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Eaton 277276

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 15 kW, 1 N/O, RDC 130: 110 - 130 V DC, DC operation, Screw terminals

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PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277276
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.534 kg
CERTIFICATIONS	IEC/EN 60947-4-1 VDE 0660 CSA Class No.: 2411-03, 3211-04 CSA File No.: 012528 UL 60947-4-1 CE CSA-C22.2 No. 60947-4-1- 14 UL Category Control No.: NLDX UL File No.: E29096 UL IEC/EN 60947 CSA
CATALOG NOTES	Contacts according to EN 50012

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**ELECTRICAL
CONNECTION TYPE FOR
AUXILIARY- AND
CONTROL-CURRENT
CIRCUIT**

Screw connection

NUMBER OF POLES

Three-pole

10.10 TEMPERATURE RISE

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

**10.11 SHORT-CIRCUIT
RATING**

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

**10.12 ELECTROMAGNETIC
COMPATIBILITY**

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

**10.13 MECHANICAL
FUNCTION**

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

**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 be evaluated.

**10.2.6 MECHANICAL
IMPACT**

Does not apply, since the entire switchgear needs to be evaluated.

10.2.7 INSCRIPTIONS

Meets the product standard's requirements.

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CHARACTERISTIC CURVE

[eaton-contactors-switch-dilm-characteristic-curve-002.eps](#)

[eaton-contactors-switch-dilm-characteristic-curve.eps](#)

**DECLARATIONS OF
CONFORMITY**

[eaton-contactor-declaration-of-conformity-uk251219en.pdf](#)

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[IL03407014Z2021_09.pdf](#)

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[eaton-contactors-contact-dilm-wiring-diagram.eps](#)

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[eaton-contactors-dimensions-210t014.eps](#)

10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
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 be evaluated.
10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS	Does not apply, since the entire switchgear needs to be evaluated.
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.
FITTED WITH:	Suppressor circuit in actuating electronics
OPERATING FREQUENCY	5000 mechanical Operations/h (DC operated)
POLLUTION DEGREE	3
UTILIZATION CATEGORY	AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-3: Normal AC induction motors: starting, switch off during running AC-1: Non-inductive or slightly inductive loads, resistance furnaces
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
CONNECTION TO SMARTWIRE-DT	No
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8000 V AC
CONNECTION	Screw terminals
FRAME SIZE	FS2
AMBIENT OPERATING TEMPERATURE - MAX	60 °C

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	2 HP
ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	20 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	25 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	90 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	36 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	42 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1-POLE, OPEN)	100 A
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	6.6 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2.2 W
SWITCHING TIME (DC	47 ms

OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX	
SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX	30 ms
APPLICATION	Contactors for Motors
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
ARCING TIME	10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver
VOLTAGE TYPE	DC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
POWER CONSUMPTION (PICK-UP) AT DC	12 W
POWER CONSUMPTION (SEALING) AT DC	0.9 W
RATED BREAKING CAPACITY AT 220/230 V	320 A
RATED BREAKING CAPACITY AT 380/400 V	320 A
RATED BREAKING CAPACITY AT 500 V	320 A
RATED BREAKING	180 A

CAPACITY AT 660/690 V	
DROP-OUT VOLTAGE	At least smoothed two-phase bridge rectifier or three-phase rectifier 0.6 - 0.15 x UC, DC operated
OVERVOLTAGE CATEGORY	III
DUTY FACTOR	100 %
EMITTED INTERFERENCE	According to EN 60947-1
INTERFERENCE IMMUNITY	According to EN 60947-1
LIFESPAN, MECHANICAL	10,000,000 Operations (DC operated)
PICK-UP VOLTAGE	110 - 130 V DC (RDC 130) 0.7 - 1.2 V DC x Uc
SAFE ISOLATION	440 V AC, Between coil and contacts, According to EN 61140 440 V AC, Between the contacts, According to EN 61140
SCREW SIZE	M5, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables
TERMINAL CAPACITY (STRANDED)	1 x 16 mm ² , Main cables
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	1 A, 250 V DC, (UL/CSA) 10 A, 600 V AC, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	A600, AC operated (UL/CSA) P300, DC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 10) mm ² , Main cables 1 x (0.75 - 2.5) mm ² , Control circuit cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 16) mm ² , Main cables
SHOCK RESISTANCE	5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 10 g, N/O main contact,

	Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 6.9 g, N/O main contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 5.3 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop-mounted, Half-sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 16) mm ² , Main cables 2 x (0.75 - 10) mm ² , Main cables 2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 4) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	Single 18 - 6, double 18 - 8, Main cables 18 - 14, Control circuit cables
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	40 A, Maximum motor rating (UL/CSA)
TIGHTENING TORQUE	3.2 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	130 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	110 V
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	384 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	45 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	32 A

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 32 A
380 V, 400 V, 415 V

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 32 A
440 V

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 32 A
500 V

RATED OPERATIONAL

CURRENT (IE) AT AC-3, 18 A
660 V, 690 V

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 15 A
220 V, 230 V, 240 V

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 15 A
400 V

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 15 A
440 V

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 15 A
500 V

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 12 A
660 V, 690 V

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 40 A
110 V

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 40 A
220 V

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 40 A
60 V

RATED OPERATIONAL

CURRENT FOR SPECIFIED 32 A
HEAT DISSIPATION (IN)

RATED OPERATIONAL

POWER AT AC-3, 240 V, 50 11 kW
HZ

RATED OPERATIONAL

POWER AT AC-3, 380/400 15 kW
V, 50 HZ

RATED OPERATIONAL

POWER AT AC-3, 415 V, 50 19 kW
HZ

RATED OPERATIONAL

POWER AT AC-4, 220/230 4 kW
V, 50 HZ

RATED OPERATIONAL

POWER AT AC-4, 240 V, 50 4.5 kW

Hz	
RATED OPERATIONAL	
POWER AT AC-4, 380/400 V, 50 Hz	7 kW
RATED OPERATIONAL	
POWER AT AC-4, 415 V, 50 Hz	7.5 kW
RATED OPERATIONAL	
POWER AT AC-4, 440 V, 50 Hz	8 kW
RATED OPERATIONAL	
POWER AT AC-4, 500 V, 50 Hz	9 kW
RATED OPERATIONAL	
POWER AT AC-4, 660/690 V, 50 Hz	10 kW
RATED OPERATIONAL POWER (NEMA)	14.9 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RESISTANCE PER POLE	2.7 mΩ
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0.9 W
STRIPPING LENGTH (CONTROL CIRCUIT CABLE)	10 mm
STRIPPING LENGTH (MAIN CABLE)	10 mm
SHORT-CIRCUIT CURRENT RATING (BASIC RATING)	5 kA, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA) 125 A, max. Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V)	50/32 A, max. CB, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA) 10/65 kA, CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA)
SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V)	50/32 A, max. CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 125/125 A, Class J, max. Fuse, SCCR (UL/CSA) 10/22 kA, CB, SCCR (UL/CSA)
SHORT-CIRCUIT PROTECTION RATING	125 A gG/gL

(TYPE 1 COORDINATION)**AT 400 V**

SUITABLE FOR	Also motors with efficiency class IE3
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SHORT-CIRCUIT**PROTECTION RATING****(TYPE 1 COORDINATION)****AT 690 V**

63 A gG/gL

SHORT-CIRCUIT**PROTECTION RATING****(TYPE 2 COORDINATION)****AT 400 V**

63 A gG/gL

SHORT-CIRCUIT**PROTECTION RATING****(TYPE 2 COORDINATION)****AT 690 V**

35 A gG/gL

SPECIAL PURPOSE**RATING OF BALLAST****ELECTRICAL DISCHARGE****LAMPS**

40 A (600V 60Hz 3phase,

347V 60Hz 1phase)

40 A (480V 60Hz 3phase,

277V 60Hz 1phase)

SPECIAL PURPOSE**RATING OF DEFINITE****PURPOSE RATING**

192 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

32 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)

SPECIAL PURPOSE**RATING OF ELEVATOR****CONTROL**

27 A, 480 V 60 Hz 3-ph, (UL/CSA)

25.3 A, 200 V 60 Hz 3-ph, (UL/CSA)

7.5 HP, 240 V 60 Hz 3-ph, (UL/CSA)

20 HP, 480 V 60 Hz 3-ph, (UL/CSA)

7.5 HP, 200 V 60 Hz 3-ph, (UL/CSA)

20 HP, 600 V 60 Hz 3-ph, (UL/CSA)

22 A, 240 V 60 Hz 3-ph, (UL/CSA)

22 A, 600 V 60 Hz 3-ph, (UL/CSA)

SPECIAL PURPOSE**RATING OF****REFRIGERATION****CONTROL (CSA ONLY)**

40 A, FLA 480 V 60 Hz 3phase; (CSA)

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

240 A, LRA 480 V 60 Hz 3phase; (CSA)

30 A, FLA 600 V 60 Hz 3phase; (CSA)

SPECIAL PURPOSE**RATING OF RESISTANCE****AIR HEATING**

40 A, 600 V 60 Hz 3phase, 347 V 60 Hz 1phase, (UL/CSA)

40 A, 480 V 60 Hz 3phase, 277 V 60 Hz 1phase, (UL/CSA)

**SPECIAL PURPOSE
RATING OF TUNGSTEN
INCANDESCENT LAMPS**
40 A, 480 V 60 Hz 3phase,
277 V 60 Hz 1phase,
(UL/CSA)
40 A, 600 V 60 Hz 3phase,
347 V 60 Hz 1phase,
(UL/CSA)

**CONVENTIONAL
THERMAL CURRENT ITH
AT 40°C (3-POLE, OPEN)**
45 A

**CONVENTIONAL
THERMAL CURRENT ITH
AT 50°C (3-POLE, OPEN)**
43 A

**CONVENTIONAL
THERMAL CURRENT ITH
AT 60°C (3-POLE, OPEN)**
40 A

**RATED OPERATIONAL
POWER AT AC-3, 440 V, 50
HZ**
20 kW

**RATED OPERATIONAL
POWER AT AC-3, 500 V, 50
HZ**
23 kW

**RATED OPERATIONAL
POWER AT AC-3, 690 V, 50
HZ**
17 kW

ACTUATING VOLTAGE RDC 130: 110 - 130 V DC

ALTITUDE Max. 2000 m

**OPERATING VOLTAGE AT
AC, 50 Hz - MIN** 24 V

**OPERATING VOLTAGE AT
AC, 50 Hz - MAX** 690 V

**OPERATING VOLTAGE AT
AC, 60 Hz - MIN** 24 V

**OPERATING VOLTAGE AT
AC, 60 Hz - MAX** 690 V

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