

Specifications



Photo is representative



Eaton 277030

Eaton Moeller® series DILM Contactor, 3 pole, 380 V 400 V 7.5 kW, 1 NC, 208 V 60 Hz, AC operation, Screw terminals DILM17-01(208V60HZ)

General specifications

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| PRODUCT NAME | Eaton Moeller® series DILM contactor |
| CATALOG NUMBER | 277030 |
| MODEL CODE | DILM17-01(208V60HZ) |
| EAN | 4015082770303 |
| PRODUCT LENGTH/DEPTH | 97 mm |
| PRODUCT HEIGHT | 85 mm |
| PRODUCT WIDTH | 45 mm |
| PRODUCT WEIGHT | 0.428 kg |
| CERTIFICATIONS | UL File No.: E29096 UL 508 VDE 0660 UL CE IEC/EN 60947 IEC/EN 60947-4-1 UL Category Control No.: NLDX CSA CSA File No.: 012528 CSA-C22.2 No. 14-05 CSA Class No.: 2411-03, 3211-04 |
| CATALOG NOTES | Contacts according to EN 50012 |
| GLOBAL CATALOG | 277030 |

Product specifications

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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. |

Resources

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|-----------------------------------|---|
| CATALOGS | Product Range Catalog Switching and protecting motors SmartWire-DT Catalog eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf |
| CHARACTERISTIC CURVE | eaton-contactors-component-dilm-characteristic-curve-003.eps eaton-contactors-switch-dilm-characteristic-curve-002.eps eaton-contactors-switch-dilm-characteristic-curve.eps |
| DECLARATIONS OF CONFORMITY | DA-DC-00004783.pdf DA-DC-00004816.pdf |
| DRAWINGS | eaton-contactors-contact-dimensions-210x202.eps eaton-contactors-mounting-dilm-dimensions.eps eaton-contactors-mounting-dilm-dimensions-002.eps eaton-contactors-dimensions-210t014.eps eaton-contactors-dilm-3d-drawing-009.eps eaton-general-ie-ready-dilm-contactor-standards.eps |
| ECAD MODEL | ETN.277030.edz |
| INSTALLATION INSTRUCTIONS | IL03407014Z2021_09.pdf |
| INSTALLATION VIDEOS | WIN-WIN with push-in technology |
| MCAD MODEL | DA-CD-dil_m17_38 DA-CS-dil_m17_38 |

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| 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 |
| OPERATING FREQUENCY | 5000 mechanical Operations/h (AC operated) |
| POLLUTION DEGREE | 3 |
| CLIMATIC PROOFING | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| CONNECTION TO SMARTWIRE-DT | No |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) | 8000 V AC |
| UTILIZATION CATEGORY | AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-3: Normal AC induction motors: starting, switch off during running |
| CONNECTION | Screw terminals |

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| SYSTEM OVERVIEW | eaton-contactors-dilm-contactor-system-overview.eps |
| WIRING DIAGRAMS | 2100SWI-117 |

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| 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-DEPENDENT PVID | 2.1 W |

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| 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) |
| 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 | 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 CONTACTS) | 1 |
| NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT | 0 |
| NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT) | 3 |
| 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 CAPACITY AT 660/690 V | 120 A |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX | 0 V |

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| RATED CONTROL SUPPLY | |
| VOLTAGE (US) AT AC, 50 | 0 V |
| HZ - MIN | |
| RATED CONTROL SUPPLY | |
| VOLTAGE (US) AT AC, 60 | 208 V |
| HZ - MAX | |
| RATED CONTROL SUPPLY | |
| VOLTAGE (US) AT AC, 60 | 208 V |
| HZ - MIN | |
| DROP-OUT VOLTAGE | AC operated: 0.6 - 0.3 x UC, AC 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 (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 coil and contacts, According to EN 61140 440 V AC, Between the 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 | 7.1 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 2.1 W, 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 |

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| 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 | 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 10 g, N/O main 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 7 g, N/O auxiliary contact, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 10 ms 5 g, N/C 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 - 2.5) mm ² , Control circuit cables 2 x (0.75 - 10) mm ² , Main 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 |

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|--|---|
| 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 | 0 V |
| RATED CONTROL SUPPLY | |
| VOLTAGE (US) AT DC - MIN | 0 V |
| 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

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| RESISTANCE PER POLE | 2.7 mΩ |
| STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS | 2.1 W |
| 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. Fuse, SCCR (UL/CSA) 125 A, max. CB, SCCR (UL/CSA) |
| SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 480 V) | 50/32 A, max. CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA) 10/65 kA, CB, SCCR (UL/CSA) |
| SHORT-CIRCUIT CURRENT RATING (HIGH FAULT AT 600 V) | 10/22 kA, CB, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) 10/100 kA, Fuse, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA) |
| SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 400 V | 63 A gG/gL |
| SUITABLE FOR | Also 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**

11 A, 600 V 60 Hz 3-ph,
(UL/CSA)
9.6 A, 240 V 60 Hz 3-ph,
(UL/CSA)
10 HP, 600 V 60 Hz 3-ph,
(UL/CSA)
11 A, 480 V 60 Hz 3-ph,
(UL/CSA)
3 HP, 200 V 60 Hz 3-ph,
(UL/CSA)
11 A, 200 V 60 Hz 3-ph,
(UL/CSA)
7.5 HP, 480 V 60 Hz 3-ph,
(UL/CSA)
3 HP, 240 V 60 Hz 3-ph,
(UL/CSA)

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

40 A, FLA 480 V 60 Hz
3phase; (CSA)
30 A, FLA 600 V 60 Hz
3phase; (CSA)
240 A, LRA 480 V 60 Hz
3phase; (CSA)
180 A, LRA 600 V 60 Hz
3phase; (CSA)

**SPECIAL PURPOSE
RATING OF RESISTANCE
AIR HEATING**

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)

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 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 208 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

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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