

# Specifications



Photo is representative



## Eaton 051610

Eaton Moeller® series DILEEM Contactor, 190 V 50 Hz, 220 V 60 Hz, 3 pole, 380 V 400 V, 3 kW, Contacts N/O = Normally open= 1 N/O, Screw terminals, AC operation

### General specifications

|                             |                                                                                                                                                                                                            |
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| <b>PRODUCT NAME</b>         | Eaton Moeller® series DILEEM Mini contactor                                                                                                                                                                |
| <b>CATALOG NUMBER</b>       | 051610                                                                                                                                                                                                     |
| <b>MODEL CODE</b>           | DILEEM-10(190V50HZ,220V60HZ)                                                                                                                                                                               |
| <b>EAN</b>                  | 4015080516101                                                                                                                                                                                              |
| <b>PRODUCT LENGTH/DEPTH</b> | 52 mm                                                                                                                                                                                                      |
| <b>PRODUCT HEIGHT</b>       | 58 mm                                                                                                                                                                                                      |
| <b>PRODUCT WIDTH</b>        | 45 mm                                                                                                                                                                                                      |
| <b>PRODUCT WEIGHT</b>       | 0.17 kg                                                                                                                                                                                                    |
| <b>CERTIFICATIONS</b>       | UL Category Control No.: NLDX<br>CE<br>CSA<br>UL File No.: E29096<br>IEC/EN 60947<br>IEC/EN 60947-4-1<br>CSA Class No.: 3211-04<br>CSA-C22.2 No. 14-05<br>UL<br>CSA File No.: 012528<br>UL 508<br>VDE 0660 |
| <b>CATALOG NOTES</b>        | Also tested according to AC-3e.                                                                                                                                                                            |
| <b>GLOBAL CATALOG</b>       | 051610                                                                                                                                                                                                     |

## Product specifications

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| <b>NUMBER OF POLES</b>                                                                  | Three-pole                                                                                                                       |
| <b>FEATURES</b>                                                                         | Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module                                       |
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.                                                                                       |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.6 MECHANICAL IMPACT</b>                                                         | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| <b>10.2.7 INSCRIPTIONS</b>                                                              | Meets the product standard's requirements.                                                                                       |
| <b>10.3 DEGREE OF</b>                                                                   | Does not apply, since the                                                                                                        |

## Resources

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| <b>CATALOGS</b>                  | <a href="#">Product Range Catalog Switching and protecting motors</a><br><a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>                                                                                                                                                                            |
| <b>CHARACTERISTIC CURVE</b>      | <a href="#">eaton-contactors-component-dilm-characteristic-curve-003.eps</a><br><a href="#">eaton-contactors-short-time-loading-dilm-characteristic-curve.eps</a>                                                                                                                                                                          |
| <b>DRAWINGS</b>                  | <a href="#">eaton-contactors-diler-dimensions-004.eps</a><br><a href="#">eaton-contactors-diler-dimensions-005.eps</a><br><a href="#">eaton-contactors-dilem-dimensions.eps</a><br><a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a><br><a href="#">eaton-tripping-devices-mounting-diler-contactor-relay-symbol.eps</a> |
| <b>ECAD MODEL</b>                | <a href="#">ETN.051610.edz</a>                                                                                                                                                                                                                                                                                                             |
| <b>INSTALLATION INSTRUCTIONS</b> | <a href="#">IL03407009Z</a>                                                                                                                                                                                                                                                                                                                |
| <b>MCAD MODEL</b>                | <a href="#">DA-CS-dil_em</a><br><a href="#">DA-CD-dil_em</a>                                                                                                                                                                                                                                                                               |
| <b>SYSTEM OVERVIEW</b>           | <a href="#">eaton-contactors-accessory-dilem-system-overview.eps</a>                                                                                                                                                                                                                                                                       |
| <b>WIRING DIAGRAMS</b>           | <a href="#">eaton-contactors-contact-dilm-wiring-diagram.eps</a>                                                                                                                                                                                                                                                                           |

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| <b>PROTECTION OF ASSEMBLIES</b>                                 | entire switchgear needs to be evaluated.                                                                                                                                                                                  |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                                                                                                                                                                                |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.                                                                                                                                                        |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.                                                                                                                                                        |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                                                                                                                                                                                    |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                                                                                                                                                                                    |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                                                                                                                                                                                    |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                                                                                                                                                                                    |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                                                                                                                                                                                    |
| <b>FITTED WITH:</b>                                             | Auxiliary contact                                                                                                                                                                                                         |
| <b>OPERATING FREQUENCY</b>                                      | 9000 mechanical Operations/h                                                                                                                                                                                              |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                                                                                                                                                                         |
| <b>CLIMATIC PROOFING</b>                                        | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78                                                                                                                                            |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC                                                                                                                                                                                                                 |
| <b>UTILIZATION CATEGORY</b>                                     | AC-1: Non-inductive or slightly inductive loads, resistance furnaces<br>AC-3: Normal AC induction motors: starting, switch off during running<br>AC-4: Normal AC induction motors: starting, plugging, reversing, inching |
| <b>CONNECTION</b>                                               | Screw terminals                                                                                                                                                                                                           |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                      | 50 °C                                                                                                                                                                                                                     |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                      | -25 °C                                                                                                                                                                                                                    |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>           | 40 °C                                                                                                                                                                                                                     |
| <b>AMBIENT OPERATING</b>                                        | 25 °C                                                                                                                                                                                                                     |

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| <b>TEMPERATURE<br/>(ENCLOSED) - MIN</b>                                                     |         |
| <b>AMBIENT STORAGE<br/>TEMPERATURE - MAX</b>                                                | 80 °C   |
| <b>AMBIENT STORAGE<br/>TEMPERATURE - MIN</b>                                                | 40 °C   |
| <b>ASSIGNED MOTOR<br/>POWER AT 115/120 V, 60<br/>HZ, 1-PHASE</b>                            | 0.25 HP |
| <b>ASSIGNED MOTOR<br/>POWER AT 200/208 V, 60<br/>HZ, 3-PHASE</b>                            | 1.5 HP  |
| <b>ASSIGNED MOTOR<br/>POWER AT 230/240 V, 60<br/>HZ, 1-PHASE</b>                            | 1 HP    |
| <b>ASSIGNED MOTOR<br/>POWER AT 230/240 V, 60<br/>HZ, 3-PHASE</b>                            | 2 HP    |
| <b>ASSIGNED MOTOR<br/>POWER AT 460/480 V, 60<br/>HZ, 3-PHASE</b>                            | 3 HP    |
| <b>ASSIGNED MOTOR<br/>POWER AT 575/600 V, 60<br/>HZ, 3-PHASE</b>                            | 3 HP    |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>(1-POLE, ENCLOSED)</b>                          | 40 A    |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>(3-POLE, ENCLOSED)</b>                          | 16 A    |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>AT 55°C (3-POLE, OPEN)</b>                      | 19 A    |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>OF AUXILIARY CONTACTS<br/>(1-POLE, OPEN)</b>    | 10 A    |
| <b>CONVENTIONAL<br/>THERMAL CURRENT ITH<br/>OF MAIN CONTACTS (1-<br/>POLE, OPEN)</b>        | 50 A    |
| <b>EQUIPMENT HEAT<br/>DISSIPATION, CURRENT-<br/>DEPENDENT PVID</b>                          | 0.6 W   |
| <b>HEAT DISSIPATION<br/>CAPACITY PDISS</b>                                                  | 0 W     |
| <b>HEAT DISSIPATION PER<br/>POLE, CURRENT-<br/>DEPENDENT PVID</b>                           | 0.2 W   |
| <b>SWITCHING TIME (AC<br/>OPERATED, N/O, WITH<br/>AUXILIARY CONTACT<br/>MODULE, CLOSING</b> | 45 ms   |

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| <b>DELAY)</b>                                                  |                                                                                                        |
| <b>APPLICATION</b>                                             | Mini Contactors for Motors and Resistive Loads                                                         |
| <b>PRODUCT CATEGORY</b>                                        | Contactors                                                                                             |
| <b>PROTECTION</b>                                              | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)   |
| <b>ARCING TIME</b>                                             | 12 ms at 690 V AC                                                                                      |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>              | Screw connection                                                                                       |
| <b>SCREWDRIVER SIZE</b>                                        | 2, Terminal screw, Pozidriv screwdriver<br>0.8 x 5.5/1 x 6 mm,<br>Terminal screw, Standard screwdriver |
| <b>VOLTAGE TYPE</b>                                            | AC                                                                                                     |
| <b>DEGREE OF PROTECTION</b>                                    | IP20                                                                                                   |
| <b>MOUNTING POSITION</b>                                       | As required (except vertical with terminals A1/A2 at the bottom)                                       |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b> | 0                                                                                                      |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>   | 1                                                                                                      |
| <b>NUMBER OF CONTACTS (NORMALLY CLOSED) AS MAIN CONTACT</b>    | 0                                                                                                      |
| <b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>             | 1                                                                                                      |
| <b>NUMBER OF MAIN CONTACTS (NORMALLY OPEN CONTACT)</b>         | 3                                                                                                      |
| <b>RATED BREAKING CAPACITY AT 220/230 V</b>                    | 90 A                                                                                                   |
| <b>RATED BREAKING CAPACITY AT 380/400 V</b>                    | 90 A                                                                                                   |
| <b>RATED BREAKING CAPACITY AT 500 V</b>                        | 64 A                                                                                                   |
| <b>RATED BREAKING CAPACITY AT 660/690 V</b>                    | 42 A                                                                                                   |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>    | 190 V                                                                                                  |
| <b>RATED CONTROL SUPPLY</b>                                    | 190 V                                                                                                  |

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| <b>VOLTAGE (US) AT AC, 50 HZ - MIN</b>                      |                                                                                                                                                                                                                                                            |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b> | 220 V                                                                                                                                                                                                                                                      |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b> | 220 V                                                                                                                                                                                                                                                      |
| <b>OVERVOLTAGE CATEGORY</b>                                 | III                                                                                                                                                                                                                                                        |
| <b>CONTROL CIRCUIT RELIABILITY</b>                          | < 2 λ, < 1 failure at 100,000,000 Operations (at U <sub>e</sub> = 24 V DC, U <sub>min</sub> = 17 V, I <sub>min</sub> = 5.4 mA)                                                                                                                             |
| <b>DUTY FACTOR</b>                                          | 100 %                                                                                                                                                                                                                                                      |
| <b>CHANGEOVER TIME</b>                                      | 16 - 21 ms                                                                                                                                                                                                                                                 |
| <b>LIFESPAN, MECHANICAL</b>                                 | 7,000,000 Operations (Coil 50/60 Hz)<br>200,000 Operations (at 240 V, AC-15)<br>10,000,000 Operations<br>150,000 Operations (at 240 V, DC, L/R = 50 ms: 2 contacts in series 0.5 A)                                                                        |
| <b>PICK-UP VOLTAGE</b>                                      | 0.8 - 1.1 V AC x U <sub>c</sub> (voltage tolerance - single-voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz)<br>1.1 V AC x U <sub>c</sub> (voltage tolerance - dual frequency coil 50/60 Hz)                                                         |
| <b>POWER CONSUMPTION, PICK-UP, 50 HZ</b>                    | 25 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz<br>22 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz                                                                                                          |
| <b>SAFE ISOLATION</b>                                       | 300 V AC, Between coil and auxiliary contacts, According to EN 61140<br>300 V AC, Between auxiliary contacts, According to EN 61140<br>300 V AC, Between coil and contacts, According to EN 61140<br>300 V AC, Between the contacts, According to EN 61140 |
| <b>POWER CONSUMPTION, PICK-UP, 60 HZ</b>                    | 25 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz<br>22 W, AC, Single-frequency                                                                                                                                                      |

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|                                                             | coil 50 Hz and Dual-frequency coil 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>SCREW SIZE</b>                                           | M3.5, Terminal screw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>POWER CONSUMPTION, SEALING, 50 HZ</b>                    | 1.8 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz<br>4.6 VA, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz                                                                                                                                                                                                                                                                                                                                                     |
| <b>POWER CONSUMPTION, SEALING, 60 HZ</b>                    | 1.8 W, AC, Single-frequency coil 50 Hz and Dual-frequency coil 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>RATED OPERATIONAL CURRENT (IE)</b>                       | 2.5 A at 60 V, DC L/R $\leq$ 15 ms (with 2 contacts in series)<br>0.5 A at 220 V, DC L/R $\leq$ 15 ms (with 3 contacts in series)<br>2.5 A at 24 V, DC L/R $\leq$ 15 ms (with 1 contact in series)<br>1.5 A at 100 V, DC L/R $\leq$ 15 ms (with 3 contacts in series)                                                                                                                                                                                                                                   |
| <b>SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE)</b> | 0.5 A, 250 V DC, (UL/CSA)<br>10 A, 600 V AC, (UL/CSA)                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY)</b>  | A600, AC operated (UL/CSA)<br>P300, DC operated (UL/CSA)                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>            | 1 x (0.75 - 1.5) mm <sup>2</sup><br>2 x (0.75 - 1.5) mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SHOCK RESISTANCE</b>                                     | 10 g, N/O main contact, Basic unit without auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>20 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>10 g, N/O main contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>8 g, N/O auxiliary contact, Basic unit without auxiliary |

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|                                                                                | contact module,<br>Mechanical, according to<br>IEC/EN 60068-2-27, Half-<br>sinusoidal shock 10 ms<br>20 g, N/C auxiliary contact,<br>Basic unit with auxiliary<br>contact module,<br>Mechanical, according to<br>IEC/EN 60068-2-27, Half-<br>sinusoidal shock 10 ms |
| <b>TERMINAL CAPACITY<br/>(SOLID)</b>                                           | 2 x (0.75 - 2.5) mm <sup>2</sup><br>1 x (0.75 - 2.5) mm <sup>2</sup>                                                                                                                                                                                                |
| <b>TERMINAL CAPACITY<br/>(SOLID/STRANDED AWG)</b>                              | 18 - 14                                                                                                                                                                                                                                                             |
| <b>SWITCHING CAPACITY<br/>(MAIN CONTACTS,<br/>GENERAL USE)</b>                 | 15 A, Maximum motor<br>rating (UL/CSA)                                                                                                                                                                                                                              |
| <b>TIGHTENING TORQUE</b>                                                       | 1.2 Nm, Screw terminals                                                                                                                                                                                                                                             |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT DC -<br/>MAX</b>                   | 0 V                                                                                                                                                                                                                                                                 |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT DC -<br/>MIN</b>                   | 0 V                                                                                                                                                                                                                                                                 |
| <b>RATED INSULATION<br/>VOLTAGE (UI)</b>                                       | 690 V                                                                                                                                                                                                                                                               |
| <b>RATED MAKING<br/>CAPACITY UP TO 440 V<br/>(COS PHI TO IEC/EN<br/>60947)</b> | 110 A                                                                                                                                                                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-1,<br/>380 V, 400 V, 415 V</b>     | 22 A                                                                                                                                                                                                                                                                |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-15,<br/>220 V, 230 V, 240 V</b>    | 6 A                                                                                                                                                                                                                                                                 |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-15,<br/>380 V, 400 V, 415 V</b>    | 3 A                                                                                                                                                                                                                                                                 |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-15,<br/>500 V</b>                  | 1.5 A                                                                                                                                                                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>220 V, 230 V, 240 V</b>     | 6.6 A                                                                                                                                                                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>380 V, 400 V, 415 V</b>     | 6.6 A                                                                                                                                                                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>440 V</b>                   | 6.6 A                                                                                                                                                                                                                                                               |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,</b>                             | 5 A                                                                                                                                                                                                                                                                 |

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| <b>500 V</b>                                                         |        |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-3, 660 V, 690 V</b>          | 3.5 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 220 V, 230 V, 240 V</b>   | 5 A    |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 400 V</b>                 | 5 A    |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 440 V</b>                 | 5 A    |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 500 V</b>                 | 3.7 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-4, 660 V, 690 V</b>          | 2.9 A  |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 110 V</b>                 | 20 A   |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 12 V</b>                  | 20 A   |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 220 V</b>                 | 20 A   |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 24 V</b>                  | 20 A   |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-1, 60 V</b>                  | 20 A   |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 6.6 A  |
| <b>RATED OPERATIONAL POWER AT AC-3, 240 V, 50 HZ</b>                 | 1.8 kW |
| <b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>             | 3 kW   |
| <b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>                 | 3.1 kW |
| <b>RATED OPERATIONAL POWER AT AC-4, 220/230 V, 50 HZ</b>             | 1.1 kW |
| <b>RATED OPERATIONAL POWER AT AC-4, 240 V, 50 HZ</b>                 | 1.3 kW |

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| <b>RATED OPERATIONAL<br/>POWER AT AC-4, 380/400<br/>V, 50 HZ</b>                    | 2.2 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-4, 415 V, 50<br/>HZ</b>                        | 2.3 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-4, 440 V, 50<br/>HZ</b>                        | 2.4 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-4, 500 V, 50<br/>HZ</b>                        | 2.2 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-4, 660/690<br/>V, 50 HZ</b>                    | 2.2 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER (NEMA)</b>                                           | 2.2 kW                                                                                                                                                                                                             |
| <b>RATED OPERATIONAL<br/>VOLTAGE (UE) AT AC -<br/>MAX</b>                           | 690 V                                                                                                                                                                                                              |
| <b>RESISTANCE PER POLE</b>                                                          | 9.18 mΩ                                                                                                                                                                                                            |
| <b>STATIC HEAT<br/>DISSIPATION, NON-<br/>CURRENT-DEPENDENT<br/>PVS</b>              | 1.8 W                                                                                                                                                                                                              |
| <b>STRIPPING LENGTH<br/>(MAIN CABLE)</b>                                            | 8 mm                                                                                                                                                                                                               |
| <b>SWITCHING TIME (AC<br/>OPERATED, MAKE<br/>CONTACTS, CLOSING<br/>DELAY) - MAX</b> | 21 ms                                                                                                                                                                                                              |
| <b>SWITCHING TIME (AC<br/>OPERATED, MAKE<br/>CONTACTS, CLOSING<br/>DELAY) - MIN</b> | 14 ms                                                                                                                                                                                                              |
| <b>SWITCHING TIME (AC<br/>OPERATED, MAKE<br/>CONTACTS, OPENING<br/>DELAY) - MAX</b> | 18 ms                                                                                                                                                                                                              |
| <b>SWITCHING TIME (AC<br/>OPERATED, MAKE<br/>CONTACTS, OPENING<br/>DELAY) - MIN</b> | 8 ms                                                                                                                                                                                                               |
| <b>SHORT-CIRCUIT CURRENT<br/>RATING (BASIC RATING)</b>                              | 45 A, max. Fuse, SCCR<br>(UL/CSA)<br>5 kA, SCCR (UL/CSA)                                                                                                                                                           |
| <b>SHORT-CIRCUIT<br/>PROTECTION</b>                                                 | PKZM0-4, Maximum<br>overcurrent protective<br>device, Short-circuit<br>protection only, Auxiliary<br>contacts, Short-circuit<br>rating without welding<br>6 A gG/gL, Max. Fuse 500V,<br>Auxiliary contacts, Short- |

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|                                                                       | circuit rating without welding<br>10 A fast, Max. Fuse 500V, Auxiliary contacts, Short-circuit rating without welding |
| <b>SUITABLE FOR</b>                                                   | Also motors with efficiency class IE3                                                                                 |
| <b>SHORT-CIRCUIT PROTECTION RATING (TYPE 1 COORDINATION) AT 500 V</b> | 20 A gG/gL                                                                                                            |
| <b>SHORT-CIRCUIT PROTECTION RATING (TYPE 2 COORDINATION) AT 500 V</b> | 10 A gG/gL                                                                                                            |
| <b>CONVENTIONAL THERMAL CURRENT ITH AT 40°C (3-POLE, OPEN)</b>        | 22 A                                                                                                                  |
| <b>CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN)</b>        | 20 A                                                                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-3, 440 V, 50 HZ</b>                  | 3.3 kW                                                                                                                |
| <b>RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ</b>                  | 3 kW                                                                                                                  |
| <b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>                  | 3 kW                                                                                                                  |
| <b>ACTUATING VOLTAGE</b>                                              | 190 V 50 Hz, 220 V 60 Hz                                                                                              |
| <b>ALTITUDE</b>                                                       | Max. 2000 m                                                                                                           |
| <b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>                           | 24 V                                                                                                                  |
| <b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>                           | 690 V                                                                                                                 |
| <b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>                           | 24 V                                                                                                                  |
| <b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>                           | 690 V                                                                                                                 |

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



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