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Eaton 277025

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

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| PRODUCT NAME | Eaton Moeller® series DILM contactor |
| CATALOG NUMBER | 277025 |
| PRODUCT LENGTH/DEPTH | 97 mm |
| PRODUCT HEIGHT | 85 mm |
| PRODUCT WIDTH | 45 mm |
| PRODUCT WEIGHT | 0.428 kg |
| CERTIFICATIONS | CSA Class No.: 2411-03, 3211-04 CSA File No.: 012528 UL 508 IEC/EN 60947 IEC/EN 60947-4-1 UL UL File No.: E29096 VDE 0660 CSA-C22.2 No. 14-05 CSA UL Category Control No.: NLDX CE |
| CATALOG NOTES | Contacts according to EN 50012 |

**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.

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-uk251218en.pdf](#)

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[IL03407014Z2021_09.pdf](#)

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

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| 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 |
| UTILIZATION CATEGORY | AC-1: Non-inductive or slightly inductive loads, resistance furnaces AC-4: Normal AC induction motors: starting, plugging, reversing, inching AC-3: Normal AC induction motors: starting, switch off during running |
| 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 |
| CONNECTION | Screw terminals |
| FRAME SIZE | FS2 |
| AMBIENT OPERATING TEMPERATURE - MAX | 60 °C |
| AMBIENT OPERATING | -25 °C |

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| TEMPERATURE - MIN | |
| 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 |
| HEAT DISSIPATION CAPACITY PDISS | 0 W |
| HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID | 0.7 W |
| APPLICATION | Contactors for Motors |
| PRODUCT CATEGORY | Contactors |

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| 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 | 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 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 | 240 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN | 240 V |
| 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 |

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| 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 U _c |
| POWER CONSUMPTION, PICK-UP, 50 HZ | 52 VA, Dual-frequency coil in a cold state and 1.0 x U _s , at 50 Hz |
| SAFE ISOLATION | 440 V AC, Between the contacts, According to EN 61140 440 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 U _s , at 60 Hz |
| SCREW SIZE | M5, Terminal screw, Main cables M3.5, Terminal screw, Control circuit cables |
| POWER CONSUMPTION, SEALING, 50 HZ | 2.1 W, Dual-frequency coil in a cold state and 1.0 x U _s , at 50 Hz 7.1 VA, Dual-frequency coil in a cold state and 1.0 x U _s , at 50 Hz |
| POWER CONSUMPTION, SEALING, 60 HZ | 8.7 VA, Dual-frequency coil in a cold state and 1.0 x U _s , at 60 Hz 2.1 W, Dual-frequency coil in a cold state and 1.0 x U _s , 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) | A600, AC operated (UL/CSA) P300, DC operated (UL/CSA) |
| TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) | 1 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 2 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- |

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| | 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 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 |
| 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) |
| TIGHTENING TORQUE | 1.2 Nm, Screw terminals, Control circuit cables 3.2 Nm, Screw terminals, Main 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 |

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| 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 | 3 kW |

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| HZ | |
| 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 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) | 125 A, max. CB, SCCR (UL/CSA) 5 kA, SCCR (UL/CSA) 125 A, max. Fuse, SCCR (UL/CSA) |
| SHORT-CIRCUIT CURRENT | 50/32 A, max. CB, SCCR |

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| RATING (HIGH FAULT AT 480 V) | (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) | 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 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 | 9.6 A, 240 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) 3 HP, 240 V 60 Hz 3-ph, (UL/CSA) 7.5 HP, 480 V 60 Hz 3-ph, (UL/CSA) 11 A, 480 V 60 Hz 3-ph, (UL/CSA) 11 A, 600 V 60 Hz 3-ph, |

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| | (UL/CSA) 3 HP, 200 V 60 Hz 3-ph, (UL/CSA) |
| SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY) | 30 A, FLA 600 V 60 Hz 3phase; (CSA) 40 A, FLA 480 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, 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) | 40 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN) | 38 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN) | 35 A |
| 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 | 240 V 50 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 |

