



Eaton 277036

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 7.5 kW, 1 NC, 230 V 50 Hz, 240 V 60 Hz, AC operation, Screw terminals DILM17-01(230V50HZ,240V60HZ)

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PRODUCT NAME	Eaton Moeller® series DILM contactor
CATALOG NUMBER	277036
PRODUCT LENGTH/DEPTH	97 mm
PRODUCT HEIGHT	85 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.428 kg
CERTIFICATIONS	CSA Certified UL Listed IEC 60947-4-1 EN 60947-4-1 UL Category Control No.: NLDX IEC/EN 60947 VDE 0660 CSA-C22.2 No. 60947-4-1- 14 IEC/EN 60947-4-1 CE CSA File No.: 012528 UL 60947-4-1 CSA Class No.: 2411-03, 3211-04 UL UL File No.: E29096 CSA
CATALOG NOTES	Contacts according to EN 50012

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

Screw connection

AMPERAGE RATING

170A

HP RATING - MAX

2, 3/ 5, 5, 10, 15 hp (1/3PH
@120,240/208,240,480,600
V)

NUMBER OF POLES

Three-pole

TYPE

Full voltage non-reversing
small contactor

VOLTAGE RATING

400 V

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

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CHARACTERISTIC CURVE

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

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

**DECLARATIONS OF
CONFORMITY**

[eaton-contactor-
declaration-of-conformity-
uk251218en.pdf](#)

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[IL03407014Z2021_09.pdf](#)

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

	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.
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:	Mirror contact
FREQUENCY RATING	50-60 Hz
OPERATING FREQUENCY	5000 mechanical Operations/h (AC operated)
POLLUTION DEGREE	3
UTILIZATION CATEGORY	AC-3: Normal AC induction motors: starting, switch off during running AC-4: Normal AC induction motors: starting, plugging, reversing, inching 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** 8000 V AC
(UIMP)

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	5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	3 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	5 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	10 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	15 HP
CONVENTIONAL THERMAL CURRENT ITH (1-POLE, ENCLOSED)	80 A
CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED)	32 A
CONVENTIONAL THERMAL CURRENT ITH AT 55°C (3-POLE, OPEN)	37 A
CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1- POLE, OPEN)	88 A
EQUIPMENT HEAT DISSIPATION, CURRENT-	2.1 W

DEPENDENT PVID	
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.7 W
APPLICATION	Contactors for Motors
PRODUCT CATEGORY	Contactors
PROTECTION	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
TERMINALS	Screw terminals
ARCING TIME	10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
SCREWDRIVER SIZE	2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver
VOLTAGE TYPE	AC
DEGREE OF PROTECTION	IP00
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	1
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED)	1
NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT	0
NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)	3
OPERATING TEMPERATURE - MAX	60 °C
OPERATING TEMPERATURE - MIN	-25 °C
RATED BREAKING CAPACITY AT 220/230 V	170 A
RATED BREAKING CAPACITY AT 380/400 V	170 A
RATED BREAKING CAPACITY AT 500 V	170 A
RATED BREAKING	120 A

CAPACITY AT 660/690 V**RATED CONTROL SUPPLY****VOLTAGE (US) AT AC, 50** 230 V**Hz - MAX****RATED CONTROL SUPPLY****VOLTAGE (US) AT AC, 50** 230 V**Hz - MIN****RATED CONTROL SUPPLY****VOLTAGE (US) AT AC, 60** 240 V**Hz - MAX****RATED CONTROL SUPPLY****VOLTAGE (US) AT AC, 60** 240 V**Hz - MIN****COIL VOLTAGE**

230-240 Vac, 50/60 Hz

CONTACT**CONFIGURATION** 1 NC**CONTINUOUS AMPERE****RATING** 18 A**DROP-OUT VOLTAGE**AC operated: 0.6 - 0.3 x
UC, AC operated**OVERTVOLTAGE****CATEGORY** III**DUTY FACTOR**

100 %

NUMBER OF CONTACTS

1 NC

EMITTED INTERFERENCE

According to EN 60947-1

OPERATION

Reversing

INTERFERENCE**IMMUNITY**

According to EN 60947-1

LIFESPAN, MECHANICAL10,000,000 Operations (AC
operated)**PICK-UP VOLTAGE**

0.8 - 1.1 V AC x Uc

**POWER CONSUMPTION,
PICK-UP, 50 Hz**52 VA, Dual-frequency coil
in a cold state and 1.0 x
Us, at 50 Hz**SAFE ISOLATION**440 V AC, Between the
contacts, According to EN
61140440 V AC, Between coil
and contacts, According to
EN 61140**POWER CONSUMPTION,
PICK-UP, 60 Hz**67 VA, Dual-frequency coil
in a cold state and 1.0 x
Us, at 60 Hz**SCREW SIZE**M3.5, Terminal screw,
Control circuit cables
M5, Terminal screw, Main
cables**POWER CONSUMPTION,
SEALING, 50 Hz**2.1 W, Dual-frequency coil
in a cold state and 1.0 x
Us, at 50 Hz
7.1 VA, Dual-frequency coil

	in a cold state and 1.0 x Us, at 50 Hz
POWER CONSUMPTION, SEALING, 60 Hz	2.1 W, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz 8.7 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 60 Hz
TERMINAL CAPACITY (STRANDED)	1 x 16 mm ² , Main cables
SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)	10 A, 600 V AC, (UL/CSA) 1 A, 250 V DC, (UL/CSA)
SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)	P300, DC operated (UL/CSA) A600, AC operated (UL/CSA)
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (0.75 - 2.5) mm ² , Control circuit cables 2 x (0.75 - 10) mm ² , Main cables 1 x (0.75 - 16) mm ² , Main cables 1 x (0.75 - 2.5) mm ² , Control circuit cables
SHOCK RESISTANCE	3.5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27 when tabletop- mounted, Half-sinusoidal shock 10 ms 5 g, N/C auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, 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
TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 16) mm ² , Main

	cables 1 x (0.75 - 4) mm ² , Control circuit cables 2 x (0.75 - 10) mm ² , Main cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 14, Control circuit cables Single 18 - 6, double 18 - 8, Main cables
SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE)	40 A, Maximum motor rating (UL/CSA)
POWER CONSUMPTION	7.5 kW
TIGHTENING TORQUE	3.2 Nm, Screw terminals, Main cables 1.2 Nm, Screw terminals, Control circuit cables
RATED INSULATION VOLTAGE (UI)	690 V
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947)	238 A
RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V	40 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	18 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	18 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V	18 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	18 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V	12 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V	10 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V	10 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V	10 A
RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V	10 A

RATED OPERATIONAL

CURRENT (IE) AT AC-4, 660 V, 690 V 8 A

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 110 V 35 A

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 220 V 35 A

RATED OPERATIONAL

CURRENT (IE) AT DC-1, 60 V 35 A

RATED OPERATIONAL

CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) 18 A

RATED OPERATIONAL

POWER AT AC-3, 240 V, 50 HZ 5.5 kW

RATED OPERATIONAL

POWER AT AC-3, 380/400 V, 50 HZ 7.5 kW

RATED OPERATIONAL

POWER AT AC-3, 415 V, 50 HZ 10 kW

RATED OPERATIONAL

POWER AT AC-4, 220/230 V, 50 HZ 2.5 kW

RATED OPERATIONAL

POWER AT AC-4, 240 V, 50 HZ 3 kW

RATED OPERATIONAL

POWER AT AC-4, 380/400 V, 50 HZ 4.5 kW

RATED OPERATIONAL

POWER AT AC-4, 415 V, 50 HZ 5 kW

RATED OPERATIONAL

POWER AT AC-4, 440 V, 50 HZ 5.5 kW

RATED OPERATIONAL

POWER AT AC-4, 500 V, 50 HZ 6 kW

RATED OPERATIONAL

POWER AT AC-4, 660/690 V, 50 HZ 6.5 kW

RATED OPERATIONAL

POWER (NEMA) 7.4 kW

RATED OPERATIONAL

VOLTAGE (UE) AT AC - MAX 690 V

RESISTANCE PER POLE 2.7 mΩ

STATIC HEAT 2.1 W

DISSIPATION, NON-**CURRENT-DEPENDENT****PVS****STRIPPING LENGTH
(CONTROL CIRCUIT
CABLE)**

10 mm

**STRIPPING LENGTH
(MAIN CABLE)**

10 mm

**SWITCHING TIME (AC
OPERATED, MAKE
CONTACTS, CLOSING
DELAY) - MAX**

22 ms

**SWITCHING TIME (AC
OPERATED, MAKE
CONTACTS, CLOSING
DELAY) - MIN**

16 ms

**SWITCHING TIME (AC
OPERATED, MAKE
CONTACTS, OPENING
DELAY) - MAX**

14 ms

**SWITCHING TIME (AC
OPERATED, MAKE
CONTACTS, OPENING
DELAY) - MIN**

8 ms

**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)**125/70 A, Class J, max.
Fuse, SCCR (UL/CSA)
10/100 kA, Fuse, SCCR
(UL/CSA)
10/65 kA, CB, SCCR
(UL/CSA)
50/32 A, max. CB, SCCR
(UL/CSA)**SHORT-CIRCUIT CURRENT
RATING (HIGH FAULT AT
600 V)**125/70 A, Class J, max.
Fuse, SCCR (UL/CSA)
10/100 kA, Fuse, SCCR
(UL/CSA)
50/32 A, max. CB, SCCR
(UL/CSA)
10/22 kA, CB, SCCR
(UL/CSA)**SHORT-CIRCUIT
PROTECTION RATING
(TYPE 1 COORDINATION)
AT 400 V**

63 A gG/gL

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

50 A gG/gL

SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 400 V	35 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	108 A, LRA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 18 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA)
SPECIAL PURPOSE RATING OF ELEVATOR CONTROL	7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA) 11 A, 480 V 60 Hz 3-ph, (UL/CSA) 3 HP, 240 V 60 Hz 3-ph, (UL/CSA) 3 HP, 200 V 60 Hz 3-ph, (UL/CSA) 10 HP, 600 V 60 Hz 3-ph, (UL/CSA) 11 A, 200 V 60 Hz 3-ph, (UL/CSA) 9.6 A, 240 V 60 Hz 3-ph, (UL/CSA) 11 A, 600 V 60 Hz 3-ph, (UL/CSA)
SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY)	180 A, LRA 600 V 60 Hz 3phase; (CSA) 30 A, FLA 600 V 60 Hz 3phase; (CSA) 240 A, LRA 480 V 60 Hz 3phase; (CSA) 40 A, FLA 480 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, 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)
OPERATING TEMPERATURE	-25° to 60°C

CONVENTIONAL	
THERMAL CURRENT ITH	40 A
AT 40°C (3-POLE, OPEN)	
CONVENTIONAL	
THERMAL CURRENT ITH	38 A
AT 50°C (3-POLE, OPEN)	
CONVENTIONAL	
THERMAL CURRENT ITH	35 A
AT 60°C (3-POLE, OPEN)	
RATED OPERATIONAL	
POWER AT AC-3, 440 V, 50 HZ	10.5 kW
RATED OPERATIONAL	
POWER AT AC-3, 500 V, 50 HZ	12 kW
RATED OPERATIONAL	
POWER AT AC-3, 690 V, 50 HZ	11 kW
ACTUATING VOLTAGE	230 V 50 Hz, 240 V 60 Hz
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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