

Changeoverswitches, TM, 10 A, centre mounting, 2 contact unit(s),
Contacts: 4, 60 °, maintained, With 0 (Off) position, 1-0-2, Design number
8211

Part no. **TM-2-8211/EZ**
015166
EL Number **1456161**
(Norway)

| General specifications | | |
|--|--|--|
| Product name | | Eaton Moeller® series TM Changeover switch |
| Part no. | | TM-2-8211/EZ |
| EAN | | 4015080151661 |
| Product Length/Depth | | 87 millimetre |
| Product height | | 30 millimetre |
| Product width | | 30 millimetre |
| Product weight | | 0.043 kilogram |
| Certifications | | IEC/EN 60947-5-1 Certified by UL for use in Canada CSA-C22.2 No. 14-05 VDE 0660 UL Category Control No.: NLRV CSA-C22.2 No. 94 UL report applies to both US and Canada IEC/EN 60947-3 UL CSA IEC/EN 60947 CE UL File No.: E36332 UL 508 |
| Product Tradename | | TM |
| Product Type | | Changeover switch |
| Product Sub Type | | None |
| Features & Functions | | |
| Enclosure material | | Plastic |
| Fitted with: | | Black thumb grip and front plate 0 (off) position |
| Inscription | | 1-0-2 |
| Number of poles | | 2 |
| General information | | |
| Degree of protection | | IP65 |
| Degree of protection (front side) | | IP65 NEMA 12 |
| Lifespan, mechanical | | 1,000,000 Operations |
| Model | | Reverser |
| Mounting method | | Center mounting |
| Mounting position | | As required |
| Number of contact units | | 2 |
| Operating frequency | | 1200 Operations/h |
| Overvoltage category | | III |
| Pollution degree | | 3 |
| Rated impulse withstand voltage (Uimp) | | 4000 V AC |
| Suitable for | | Front mounting |
| Switching angle | | 60 ° |
| Type | | Changeover switch |
| Climatic environmental conditions | | |
| Ambient operating temperature - min | | -25 °C |
| Ambient operating temperature - max | | 50 °C |
| Climatic proofing | | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |

| 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 |
| 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) | 1 x 1.5 mm ² 2 x 1,5 mm ² |
| Screw size | M2.5, Terminal screw |
| Tightening torque | 0.4 Nm, Screw terminals 3.5 lb-in, Screw terminals |
| Electrical rating | |
| Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V | 0 A |
| Rated operational power at AC-3, 380/400 V, 50 Hz | 2.2 kW |
| Rated operational power at AC-23A, 400 V, 50 Hz | 3 kW |
| Rated operational voltage (Ue) at AC - max | 500 V |
| 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 auxiliary contacts (change-over contacts) | 0 |
| Number of auxiliary contacts (normally closed contacts) | 0 |
| Number of auxiliary contacts (normally open contacts) | 0 |
| Number of contacts | 4 |
| Actuator | |
| Actuator function | With 0 (Off) position Maintained |
| Actuator type | Short thumb-grip |
| 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. |
| 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) / Off-load switch (EC001105)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Load-break switch (ecl@ss13-27-37-14-05 [AKF062018])

| | | |
|---|----|------------------|
| Model | | Reverser |
| Number of poles | | 2 |
| With zero (off) position | | Yes |
| With retraction in 0-position | | No |
| Rated permanent current I _u | A | 10 |
| Rated operation current I _e at AC-3, 400 V | A | 0 |
| Rated operation power at AC-3, 400 V | kW | 2.2 |
| Degree of protection (IP), front side | | IP65 |
| Degree of protection (NEMA), front side | | 12 |
| Number of auxiliary contacts as normally closed contact | | 0 |
| Number of auxiliary contacts as normally open contact | | 0 |
| Number of auxiliary contacts as change-over contact | | 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 |
| Housing material | | Plastic |
| Type of control element | | Short thumb-grip |
| Type of electrical connection of main circuit | | Screw connection |