

**Contactor relay, 12 V DC, N/O = Normally open: 2 N/O, N/C = Normally closed: 2 NC, Screw terminals, DC operation**



**Part no. DILER-22-G(12VDC)  
080728**

| <b>General specifications</b>                  |  |   |
|--|--|---|
| Product name                                   |  | Eaton Moeller® series DILER Control Relay   |
| Part no.                                       |  | DILER-22-G(12VDC)   |
| EAN  |  | 4015080807285   |
| Product Length/Depth                           |  | 54 millimetre   |
| Product height                                 |  | 58 millimetre   |
| Product width                                  |  | 45 millimetre   |
| Product weight                                 |  | 0.206 kilogram  |
| Certifications                                 |  | IEC/EN 60947<br>VDE 0660<br>UL<br>UL Category Control No.: NKCR<br>CSA Class No.: 3211-03<br>UL 508<br>CSA<br>UL File No.: E29184<br>CSA-C22.2 No. 14-05<br>IEC/EN 60947-4-1<br>EN 60947-5-1<br>CSA File No.: 012528<br>CE  |
| Product Tradename                              |  | DILER   |
| Product Type                                   |  | Control Relay   |
| Product Sub Type                               |  | None  |
| Catalog Notes                                  |  | Coil terminal markings according to EN 50005<br>Contact numbers according to EN 50011<br>Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified.   |
| <b>Features &amp; Functions</b>                |  |   |
| Features                                       |  | Positive operating contacts to EN 60947-5-1 appendix L, including auxiliary contact module  |
| Fitted with:                                   |  | Interlocked opposing contacts   |
| <b>General information</b>                     |  |   |
| Application                                    |  | Contactor relays  |
| Degree of protection                           |  | IP20  |
| Lifespan, mechanical                           |  | 20,000,000 Operations (DC operated)   |
| Mounting method                                |  | DIN-rail/screw  |
| Mounting position                              |  | As required (except vertical with terminals A1/A2 at the bottom)  |
| Operating frequency                            |  | 9000 Operations/h   |
| Overvoltage category                           |  | III   |
| Pollution degree                               |  | 3   |
| Product category                               |  | DILER Mini-contactors   |
| 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 auxiliary contact, Basic unit with auxiliary contact module, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms<br>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 |
| Voltage type                                   |  | DC  |
| <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   |
| Climatic proofing                              |  | Damp heat, cyclic, to IEC 60068-2-30  |

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|   |  | Damp heat, constant, to IEC 60068-2-78  |
| <b>Terminal capacities</b>  |  |   |
| Terminal capacity (flexible with ferrule)                                       |  | 1 x (0.75 - 1.5) mm <sup>2</sup><br>2 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)  |  | 1 x (18 - 14)<br>18 - 14<br>2 x (18 - 14)   |
| Stripping length (main cable)   |  | 8 mm  |
| 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)  |  | 1.5 A at 110 V, DC L/R ≤ 15 ms (with 3 contacts in series)<br>2.5 A at 24 V, DC L/R ≤ 15 ms (with 1 contact in series)<br>2.5 A at 60 V, DC L/R ≤ 15 ms (with 2 contacts in series)<br>0.5 A at 220 V, DC L/R ≤ 15 ms (with 3 contacts in series)<br>10 A |
| Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V                    |  | 6 A   |
| 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   |
| Safe isolation  |  | 300 V AC, Between coil and auxiliary contacts, According to EN 61140<br>300 V AC, Between 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>Switching capacity</b>   |  |   |
| Switching capacity (auxiliary contacts, general use)                            |  | 0.5 A, 250 V DC, (UL/CSA)<br>10 A, 600 V AC, (UL/CSA)   |
| Switching capacity (auxiliary contacts, pilot duty)                             |  | P300, DC operated (UL/CSA)<br>A600, AC operated (UL/CSA)  |
| <b>Magnet system</b>  |  |   |
| Duty factor   |  | 100 %   |
| Pick-up voltage   |  | 0.85 - 1.3 V DC x Uc<br>0.7 - 1.3 V DC x Uc (at 24 V: without auxiliary contact module and at ambient air temperature + 40 °C)  |
| 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 - min                            |  | 0 V   |
| Rated control supply voltage (Us) at AC, 50 Hz - max                            |  | 0 V   |
| Rated control supply voltage (Us) at AC, 60 Hz - min                            |  | 0 V   |
| Rated control supply voltage (Us) at AC, 60 Hz - max                            |  | 0 V   |
| Rated control supply voltage (Us) at DC - min                                   |  | 12 V  |
| Voltage tolerance   |  | Smoothed DC, three-phase bridge rectifiers or smoothed double-wave rectification  |
| Rated control supply voltage (Us) at DC - max                                   |  | 12 V  |
| Switching time (DC operated, make contacts, closing delay) - min                |  | 26 ms   |
| Switching time (DC operated, make contacts, closing delay) - max                |  | 35 ms   |
| Switching time (DC operated, make contacts, opening delay) - min                |  | 15 ms   |
| Switching time (DC operated, make contacts, opening delay) - max                |  | 25 ms   |
| Switching time (DC operated, N/O, with auxiliary contact module, closing delay) |  | 70 ms   |
| <b>Contacts</b>   |  |   |
| Code number   |  | 22E   |
| 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 auxiliary contacts (change-over contacts)                             |  | 0   |
| Number of auxiliary contacts (normally closed contacts)                         |  | 2   |

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|--|--|--|
| Number of auxiliary contacts (normally open contacts)                            |  | 2  |
| Number of contacts (normally closed contacts)                                    |  | 2  |
| Number of contacts (normally open contacts)                                      |  | 2  |
| <b>Design verification</b>   |  |  |
| Equipment heat dissipation, current-dependent Pvid                               |  | 0 W  |
| Heat dissipation capacity P <sub>diss</sub>                                      |  | 0 W  |
| Heat dissipation per pole, current-dependent Pvid                                |  | 0.4 W  |
| Rated operational current for specified heat dissipation (I <sub>n</sub> )       |  | 6 A  |
| Static heat dissipation, non-current-dependent P <sub>vs</sub>                   |  | 2.3 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.   |
| 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) / Contactor relay (EC000196)   |   |                |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Contactor (LV) / Contactor relay (ec @ss13-27-37-10-01 [AAB716019]) |   |                |
| Rated control supply voltage AC 50 Hz   | V | 0 - 0          |
| Rated control supply voltage AC 60 Hz   | V | 0 - 0          |
| Rated control supply voltage DC   | V | 12 - 12        |
| Voltage type for actuating  |   | DC             |
| Rated operation current   | A | 10             |
| Rated operation current I <sub>e</sub> , 400 V  | A | 3              |
| Mounting method   |   | DIN-rail/screw |
| With LED indication   |   | No             |
| Suitable for manual operation   |   | No             |
| Interface   |   | No             |
| Number of auxiliary contacts as normally closed contact   |   | 2              |
| Number of auxiliary contacts as normally open contact   |   | 2              |
| Number of auxiliary contacts as normally closed contact, delayed switching  |   | 0              |
| Number of auxiliary contacts as normally open contact, leading  |   | 0              |
| Number of auxiliary contacts as change-over contact   |   | 0              |
| Operating voltage AC 50 Hz  | V | 17 - 500       |
| Operating voltage AC 60 Hz  | V | 17 - 500       |
| Operating voltage DC  | V | 24 - 220       |
| Voltage type (operating voltage)  |   | AC/DC          |

|                                   |    |                  |
|-----------------------------------|----|------------------|
| Rated switch current              | A  | 10               |
| Connection type auxiliary circuit |    | Screw connection |
| Width                             | mm | 45               |
| Height                            | mm | 58               |
| Depth                             | mm | 54               |