

Current transformer-operated overload relay, 190-290A, 1N/0+1N/C

Part no. ZW7-290
052448
EL Number 4131712
(Norway)

| General specifications | |
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| Product name | Eaton Moeller® series ZW7 Current transformer-operated overload relay |
| Part no. | ZW7-290 |
| EAN | 4015080524489 |
| Product Length/Depth | 162.5 millimetre |
| Product height | 97 millimetre |
| Product width | 200.5 millimetre |
| Product weight | 0.622 kilogram |
| Certifications | IEC/EN 60947 UL File No.: E29184 CSA Class No.: 3211-03 VDE 0660 UL Category Control No.: NKCR CE CSA-C22.2 No. 14 CSA IEC/EN 60947-4-1 CSA File No.: 012528 UL UL 508 |
| Product Tradename | ZW7 |
| Product Type | Current transformer-operated overload relay |
| Product Sub Type | None |
| Catalog Notes | Rated operational current: Switch-on and switch-off conditions based on DC-13, time constant as specified. |
| Features & Functions | |
| Features | Test/off button Reset pushbutton manual/auto Protection with heavy starting duty Trip-free release |
| General information | |
| 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 |
| Class | Other |
| Climatic proofing | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| Degree of protection | IP00 |
| Mounting method | Separate positioning Separate mounting |
| Mounting position | As required |
| Opening diameter | 27 mm |
| Overload release current setting - min | 190 A |
| Overload release current setting - max | 290 A |
| Overvoltage category | III |
| Pollution degree | 3 |
| Product category | ZW7 current transformer-operated overload relays |
| Protection | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| Rated impulse withstand voltage (Uimp) | 8000 V AC 4000 V (auxiliary and control circuits) |
| Shock resistance | 10 g, Mechanical, Sinusoidal, Shock duration 10 ms |
| Suitable for | Branch circuits, (UL/CSA) |
| Temperature compensation | Continuous |

| Terminal capacities | |
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| Terminal capacity (flexible with ferrule) | 2 x (0.75 - 2.5) mm ² 1 x (0.75 - 2.5) mm ² |
| Terminal capacity (solid) | 2 x (0.75 - 4) mm ² 1 x (0.75 - 4) mm ² |
| Terminal capacity (solid/stranded AWG) | 2 x (18 - 14) |
| Stripping length (control circuit cable) | 8 mm |
| Screw size | M3.5, Terminal screw |
| Screwdriver size | 1 x 6 mm, Terminal screw, Control circuit cables, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver |
| Tightening torque | 1.2 Nm, Screw terminals, Control circuit cables |
| Electrical rating | |
| Conventional thermal current I _{th} of auxiliary contacts (1-pole, open) | 6 A |
| Rated operational current (I _e) at AC-15, 120 V | 1.5 A |
| Rated operational current (I _e) at AC-15, 220 V, 230 V, 240 V | 1.5 A |
| Rated operational current (I _e) at AC-15, 380 V, 400 V, 415 V | 0.9 A |
| Rated operational current (I _e) at DC-13, 110 V | 0.4 A |
| Rated operational current (I _e) at DC-13, 220 V, 230 V | 0.2 A |
| Rated operational current (I _e) at DC-13, 24 V | 0.9 A |
| Rated operational current (I _e) at DC-13, 60 V | 0.75 A |
| Rated operational voltage (U _e) - max | 690 V |
| Safe isolation | 240 V AC, Between auxiliary contacts, According to EN 61140 440 V AC, Between main circuits, According to EN 61140 440 V AC, Between auxiliary contacts and main contacts, According to EN 61140 |
| Switching capacity (auxiliary contacts, pilot duty) | B300 at opposite polarity, AC operated (UL/CSA) R300, DC operated (UL/CSA) B600 at opposite polarity, AC operated (UL/CSA) |
| Voltage rating - max | 600 V AC |
| Short-circuit rating | |
| Short-circuit protection | With overload relay in conjunction with a transformer as required for the contactor, Max. Fuse, Main conducting paths |
| Short-circuit protection rating | Max. 6 A gG/gL, Fuse, Auxiliary contacts |
| Contacts | |
| Number of auxiliary contacts (change-over contacts) | 0 |
| Number of auxiliary contacts (normally closed contacts) | 1 |
| Number of auxiliary contacts (normally open contacts) | 1 |
| Number of contacts (normally closed contacts) | 1 |
| Number of contacts (normally open contacts) | 1 |
| Design verification | |
| Equipment heat dissipation, current-dependent P _{vid} | 7.2 W |
| Heat dissipation capacity P _{diss} | 0 W |
| Heat dissipation per pole, current-dependent P _{vid} | 2.4 W |
| Rated operational current for specified heat dissipation (I _n) | 290 A |
| Static heat dissipation, non-current-dependent P _{vs} | 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. |
| 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. |

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| 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) / Thermal overload relay (EC000106) | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Thermal overload relay (ecl@ss13-27-37-15-01 [AKF075019]) | | |
| Adjustable current range | A | 190 - 290 |
| Max. rated operation voltage Ue | V | 690 |
| Mounting method | | Separate positioning |
| Type of electrical connection of main circuit | | Screw connection |
| Number of auxiliary contacts as normally closed contact | | 1 |
| Number of auxiliary contacts as normally open contact | | 1 |
| Number of auxiliary contacts as change-over contact | | 0 |
| Release class | | Other |
| Reset function input | | No |
| Reset function automatic | | Yes |
| Reset function push-button | | Yes |