifications >

GENERAL SPECIFICATIONS

PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277832
MODEL CODE	DILM50(400V50HZ,440V60HZ)
EAN	4015082778323
PRODUCT LENGTH/DEPTH	132.1 mm
PRODUCT HEIGHT	115 mm
PRODUCT WIDTH	55 mm
PRODUCT WEIGHT	0.872 kg
COMPLIANCES	CE Marked
CERTIFICATIONS	EN 60947-4-1 CSA Std. C22.2 No. 14-05 IEC 60947-4-1 UL 508 VDE UL CSA IEC/EN 60947 VDE 0660
CATALOG NOTES	Contacts according to EN 50012

PRODUCT SPECIFICATIONS

TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 2.5) mm², Control circuit cables 2 x (0.75 - 25) mm², Main cables 1 x (0.75 - 2.5) mm², Control circuit cables 1 x (0.75 - 35) mm², Main cables
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	50 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	22 kW
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	58 A
RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ	10 kW

RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	21 A
TERMINAL CAPACITY (COPPER BAND)	2 x (6 x 9 x 0.8) mm (Number of segments x width cables
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	400 V
CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)	65 A
10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	68 A
RATED OPERATIONAL POWER (NEMA)	29.8 kW
10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
RATED BREAKING CAPACITY AT 380/400 V	500 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX	400 V
RATED BREAKING CAPACITY AT 660/690 V	320 A
OPERATING TEMPERATURE	-25° to 60°C
RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V	45 A
AMBIENT OPERATING TEMPERATURE - MAX	60 °C
RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ	12 kW
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
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	5000 mechanical Operations/h (AC operated)
VOLTAGE TYPE	AC
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V	160 A gG/gL

PRODUCT CATEGORY	Contactors
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	21 A
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	30 kW
POWER CONSUMPTION, PICK-UP, 50 HZ	149 VA, Dual-frequency coil in a cold state and 1.0
HEAT DISSIPATION CAPACITY PDISS	0 W
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN	8 ms
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	21 A
RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ	17 kW
OPERATING VOLTAGE AT AC, 60 HZ - MAX	690 V
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 14 - 1, double 14 - 2, 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
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	13 ms
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
POLLUTION DEGREE	3
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	80 A
POWER CONSUMPTION, PICK-UP, 60 HZ	178 VA, Dual-frequency coil in a cold state and 1.0
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	18 ms
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
CONNECTION	Screw terminals
OPERATING VOLTAGE AT AC, 60 HZ - MIN	230 V
TIGHTENING TORQUE	3.3 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ	14 kW
FRAME SIZE	FS3
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	145 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	32 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	50 A
SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN	12 ms
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	80 A gG/gL
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	36 kW
SHOCK RESISTANCE	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 10 g, N/O main contact, Mechanical, according to I Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to 27, Half-sinusoidal shock 10 ms 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
RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V	50 A
DROP-OUT VOLTAGE	AC operated: 0.6 - 0.3 x UC, AC operated
POWER CONSUMPTION, SEALING, 60 HZ	19 VA, Dual-frequency coil in a cold state and 1.0 x 4.1 W, Dual-frequency coil in a cold state and 1.0 x
RESISTANCE PER POLE	1.9 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.
AMPERAGE RATING	50A
10.2.5 LIFTING	Does not apply, since the entire switchgear needs to
STRIPPING LENGTH (MAIN CABLE)	14 mm
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	0 V

FREQUENCY RATING	50-60 Hz
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	500 A
SCREW SIZE	M3.5, Terminal screw, Control circuit cables M6, Terminal screw, Main cables
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	21 A
SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 690 V	63 A gG/gL
PROTECTION	Finger and back-of-hand proof, Protection against di actuated from front (EN 50274)
POWER CONSUMPTION, SEALING, 50 HZ	4.1 W, Dual-frequency coil in a cold state and 1.0 x 16 VA, Dual-frequency coil in a cold state and 1.0 x
RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ	32 kW
TERMINAL CAPACITY (STRANDED)	2 x (16 - 35) mm², Main cables 1 x (16 - 50) mm², Main cables
RATED BREAKING CAPACITY AT 500 V	500 A
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	30 kW
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
EMITTED INTERFERENCE	According to EN 60947-1
CONNECTION TO SMARTWIRE-DT	No
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	4.1 W
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	0 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-4: Normal AC induction motors: starting, plugg inching AC-3: Normal AC induction motors: starting, switc
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	50 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
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	3.3 W
ACTUATING VOLTAGE	400 V 50 Hz, 440 V 60 Hz
OPERATING TEMPERATURE - MIN	-25 °C
RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V	17 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	9.9 W
PICK-UP VOLTAGE	0.8 - 1.1 V AC x Uc
SUITABLE FOR	Also motors with efficiency class IE3
CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)	80 A
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 16) mm², Main cables 2 x (0.75 - 16) mm², Main cables 2 x (0.75 - 2.5) mm², Control circuit cables 1 x (0.75 - 4) mm², Control circuit cables
NUMBER OF AUXILIARY CONTACTS (NORMALLY 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.
OPERATING TEMPERATURE - MAX	60 °C
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)
SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 690 V	80 A gG/gL
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	700 A
RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ	6.5 kW
RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ	13 kW
VOLTAGE RATING	400-440 V
RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V	60 A
RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ	6 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60	440 V

HZ - MIN	
10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS	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
CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)	71 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	50 A
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard scre
DUTY FACTOR	100 %
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	50 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	162 A
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	440 V
ARCING TIME	10 ms
RATED OPERATIONAL POWER AT AC-4, 415 V, 50 HZ	11 kW
RATED INSULATION VOLTAGE (UI)	690 V
ALTITUDE	Max. 2000 m

Catalogs

Certification reports

Characteristic curve

Declarations of conformity

Drawings

eCAD model

Installation instructions

Installation videos

mCAD model

System overview

Wiring diagrams

277832

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