

**Auxiliary contact module, 4 pole, 3 N/O, 1 NC, Front fixing, Screw terminals, DILE(E)M, DILER**

**Part no.** 31DILE  
048912  
**EL Number** 4130367  
**(Norway)**

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| <b>General specifications</b>          |  |  |
| Product name                           |  | Eaton Moeller® series DILE Accessory Auxiliary contact module  |
| Part no.                               |  | 31DILE   |
| EAN                                    |  | 4015080489122  |
| Product Length/Depth                   |  | 36 millimetre  |
| Product height                         |  | 32 millimetre  |
| Product width                          |  | 45 millimetre  |
| Product weight                         |  | 0.04 kilogram  |
| Certifications                         |  | UL 508<br>CSA Class No.: 3211-03<br>CSA-C22.2 No. 14-05<br>CE<br>UL Category Control No.: NKCR<br>IEC/EN 60947-4-1<br>CSA File No.: 012528<br>CSA<br>IEC/EN 60947<br>VDE 0660<br>UL File No.: E29184<br>UL   |
| Product Tradename                      |  | DILE   |
| Product Type                           |  | Accessory  |
| Product Sub Type                       |  | Auxiliary contact module   |
| Catalog Notes                          |  | Auxiliary contacts used as mirror contacts (according to IEC/EN 60947-4-1 Appendix F (not N/C late open))<br>Conventional thermal current at maximum permissible ambient air temperature.<br>Interlocked opposing contacts according to IEC/EN 60947-5-1 appendix L, inside the auxiliary contact modules, also for the integrated auxiliary contacts of the DILE(E)M<br>Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.<br>Switching elements according to EN 50012 are to be preferred.<br>Version E combinations correspond to EN 50011 and are to be preferred. |
| <b>Features &amp; Functions</b>        |  |  |
| Electric connection type               |  | Screw connection   |
| Features                               |  | Interlocked opposing contacts within an auxiliary contact module (according to IEC 60947-5-1 Annex L)  |
| Fitted with:                           |  | Interlocked opposing contacts<br>Switching elements according to EN 50005  |
| Functions                              |  | For standard applications  |
| Number of poles                        |  | Four-pole  |
| <b>General information</b>             |  |  |
| Degree of protection                   |  | IP20   |
| Lifespan, mechanical                   |  | 150,000 Operations (at 240 V, DC, L/R = 50 ms: 2 contacts in series 0.5 A)<br>20,000,000 Operations (DC operated)<br>10,000,000 Operations (AC operated)<br>200,000 Operations (at 240 V, AC-15)   |
| Model                                  |  | Top mounting   |
| Mounting method                        |  | Front fastening  |
| Mounting position                      |  | As required (except vertical with terminals A1/A2 at the bottom)   |
| Operating frequency                    |  | 9000 Operations/h  |
| Overvoltage category                   |  | III  |
| Pollution degree                       |  | 3  |
| Protection                             |  | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)   |
| Rated impulse withstand voltage (Uimp) |  | 6000 V AC  |
| Shock resistance                       |  | 10 g, N/O contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms   |

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|   |  | 8 g, N/C contact, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms   |
| <b>Climatic environmental conditions</b>                              |  |   |
| Ambient operating temperature - min                                   |  | -25 °C  |
| Ambient operating temperature - max                                   |  | 50 °C   |
| Ambient operating temperature (enclosed) - min                        |  | 25 °C   |
| Ambient operating temperature (enclosed) - max                        |  | 40 °C   |
| Ambient storage temperature - min                                     |  | 40 °C   |
| Ambient storage temperature - max                                     |  | 80 °C   |
| Climatic proofing   |  | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78  |
| <b>Terminal capacities</b>  |  |   |
| Terminal capacity (flexible with ferrule)                             |  | 2 x (0.75 - 1.5) mm <sup>2</sup><br>1 x (0.75 - 1.5) mm <sup>2</sup>  |
| Terminal capacity (solid)   |  | 2 x (0.75 - 2.5) mm <sup>2</sup><br>1 x (0.75 - 2.5) mm <sup>2</sup>  |
| Terminal capacity (solid/stranded AWG)                                |  | Single 18 – 14, double 18 – 14  |
| Screw size  |  | M3.5, Terminal screw  |
| Screwdriver size  |  | 0.8 x 5.5/1 x 6 mm, Terminal screw, Standard screwdriver<br>2, Terminal screw, Pozidriv screwdriver   |
| Tightening torque   |  | 1.2 Nm, Screw terminals   |
| <b>Electrical rating</b>  |  |   |
| Rated operational voltage (Ue) at AC - max                            |  | 600 V   |
| Rated insulation voltage (Ui)   |  | 690 V   |
| Rated operational current (Ie)  |  | 2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series)<br>1.5 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series)<br>0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)<br>2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series) |
| Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V          |  | 4 A   |
| Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V          |  | 2 A   |
| Rated operational current (Ie) at AC-15, 500 V                        |  | 1.5 A   |
| Safe isolation  |  | 300 V AC, Between auxiliary contacts, According to EN 61140<br>300 V AC, Between coil and auxiliary contacts, According to EN 61140   |
| <b>Short-circuit rating</b>   |  |   |
| Short-circuit protection rating                                       |  | 10 A fast, 500V, Maximum fuse, Short-circuit rating without welding, Contacts   |
| Short-circuit protection rating without welding                       |  | 6 A gG/gL, 500 V, Max. Fuse, Contacts   |
| <b>Conventional thermal current Ith</b>                               |  |   |
| Conventional thermal current Ith of auxiliary contacts (1-pole, open) |  | 10 A  |
| <b>Switching capacity</b>   |  |   |
| Switching capacity (auxiliary contacts, general use)                  |  | 10 A, 600 V AC, (UL/CSA)<br>0.5 A, 250 V DC, (UL/CSA)   |
| Switching capacity (auxiliary contacts, pilot duty)                   |  | A600, AC operated (UL/CSA)<br>P300, DC operated (UL/CSA)  |
| <b>Contacts</b>   |  |   |
| Code number   |  | 71E in combination with DILER-40(-G)<br>62 in combination with DILER-31(-G)<br>53 in combination with DILER-22  |
| Control circuit reliability   |  | < 2 λ, < 1 failure at 100,000,000 Operations (at U# = 24 V DC, Umin = 17 V, Imin = 5.4 mA)  |
| Number of contacts (change-over contacts)                             |  | 0   |
| Number of contacts (normally closed contacts)                         |  | 1   |
| Number of contacts (normally open contacts)                           |  | 3   |
| <b>Design verification</b>  |  |   |
| Equipment heat dissipation, current-dependent Pvid                    |  | 0 W   |
| Heat dissipation capacity Pdiss                                       |  | 0 W   |
| Heat dissipation per pole, current-dependent Pvid                     |  | 0.24 W  |
| Rated operational current for specified heat dissipation (In)         |  | 4 A   |
| Static heat dissipation, non-current-dependent Pvs                    |  | 0 W   |
| 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.  |

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| 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.   |
| 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.   |
| 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.                         |

Technical data ETIM 9.0

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| Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)  |  |   |                  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ecI@ss13-27-37-13-02 [AKN342018]) |  |   |                  |
| Number of contacts as change-over contact  |  |   | 0                |
| Number of contacts as normally open contact  |  |   | 3                |
| Number of contacts as normally closed contact  |  |   | 1                |
| Number of fault-signal switches  |  |   | 0                |
| Rated operation current Ie at AC-15, 230 V   |  | A | 4                |
| Type of electric connection  |  |   | Screw connection |
| Model  |  |   | Clip-on          |
| Mounting method  |  |   | Front fastening  |
| Lamp holder  |  |   | None             |