

Step switches, TM, 10 A, centre mounting, 1 contact unit(s), Contacts: 2, 60 °, maintained, With 0 (Off) position, 0-1-2, Design number 8310



Powering Business Worldwide™

Part no. **TM-1-8310/EZ**
045479

| General specifications | | |
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| Product name | | Eaton Moeller® series TM Step switch |
| Part no. | | TM-1-8310/EZ |
| EAN | | 4015080454793 |
| Product Length/Depth | | 74 millimetre |
| Product height | | 30 millimetre |
| Product width | | 30 millimetre |
| Product weight | | 0.034 kilogram |
| Certifications | | CSA CSA-C22.2 No. 94 IEC/EN 60947-3 IEC/EN 60947-5-1 CE UL 508 IEC/EN 60947 CSA-C22.2 No. 14-05 Certified by UL for use in Canada UL report applies to both US and Canada VDE 0660 UL File No.: E36332 UL Category Control No.: NLRV UL |
| Product Tradename | | TM |
| Product Type | | Step switch |
| Product Sub Type | | None |
| Features & Functions | | |
| Fitted with: | | 0 (off) position Black thumb grip and front plate |
| Inscription | | 0-1-2 |
| Number of poles | | Single-pole |
| General information | | |
| Degree of protection | | IP65 |
| Degree of protection (front side) | | IP65 NEMA 12 |
| Lifespan, mechanical | | 1,000,000 Operations |
| Mounting method | | Center mounting |
| Mounting position | | As required |
| Number of contact units | | 1 |
| Operating frequency | | 1200 Operations/h |
| Overvoltage category | | III |
| Pollution degree | | 3 |
| Product category | | Control switches |
| Rated impulse withstand voltage (Uimp) | | 4000 V AC |
| Suitable for | | Front mounting |
| Switching angle | | 60 ° |
| Type | | Step switch |
| Climatic environmental conditions | | |
| Ambient operating temperature - min | | -25 °C |
| Ambient operating temperature - max | | 50 °C |
| Climatic proofing | | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| Terminal capacities | | |
| Terminal capacity (flexible with ferrule) | | 1 x 1.0 mm ² , ferrules to DIN 46228 2 x 1.0 mm ² , ferrules to DIN 46228 |

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| Terminal capacity (flexible) | | 1 x 1.5 mm ² 2 x 1.5 mm ² |
| Terminal capacity (solid/flexible with ferrule AWG) | | 14 |
| Terminal capacity (solid/stranded) | | 2 x 1,5 mm ² 1 x 1.5 mm ² |
| Screw size | | M2.5, Terminal screw |
| Tightening torque | | 3.5 lb-in, Screw terminals 0.4 Nm, Screw terminals |
| Electrical rating | | |
| Rated operating voltage (Ue) at AC - max | | 500 V |
| Rated operational current (Ie) at AC-21, 440 V | | 10 A |
| Rated operational power at AC-23A, 400 V, 50 Hz | | 3 kW |
| Rated uninterrupted current (Iu) | | 10 A |
| Uninterrupted current | | Rated uninterrupted current Iu is specified for max. cross-section. |
| Short-circuit rating | | |
| Short-circuit protection rating | | 10 A gG/gL, Fuse, Contacts |
| Switching capacity | | |
| Switching capacity (main contacts, general use) | | 10 A, Rated uninterrupted current max. (UL/CSA) |
| Switching capacity (auxiliary contacts, general use) | | 10A, IU, (UL/CSA) |
| Switching capacity (auxiliary contacts, pilot duty) | | A300 (UL/CSA) |
| Motor rating | | |
| Assigned motor power at 115/120 V, 60 Hz, 1-phase | | 0.33 HP |
| Assigned motor power at 115/120 V, 60 Hz, 3-phase | | 0.75 HP |
| Assigned motor power at 230/240 V, 60 Hz, 1-phase | | 0.75 HP |
| Assigned motor power at 230/240 V, 60 Hz, 3-phase | | 1 HP |
| Assigned motor power at 277 V, 60 Hz, 1-phase | | 0.75 HP |
| Contacts | | |
| Control circuit reliability | | 1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA) |
| Number of contacts | | 2 |
| Actuator | | |
| Actuator function | | With 0 (Off) position Maintained |
| Actuator type | | Toggle |
| Number of switch positions | | 3 |
| Design verification | | |
| Equipment heat dissipation, current-dependent Pvid | | 0 W |
| Heat dissipation capacity Pdis | | 0 W |
| Heat dissipation per pole, current-dependent Pvid | | 0.15 W |
| Rated operational current for specified heat dissipation (In) | | 10 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. |
| 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 | | UV resistance only in connection with protective shield. |
| 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. |

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| 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

Low-voltage industrial components (EG000017) / Control switch (EC002611)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Control switch (ecl@ss13-27-37-14-14 [ACN998016])

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| Type of switch | | Level switch |
| Number of poles | | 1 |
| Max. rated operation voltage Ue AC | V | 500 |
| Rated permanent current Iu | A | 10 |
| Number of switch positions | | 3 |
| With zero (off) position | | Yes |
| With retraction in 0-position | | No |
| Device construction | | Built-in device |
| Width in number of modular spacings | | 0 |
| Suitable for floor mounting | | No |
| Suitable for front mounting | | Yes |
| Suitable for distribution board installation | | No |
| Suitable for intermediate mounting | | No |
| Complete device in housing | | No |
| Type of control element | | Toggle |
| Front shield size | | 30x30 mm |
| Degree of protection (IP), front side | | IP65 |
| Degree of protection (NEMA), front side | | 12 |