

Overload relay, Direct mounting, Earth-fault protection: none, Ir= 20 - 100 A, 1 N/O, 1 N/C

Part no. ZEB65-100

136504

EL Number
(Norway)

4137373

| General specifications | |
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| Product name | Eaton Moeller® series ZEB Electronic overload Relay |
| Part no. | ZEB65-100 |
| EAN | 4015081332847 |
| Product Length/Depth | 136.3 millimetre |
| Product height | 116 millimetre |
| Product width | 56 millimetre |
| Product weight | 0.648 kilogram |
| Certifications | CSA IEC/EN 60947-4-1 CE UL File No.: E1230 VDE 0660 UL 508 CSA Class No.: 3211-03 UL Category Control No.: NKCR UL IEC/EN 60947 CSA-C22.2 No. 14 CSA File No.: 2290956 |
| Product Tradename | ZEB |
| Product Type | Electronic 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 | |
| Earth fault protection | None |
| Features | Phase-failure sensitivity (according to IEC/EN 60947, VDE 0660 Part 102) |
| Functions | Filament bulb (24 V) |
| General information | |
| Class | Adjustable |
| Degree of protection | IP20 |
| Mounting method | Direct mounting Direct attachment |
| Overload release current setting - min | 20 A |
| Overload release current setting - max | 100 A |
| 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 (auxiliary circuits) 6000 V AC |
| Shock resistance | 15 g, Mechanical, According to IEC/EN 60068-2-27, Shock duration 10 ms Mechanical, According to IEC/EN 60068-2-27 |
| Suitable for | Branch circuits, (UL/CSA) |
| Voltage type | Self powered |
| Climatic environmental conditions | |
| Ambient operating temperature - min | -25 °C |
| Ambient operating temperature - max | 65 °C |
| Ambient operating temperature (enclosed) - max | 45 °C |
| Climatic proofing | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Terminal capacities | |

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| Terminal capacity (flexible with ferrule) | | 2 x (0.75 - 2.5) mm ² , Control circuit cables |
| Terminal capacity (solid) | | 2 x (0.75 - 4) mm ² , Control circuit cables 1 x (16 - 50) mm ² , Main cables |
| Terminal capacity (solid/stranded AWG) | | 1 x (6 - 1), Main cables 2 x (18 - 12), Control circuit cables |
| Stripping length (main cable) | | 14 mm |
| Stripping length (control circuit cable) | | 8 mm |
| Screw size | | M3.5, Terminal screw, Control circuit cables |
| Screwdriver size | | 1 x 6 mm, Terminal screw, Standard screwdriver 2, Terminal screw, Pozidriv screwdriver |
| Tightening torque | | 0.8 - 1.2 Nm, Screw terminals, Control circuit cables 7 lb-in, Screw terminals |
| Electrical rating | | |
| Conventional thermal current I_{th} of auxiliary contacts (1-pole, open) | | 5 A |
| 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 | | 0 V |
| Rated control supply voltage (Us) at DC - max | | 0 V |
| Rated frequency - min | | 50 Hz |
| Rated frequency - max | | 60 Hz |
| Rated operational current (Ie) at AC-15, 120 V | | 1.5 A |
| Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V | | 1.5 A |
| Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V | | 0.9 A |
| Rated operational current (Ie) at DC-13, 110 V | | 0.4 A |
| Rated operational current (Ie) at DC-13, 220 V, 230 V | | 0.2 A |
| Rated operational current (Ie) at DC-13, 24 V | | 0.9 A |
| Rated operational current (Ie) at DC-13, 60 V | | 0.75 A |
| Rated operational voltage (Ue) at AC - max | | 690 V |
| Safe isolation | | 600 V AC, Between main circuits, According to EN 61140 240 V AC, Between auxiliary contacts, According to EN 61140 440 V, Between auxiliary contacts and main contacts, According to EN 61140 |
| Short-circuit protection rating | | Max. 6 A gG/gL, fuse, Without welding, Auxiliary and control circuits |
| Short-circuit current rating (high fault at 600 V) | | 100 kA, Fuse, SCCR (UL/CSA) 200 A, Class J, max. Fuse, SCCR (UL/CSA) |
| Switching capacity (auxiliary contacts, pilot duty) | | B600, AC operated (UL/CSA) R300, DC operated (UL/CSA) |
| Voltage rating - max | | 600 V |
| 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} | | 25.4 W |
| Heat dissipation capacity P _{diss} | | 0 W |
| Heat dissipation per pole, current-dependent P _{vid} | | 8.47 W |
| Rated operational current for specified heat dissipation (I _n) | | 100 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. |

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| 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) / Electronic overload relay (EC001080) | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Overload protection device / Electronic overload relay (ecl@ss13-27-37-15-02 [AKF076019]) | | |
| Mounting method | | Direct attachment |
| Type of electrical connection of main circuit | | Screw connection |
| Adjustable current range | A | 20 - 100 |
| External power supply required | | No |
| 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 | 0 - 0 |
| Voltage type for actuating | | |
| 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 |
| Voltage type (operating voltage) | | AC |
| Operating voltage AC 50 Hz | V | 230 - 690 |
| Operating voltage AC 60 Hz | V | 230 - 690 |
| Operating voltage DC | V | 0 - 0 |
| Rated switch current | A | |
| Release class | | Adjustable |
| Reset function automatic | | Yes |
| Reset function input | | No |
| Reset function push-button | | Yes |
| Width | mm | 56 |
| Height | mm | 116 |
| Depth | mm | 136.3 |