

Specifications

Photo is representative

Eaton 104418

Eaton Moeller® series DILMF Contactors for Semiconductor Industries acc. to SEMI F47, 380 V 400 V: 9 A, 1 N/O, RAC 24: 24 V 50/60 Hz, Screw terminals

General specifications

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| PRODUCT NAME | Eaton Moeller® series DILMF contactor for semiconductor industries |
| CATALOG NUMBER | 104418 |
| MODEL CODE | DILMF11-10(RAC24) |
| EAN | 4015081042357 |
| PRODUCT LENGTH/DEPTH | 97 mm |
| PRODUCT HEIGHT | 85 mm |
| PRODUCT WIDTH | 45 mm |
| PRODUCT WEIGHT | 0.531 kg |
| CERTIFICATIONS | CSA UL Category Control No.: NLDX CE UL 60947-4-1 CSA Class No.: 2411-03, 3211-04 UL IEC/EN 60947-4-1 CSA File No.: 012528 CSA-C22.2 No. 60947-4-1- 14 UL File No.: E29096 |
| CATALOG NOTES | Also tested according to AC-3e. |
| GLOBAL CATALOG | 104418 |

Product specifications

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

[SmartWire-DT Catalog](#)

CATALOGS

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

[Product Range Catalog Switching and protecting motors](#)

CHARACTERISTIC CURVE

[eaton-contactors-component-dilm-characteristic-curve-003.eps](#)

[eaton-contactors-short-time-loading-dilm-characteristic-curve.eps](#)

DECLARATIONS OF CONFORMITY

[DA-DC-00004816.pdf](#)

[DA-DC-00004783.pdf](#)

DRAWINGS

[eaton-contactors-mounting-dilm-dimensions.eps](#)

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

[eaton-contactors-contact-dimensions-210x202.eps](#)

[eaton-contactors-dilm-3d-drawing-009.eps](#)

[eaton-general-ie-ready-dilm-contactor-standards.eps](#)

ECAD MODEL

[ETN.104418.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](#)

SYSTEM OVERVIEW

[eaton-contactors-mounting-dilmf-explosion-drawing.eps](#)

[eaton-contactors-circuit-breaker-dilmf-explosion-drawing.eps](#)

WIRING DIAGRAMS

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

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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: | Built-in suppressor circuit |
| 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 |
| AMBIENT OPERATING TEMPERATURE - MAX | 60 °C |
| AMBIENT OPERATING TEMPERATURE - MIN | -25 °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 |

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| 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) | 45 A |
| CONVENTIONAL THERMAL CURRENT ITH (3-POLE, ENCLOSED) | 18 A |
| CONVENTIONAL THERMAL CURRENT ITH OF MAIN CONTACTS (1- POLE, OPEN) | 50 A |
| EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID | 0.6 W |
| HEAT DISSIPATION CAPACITY PDISS | 0 W |
| HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID | 0.2 W |
| APPLICATION | Contactors for Semiconductor Industries acc. to SEMI F47 |
| PRODUCT CATEGORY | Contactors |
| ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT | Screw connection |
| VOLTAGE TYPE | AC |
| 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 |

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| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX | 24 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN | 24 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX | 24 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN | 24 V |
| DROP-OUT VOLTAGE | AC operated: 0.5 - 0.2 x UC, AC operated |
| DUTY FACTOR | 100 % |
| EMITTED INTERFERENCE | According to EN 60947-1 |
| INTERFERENCE IMMUNITY | According to EN 60947-1 |
| PICK-UP VOLTAGE | 0.8 - 1.15 V AC x Uc |
| POWER CONSUMPTION, PICK-UP, 50 HZ | 14 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz |
| POWER CONSUMPTION, SEALING, 50 HZ | 0.8 W, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz 0.7 VA, Dual-frequency coil in a cold state and 1.0 x Us, at 50 Hz |
| 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) |
| SWITCHING CAPACITY (MAIN CONTACTS, GENERAL USE) | 40 A, Maximum motor rating (UL/CSA) |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX | 0 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN | 0 V |
| RATED OPERATIONAL CURRENT (IE) AT AC-1, 380 V, 400 V, 415 V | 20 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V | 9 A |

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| RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V | 9 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 440 V | 9 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V | 7 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V | 5 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V | 6 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V | 7 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V | 6 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V | 5 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V | 4.5 A |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 9 A |
| RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ | 3 kW |
| RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ | 4 kW |
| RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ | 5.5 kW |
| RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ | 1.5 kW |
| RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ | 1.6 kW |
| RATED OPERATIONAL POWER AT AC-4, 380/400 V, 50 HZ | 3 kW |
| RATED OPERATIONAL POWER AT AC-4, 415 V, 50 | 2.8 kW |

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| HZ | |
| RATED OPERATIONAL POWER AT AC-4, 440 V, 50 HZ | 3 kW |
| RATED OPERATIONAL POWER AT AC-4, 500 V, 50 HZ | 2.8 kW |
| RATED OPERATIONAL POWER AT AC-4, 660/690 V, 50 HZ | 3.6 kW |
| RATED OPERATIONAL POWER (NEMA) | 7.4 kW |
| RESISTANCE PER POLE | 2.65 mΩ |
| STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS | 0.8 W |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX | 40 ms |
| SWITCHING TIME (AC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX | 45 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) | 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) | 10/100 kA, Fuse, SCCR (UL/CSA) 125/70 A, Class J, max. Fuse, SCCR (UL/CSA) 10/22 kA, CB, SCCR (UL/CSA) 50/32 A, max. CB, SCCR (UL/CSA) |
| SUITABLE FOR | SEMI F47, Magnet systems Also motors with efficiency class IE3 |
| SPECIAL PURPOSE | 40 A (600V 60Hz 3phase, |

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| RATING OF BALLAST ELECTRICAL DISCHARGE LAMPS | 347V 60Hz 1phase) 40 A (480V 60Hz 3phase, 277V 60Hz 1phase) |
| SPECIAL PURPOSE RATING OF DEFINITE PURPOSE RATING | 18 A, FLA 480 V 60 Hz 3-ph, 100,000 cycles acc. to UL 1995, (UL/CSA) 108 A, LRA 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) 10 HP, 600 V 60 Hz 3-ph, (UL/CSA) 11 A, 600 V 60 Hz 3-ph, (UL/CSA) 3 HP, 200 V 60 Hz 3-ph, (UL/CSA) 9.6 A, 240 V 60 Hz 3-ph, (UL/CSA) 3 HP, 240 V 60 Hz 3-ph, (UL/CSA) 11 A, 200 V 60 Hz 3-ph, (UL/CSA) |
| SPECIAL PURPOSE RATING OF REFRIGERATION CONTROL (CSA ONLY) | 240 A, LRA 480 V 60 Hz 3phase; (CSA) 30 A, FLA 600 V 60 Hz 3phase; (CSA) 40 A, FLA 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, 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) |
| CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN) | 22 A |
| CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN) | 21 A |
| CONVENTIONAL THERMAL CURRENT ITH | 20 A |

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| AT 60°C (3-POLE, OPEN) | |
| RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ | 5.5 kW |
| RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ | 4.5 kW |
| RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ | 4.5 kW |
| ACTUATING VOLTAGE | RAC 24: 24 V 50/60 Hz |
| ALTITUDE | Max. 2000 m |
| OPERATING VOLTAGE AT AC, 50 HZ - MIN | 230 V |
| OPERATING VOLTAGE AT AC, 50 HZ - MAX | 690 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MIN | 230 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MAX | 690 V |

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| PROJECT NAME: |
| PROJECT NUMBER: |
| PREPARED BY: |
| DATE: |



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