

Specifications

Photo is representative

Eaton 010205

Eaton Moeller® series DILER Contactor relay, 48 V DC, N/O = Normally open: 3 N/O, N/C = Normally closed: 1 NC, Screw terminals, DC operation

General specifications

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| PRODUCT NAME | Eaton Moeller® series DILER Control relay |
| CATALOG NUMBER | 010205 |
| MODEL CODE | DILER-31-G(48VDC) |
| EAN | 4015080102052 |
| PRODUCT LENGTH/DEPTH | 54 mm |
| PRODUCT HEIGHT | 58 mm |
| PRODUCT WIDTH | 45 mm |
| PRODUCT WEIGHT | 0.206 kg |
| CERTIFICATIONS | UL File No.: E29184 VDE 0660 CE IEC/EN 60947 IEC/EN 60947-4-1 CSA-C22.2 No. 14-05 CSA UL 508 CSA Class No.: 3211-03 CSA File No.: 012528 UL EN 60947-5-1 UL Category Control No.: NKR |
| GLOBAL CATALOG | 010205 |

Product specifications

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| FEATURES | Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module |
| 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. |

Resources

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| CATALOGS | eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf Product Range Catalog Switching and protecting motors |
| CHARACTERISTIC CURVE | eaton-contactors-diler-relay-characteristic-curve.eps |
| DECLARATIONS OF CONFORMITY | DA-DC-00004763.pdf DA-DC-00004748.pdf |
| DRAWINGS | eaton-contactors-diler-dimensions-003.eps eaton-contactors-diler-dimensions-004.eps eaton-contactors-diler-dimensions-005.eps eaton-contactors-diler-dimensions.eps eaton-contactors-diler-dimensions-002.eps eaton-tripping-devices-mounting-diler-contactor-relay-symbol.eps |
| ECAD MODEL | eaton-diler-control-relay-eplan-010205.edz |
| INSTALLATION INSTRUCTIONS | IL03407009Z |
| MCAD MODEL | DA-CS-dil_em DA-CD-dil_em |
| SYSTEM OVERVIEW | eaton-contactors-accessory-diler-relay-system-overview.eps |
| WIRING DIAGRAMS | eaton-contactors-contact-diler-relay-wiring-diagram-005.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: | Interlocked opposing contacts |
| OPERATING FREQUENCY | 9000 Operations/h |
| POLLUTION DEGREE | 3 |
| CLIMATIC PROOFING | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| AMBIENT OPERATING TEMPERATURE - MAX | 50 °C |
| AMBIENT OPERATING TEMPERATURE - MIN | -25 °C |
| AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX | 40 °C |
| AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN | 25 °C |
| EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID | 0 W |
| HEAT DISSIPATION CAPACITY PDISS | 0 W |
| HEAT DISSIPATION PER POLE, CURRENT- | 0.4 W |

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| DEPENDENT PVID | |
| NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS) | 0 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) | 1 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS, DELAYED SWITCHING) | 0 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) | 3 |
| NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS, LEADING) | 0 |
| POWER CONSUMPTION (PICK-UP) AT DC | 2.3 W |
| POWER CONSUMPTION (SEALING) AT DC | 2.3 W |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX | 0 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN | 0 V |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) | 6000 V AC |
| SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MIN | 26 ms |
| SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX | 25 ms |
| SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MIN | 15 ms |
| SWITCHING TIME (DC OPERATED, N/O, WITH AUXILIARY CONTACT MODULE, CLOSING DELAY) | 70 ms |
| APPLICATION | Contactor relays |
| PRODUCT CATEGORY | DILER Mini-contactors |

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| PROTECTION | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| CONVENTIONAL THERMAL CURRENT ITH AT 50°C (3-POLE, OPEN) | 10 A |
| VOLTAGE TYPE OF OPERATING VOLTAGE | AC/DC |
| RATED SWITCH CURRENT | 10 A |
| OPERATING VOLTAGE AT AC, 50 HZ - MIN | 17 V |
| OPERATING VOLTAGE AT AC, 50 HZ - MAX | 500 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MIN | 17 V |
| OPERATING VOLTAGE AT AC, 60 HZ - MAX | 500 V |
| OPERATING VOLTAGE AT DC - MIN | 24 VDC |
| OPERATING VOLTAGE AT DC - MAX | 220 VDC |
| SCREWDRIVER SIZE | 2, Terminal screw, Pozidriv screwdriver 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver |
| VOLTAGE TYPE | DC |
| CODE NUMBER | 31E |
| DEGREE OF PROTECTION | IP20 |
| MOUNTING POSITION | As required (except vertical with terminals A1/A2 at the bottom) |
| OVERVOLTAGE CATEGORY | III |
| CONTROL CIRCUIT RELIABILITY | < 2 λ, < 1 failure at 100,000,000 Operations (at U _e = 24 V DC, U _{min} = 17 V, I _{min} = 5.4 mA) |
| CONNECTION TYPE (AUXILIARY CIRCUIT) | Screw connection |
| DUTY FACTOR | 100 % |
| LIFESPAN, MECHANICAL | 20,000,000 Operations (DC operated) |
| MOUNTING METHOD | DIN-rail/screw |
| PICK-UP VOLTAGE | 0.85 - 1.3 V DC x U _c 0.7 - 1.3 V DC x U _c (at 24 V: |

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| | without auxiliary contact module and at ambient air temperature + 40 °C) |
| VOLTAGE TOLERANCE | Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification |
| SAFE ISOLATION | 300 V AC, Between coil and auxiliary contacts, According to EN 61140 300 V AC, Between auxiliary contacts, According to EN 61140 |
| SCREW SIZE | M3.5, Terminal screw |
| RATED OPERATIONAL CURRENT (IE) | 1.5 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series) 0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series) 2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series) 2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series) 10 A |
| SWITCHING CAPACITY (AUXILIARY CONTACTS, GENERAL USE) | 10 A, 600 V AC, (UL/CSA) 0.5 A, 250 V DC, (UL/CSA) |
| SWITCHING CAPACITY (AUXILIARY CONTACTS, PILOT DUTY) | P300, DC operated (UL/CSA) A600, AC operated (UL/CSA) |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX | 0 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN | 0 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX | 48 V |
| RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN | 48 V |
| RATED INSULATION VOLTAGE (UI) | 690 V |
| RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V | 6 A |

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| RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V | 3 A |
| RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V | 1.5 A |
| RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN) | 6 A |
| RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX | 600 V |
| STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS | 2.3 W |
| STRIPPING LENGTH (MAIN CABLE) | 8 mm |
| SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX | 35 ms |
| TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) | 1 x (0.75 - 1.5) mm ² 2 x (0.75 - 1.5) mm ² |
| SHOCK RESISTANCE | 8 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms 10 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| SHORT-CIRCUIT PROTECTION RATING | 10 A fast, 500V, Maximum fuse, Short-circuit rating without welding, Contacts |
| TERMINAL CAPACITY (SOLID/STRANDED AWG) | 18 - 14 1 x (18 - 14) 2 x (18 - 14) |
| SHORT-CIRCUIT PROTECTION RATING WITHOUT WELDING | 6 A gG/gL, 500 V, Max. Fuse, Contacts |
| TERMINAL CAPACITY (SOLID) | 1 x (0.75 - 2.5) mm ² 2 x (0.75 - 2.5) mm ² |
| TIGHTENING TORQUE | 1.2 Nm, Screw terminals |
| ACTUATING VOLTAGE | 48 V DC |

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



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