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## Eaton 276414

Eaton Moeller® series DILA Contactor relay,  
24 V DC, 2 N/O, 2 NC, Screw terminals, DC  
operation

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| <b>PRODUCT NAME</b>             | Eaton Moeller® series<br>DILA Control relay                                                                                                                                                                                   |
| <b>CATALOG NUMBER</b>           | 276414                                                                                                                                                                                                                        |
| <b>PRODUCT<br/>LENGTH/DEPTH</b> | 75 mm                                                                                                                                                                                                                         |
| <b>PRODUCT HEIGHT</b>           | 68 mm                                                                                                                                                                                                                         |
| <b>PRODUCT WIDTH</b>            | 45 mm                                                                                                                                                                                                                         |
| <b>PRODUCT WEIGHT</b>           | 0.294 kg                                                                                                                                                                                                                      |
| <b>CERTIFICATIONS</b>           | IEC/EN 60947<br>IEC/EN 60947-4-1<br>UL Category Control No.:<br>NKCR<br>CSA Class No.: 3211-03<br>UL 508<br>CE<br>UL<br>UL File No.: E29184<br>CSA<br>CSA-C22.2 No. 14-05<br>CSA File No.: 012528<br>EN 60947-5-1<br>VDE 0660 |

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| <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 PROTECTION OF</b>                                                     | Does not apply, since the entire switchgear needs to                                                                             |

|                            |                                                                              |
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| DECLARATIONS OF CONFORMITY | <a href="#">eaton-control-relay-declaration-of-conformity-uk251205en.pdf</a> |
| 000000                     | <a href="#">eaton-contactors-dila-dilm7-15-dilmp20-il03407013z.pdf</a>       |
|                            | <a href="#">eaton-contactors-frame-dilm-dimensions.eps</a>                   |
| 00                         | <a href="#">eaton-contactors-module-dilm-dimensions.eps</a>                  |
|                            | <a href="#">eaton-contactors-dilm-3d-drawing-007.eps</a>                     |

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| <b>ASSEMBLIES</b>                                               | 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>                                             | Suppressor circuit<br>Positive operation contacts<br>Built-in suppressor circuit |
| <b>OPERATING FREQUENCY</b>                                      | 9000 Operations/h                                                                |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                                |
| <b>CLIMATIC PROOFING</b>                                        | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30   |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                      | 60 °C                                                                            |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                      | -25 °C                                                                           |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>           | 40 °C                                                                            |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>           | 25 °C                                                                            |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>                        | 80 °C                                                                            |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                        | 40 °C                                                                            |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>       | 0 W                                                                              |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                          | 0 W                                                                              |

|                                                                                   |                                                                  |
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| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>                          | 1 W                                                              |
| <b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>                        | 0                                                                |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>                    | 2                                                                |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS, DELAYED SWITCHING)</b> | 0                                                                |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>                      | 2                                                                |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS, LEADING)</b>             | 0                                                                |
| <b>NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)</b>                              | 2                                                                |
| <b>NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)</b>                                | 2                                                                |
| <b>POWER CONSUMPTION (PICK-UP) AT DC</b>                                          | 2.6 W                                                            |
| <b>POWER CONSUMPTION (SEALING) AT DC</b>                                          | 2.6 W                                                            |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>                       | 0 V                                                              |
| <b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>                       | 0 V                                                              |
| <b>CONNECTION TO SMARTWIRE-DT</b>                                                 | In conjunction with DIL-SWD SmartWire DT contactor module<br>Yes |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                                     | 6000 V AC                                                        |
| <b>CONNECTION</b>                                                                 | Screw terminals                                                  |
| <b>SWITCHING TIME (DC OPERATED, MAKE CONTACTS, OPENING DELAY) - MAX</b>           | 12 ms                                                            |
| <b>APPLICATION</b>                                                                | Contactor relays                                                 |
| <b>PRODUCT CATEGORY</b>                                                           | DILA relays                                                      |
| <b>PROTECTION</b>                                                                 | Finger and back-of-hand proof, Protection against                |

|                                                                |                                                                                                                                     |
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|                                                                | direct contact when actuated from front (EN 50274)                                                                                  |
| <b>CONVENTIONAL THERMAL CURRENT ITH AT 60°C (3-POLE, OPEN)</b> | 16 A                                                                                                                                |
| <b>VOLTAGE TYPE OF OPERATING VOLTAGE</b>                       | AC/DC                                                                                                                               |
| <b>RATED SWITCH CURRENT</b>                                    | 16 A                                                                                                                                |
| <b>OPERATING VOLTAGE AT AC, 50 HZ - MIN</b>                    | 17 V                                                                                                                                |
| <b>OPERATING VOLTAGE AT AC, 50 HZ - MAX</b>                    | 500 V                                                                                                                               |
| <b>OPERATING VOLTAGE AT AC, 60 HZ - MIN</b>                    | 17 V                                                                                                                                |
| <b>OPERATING VOLTAGE AT AC, 60 HZ - MAX</b>                    | 500 V                                                                                                                               |
| <b>OPERATING VOLTAGE AT DC - MIN</b>                           | 24 VDC                                                                                                                              |
| <b>OPERATING VOLTAGE AT DC - MAX</b>                           | 220 VDC                                                                                                                             |
| <b>SCREWDRIVER SIZE</b>                                        | 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver<br>2, Terminal screw, Pozidriv screwdriver                                 |
| <b>VOLTAGE TYPE</b>                                            | DC                                                                                                                                  |
| <b>CODE NUMBER</b>                                             | 22E                                                                                                                                 |
| <b>DEGREE OF PROTECTION</b>                                    | IP20                                                                                                                                |
| <b>OVERVOLTAGE CATEGORY</b>                                    | III                                                                                                                                 |
| <b>CONTROL CIRCUIT RELIABILITY</b>                             | $\lambda < 5 \times 10^{-7}$ (1 failure at 2,000,000 operations for $U_e = 24$ V DC, $U_{min} = 17$ V, $I_{min} = 5.4$ mA)          |
| <b>CONNECTION TYPE (AUXILIARY CIRCUIT)</b>                     | Screw connection                                                                                                                    |
| <b>DUTY FACTOR</b>                                             | 100 %                                                                                                                               |
| <b>LIFESPAN, MECHANICAL</b>                                    | 20,000,000 Operations (DC operated)                                                                                                 |
| <b>MOUNTING METHOD</b>                                         | DIN-rail/screw                                                                                                                      |
| <b>PICK-UP VOLTAGE</b>                                         | 0.7 - 1.3 V DC x $U_c$ (at 24 V: without auxiliary contact module and at ambient air temperature + 40 °C)<br>0.8 - 1.1 V DC x $U_c$ |
| <b>VOLTAGE TOLERANCE</b>                                       | Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification                                                    |
| <b>SAFE ISOLATION</b>                                          | 400 V AC, Between                                                                                                                   |

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|                                                                     | auxiliary contacts,<br>According to EN 61140<br>400 V AC, Between coil<br>and auxiliary contacts,<br>According to EN 61140                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SCREW SIZE</b>                                                   | M3.5, Terminal screw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>RATED OPERATIONAL<br/>CURRENT (IE)</b>                           | 2 A at 110 V, DC L/R $\leq$ 50<br>ms (with 3 contacts in<br>series)<br>6 A at 110 V, DC L/R $\leq$ 15<br>ms (with 3 contacts in<br>series)<br>6 A at 60 V, DC L/R $\leq$ 15 ms<br>(with 1 contact in series)<br>3 A at 110 V, DC L/R $\leq$ 15<br>ms (with 1 contact in<br>series)<br>1 A at 220 V, DC L/R $\leq$ 50<br>ms (with 3 contacts in<br>series)<br>10 A at 24 V, DC L/R $\leq$ 15<br>ms (with 1 contact in<br>series)<br>10 A at 60 V, DC L/R $\leq$ 15<br>ms (with 2 contacts in<br>series)<br>5 A at 220 V, DC L/R $\leq$ 15<br>ms (with 3 contacts in<br>series)<br>1 A at 220 V, DC L/R $\leq$ 15<br>ms (with 1 contact in<br>series)<br>4 A at 24 V, DC L/R $\leq$ 50 ms<br>(with 3 contacts in series)<br>4 A at 60 V, DC L/R $\leq$ 50 ms<br>(with 3 contacts in series)<br>16 A |
| <b>SWITCHING CAPACITY<br/>(AUXILIARY CONTACTS,<br/>GENERAL USE)</b> | 15 A, 600 V AC, (UL/CSA)<br>1 A, 250 V DC, (UL/CSA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>SWITCHING CAPACITY<br/>(AUXILIARY CONTACTS,<br/>PILOT DUTY)</b>  | P300, DC operated<br>(UL/CSA)<br>A600, AC operated<br>(UL/CSA)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 60<br/>HZ - MAX</b> | 0 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT AC, 60<br/>HZ - MIN</b> | 0 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT DC -<br/>MAX</b>        | 24 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>RATED CONTROL SUPPLY<br/>VOLTAGE (US) AT DC -<br/>MIN</b>        | 24 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>RATED INSULATION VOLTAGE (UI)</b>                                    | 690 V                                                                                                                                                                                                                                                                                          |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V</b>     | 4 A                                                                                                                                                                                                                                                                                            |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V</b>     | 4 A                                                                                                                                                                                                                                                                                            |
| <b>RATED OPERATIONAL CURRENT (IE) AT AC-15, 500 V</b>                   | 1.5 A                                                                                                                                                                                                                                                                                          |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>    | 15.5 A                                                                                                                                                                                                                                                                                         |
| <b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>                       | 690 V                                                                                                                                                                                                                                                                                          |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>               | 3 W                                                                                                                                                                                                                                                                                            |
| <b>STRIPPING LENGTH (MAIN CABLE)</b>                                    | 10 mm                                                                                                                                                                                                                                                                                          |
| <b>SWITCHING TIME (DC OPERATED, MAKE CONTACTS, CLOSING DELAY) - MAX</b> | 31 ms                                                                                                                                                                                                                                                                                          |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>                        | 2 x (0.75 - 2.5) mm <sup>2</sup> , Screw terminals<br>1 x (0.75 - 2.5) mm <sup>2</sup> , Screw terminals                                                                                                                                                                                       |
| <b>SHOCK RESISTANCE</b>                                                 | 5 g, N/C auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>7 g, N/O auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| <b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>                           | 18 - 14, Screw terminals                                                                                                                                                                                                                                                                       |
| <b>SHORT-CIRCUIT PROTECTION RATING WITHOUT WELDING</b>                  | 10 A gG/gL, 500 V, Max. Fuse, Contacts                                                                                                                                                                                                                                                         |
| <b>TERMINAL CAPACITY (SOLID)</b>                                        | 1 x (0.75 - 4) mm <sup>2</sup> , Screw terminals<br>2 x (0.75 - 2.5) mm <sup>2</sup> , Screw terminals                                                                                                                                                                                         |
| <b>TIGHTENING TORQUE</b>                                                | 1.2 Nm, Screw terminals                                                                                                                                                                                                                                                                        |
| <b>ACTUATING VOLTAGE</b>                                                | 24 V DC                                                                                                                                                                                                                                                                                        |

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



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