



□□□□□

## Eaton 222668

Eaton Moeller® series T0 Step switch, 20 A, surface mounting, 3 contact units, Contacts: 6, 45 °, maintained, 0 (Off) position, 0-2, Design number 8314

□□□□

|                             |                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller® series T0 Step switch                                                                   |
| <b>CATALOG NUMBER</b>       | 222668                                                                                                 |
| <b>PRODUCT LENGTH/DEPTH</b> | 137 mm                                                                                                 |
| <b>PRODUCT HEIGHT</b>       | 122 mm                                                                                                 |
| <b>PRODUCT WIDTH</b>        | 80 mm                                                                                                  |
| <b>PRODUCT WEIGHT</b>       | 0.288 kg                                                                                               |
| <b>CERTIFICATIONS</b>       | EN 60204<br>IEC 60947<br>EN 60947<br>VDE<br>IEC/EN 60947<br>IEC/EN 60947-3<br>IEC/EN 60204<br>VDE 0660 |
| <b>CATALOG NOTES</b>        | Rated Short-time<br>Withstand Current (Icw)<br>for a time of 1 second                                  |

| □□□□                                                                                    |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>TYPE</b>                                                                             | Step switch                                                                                                                      |
| <b>ACCESSORIES</b>                                                                      | Black thumb grip and front plate                                                                                                 |
| <b>AMPERAGE RATING</b>                                                                  | 20A                                                                                                                              |
| <b>PRODUCT CATEGORY</b>                                                                 | Control switches                                                                                                                 |
| <b>VOLTAGE RATING</b>                                                                   | 690 V                                                                                                                            |
| <b>FEATURES</b>                                                                         | Complete device in housing                                                                                                       |
| <b>ACTUATOR FUNCTION</b>                                                                | Maintained<br>With 0 (Off) position                                                                                              |
| <b>10.10 TEMPERATURE RISE</b>                                                           | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>                                                       | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>                                              | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>                                                        | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>                                                      | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.                                                                                       |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.                                                                                       |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | UV resistance only in connection with protective shield.                                                                         |
| <b>10.2.5 LIFTING</b>                                                                   | Does not apply, since the entire switchgear needs to be evaluated.                                                               |

| □□                         |                                                                                                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DECLARATIONS OF CONFORMITY | <a href="#">eaton-step-switch-declaration-of-conformity-uk251327en.pdf</a>                                                                                           |
| □□□□□                      | <a href="#">IL03801007Z2021_06.pdf</a>                                                                                                                               |
| □□□                        | <a href="#">eaton-rotary-switches-t0-step-switch-wiring-diagram-212.eps</a><br><br><a href="#">eaton-rotary-switches-t0-step-switch-wiring-diagram-211.eps</a>       |
| □□                         | <a href="#">eaton-rotary-switches-t0-changeover-switch-dimensions-002.eps</a><br><br><a href="#">eaton-rotary-switches-front-plate-t0-step-switch-symbol-008.eps</a> |

|                                                                 |                                                                                |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>10.2.6 MECHANICAL IMPACT</b>                                 | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.2.7 INSCRIPTIONS</b>                                      | Meets the product standard's requirements.                                     |
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                  | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                   | Meets the product standard's requirements.                                     |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                   | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>   | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>        | Is the panel builder's responsibility.                                         |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                 | Is the panel builder's responsibility.                                         |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                 | Is the panel builder's responsibility.                                         |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                         | Is the panel builder's responsibility.                                         |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b> | Is the panel builder's responsibility.                                         |
| <b>FITTED WITH:</b>                                             | Black thumb grip and front plate<br>0 (off) position                           |
| <b>OPERATING FREQUENCY</b>                                      | 1200 Operations/h                                                              |
| <b>POLLUTION DEGREE</b>                                         | 3                                                                              |
| <b>CLIMATIC PROOFING</b>                                        | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30 |
| <b>ENCLOSURE MATERIAL</b>                                       | Plastic                                                                        |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>                   | 6000 V AC                                                                      |
| <b>ACTUATOR TYPE</b>                                            | Short thumb-grip                                                               |
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                      | 40 °C                                                                          |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                      | -25 °C                                                                         |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>           | 40 °C                                                                          |
| <b>AMBIENT OPERATING</b>                                        | -25 °C                                                                         |

|                                                                        |                                                                                                  |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>TEMPERATURE<br/>(ENCLOSED) - MIN</b>                                |                                                                                                  |
| <b>EQUIPMENT HEAT<br/>DISSIPATION, CURRENT-<br/>DEPENDENT PVID</b>     | 0 W                                                                                              |
| <b>HEAT DISSIPATION<br/>CAPACITY PDISS</b>                             | 0 W                                                                                              |
| <b>HEAT DISSIPATION PER<br/>POLE, CURRENT-<br/>DEPENDENT PVID</b>      | 0.6 W                                                                                            |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (CHANGE-<br/>OVER CONTACTS)</b>    | 0                                                                                                |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>CLOSED CONTACTS)</b> | 0                                                                                                |
| <b>NUMBER OF AUXILIARY<br/>CONTACTS (NORMALLY<br/>OPEN CONTACTS)</b>   | 0                                                                                                |
| <b>NUMBER OF CONTACT<br/>UNITS</b>                                     | 3                                                                                                |
| <b>RATED SHORT-TIME<br/>WITHSTAND CURRENT<br/>(ICW)</b>                | 320 A, Contacts, 1 second                                                                        |
| <b>ELECTRICAL<br/>CONNECTION TYPE OF<br/>MAIN CIRCUIT</b>              | Screw connection                                                                                 |
| <b>MOUNTING POSITION</b>                                               | As required                                                                                      |
| <b>RATED CONDITIONAL<br/>SHORT-CIRCUIT CURRENT<br/>(IQ)</b>            | 6 kA                                                                                             |
| <b>MOUNTING METHOD</b>                                                 | Surface mounting                                                                                 |
| <b>OVERVOLTAGE<br/>CATEGORY</b>                                        | III                                                                                              |
| <b>CONTROL CIRCUIT<br/>RELIABILITY</b>                                 | 1 failure per 100,000<br>switching operations<br>statistically determined, at<br>24 V DC, 10 mA) |
| <b>NUMBER OF POLES</b>                                                 | 3                                                                                                |
| <b>DEGREE OF PROTECTION</b>                                            | IP65                                                                                             |
| <b>NUMBER OF CONTACTS</b>                                              | 6                                                                                                |
| <b>MODEL</b>                                                           | Reverser                                                                                         |
| <b>DEGREE OF PROTECTION<br/>(FRONT SIDE)</b>                           | IP65<br>NEMA 12                                                                                  |
| <b>INSCRIPTION</b>                                                     | 0-2                                                                                              |
| <b>LIFESPAN, MECHANICAL</b>                                            | 400,000 Operations                                                                               |
| <b>SAFE ISOLATION</b>                                                  | 440 V AC, Between the<br>contacts, According to EN<br>61140                                      |
| <b>RATED OPERATIONAL</b>                                               | 15.6 A at AC-3, 500 V star-                                                                      |

|                                                                      |                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CURRENT (IE)</b>                                                  | delta<br>8.5 A at AC-3, 690 V star-delta<br>20 A at AC-3, 230 V star-delta<br>20 A at AC-3, 400 V star-delta                                                                                                                                  |
| <b>SCREW SIZE</b>                                                    | M3.5, Terminal screw                                                                                                                                                                                                                          |
| <b>SHOCK RESISTANCE</b>                                              | 15 g, Mechanical,<br>According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms                                                                                                                                                              |
| <b>LOAD RATING</b>                                                   | 1.3 x I <sub>e</sub> (with intermittent operation class 12, 60 % duty factor)<br>1.6 x I <sub>e</sub> (with intermittent operation class 12, 40 % duty factor)<br>2 x I <sub>e</sub> (with intermittent operation class 12, 25 % duty factor) |
| <b>TIGHTENING TORQUE</b>                                             | 1 Nm, Screw terminals                                                                                                                                                                                                                         |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-21A, 240 V</b>                 | 1                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V</b>                 | 3                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 24 V</b>                  | 1                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 240 V</b>                 | 5                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 48 V</b>                  | 2                                                                                                                                                                                                                                             |
| <b>NUMBER OF CONTACTS IN SERIES AT DC-23A, 60 V</b>                  | 3                                                                                                                                                                                                                                             |
| <b>RATED BREAKING CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)</b> | 100 A                                                                                                                                                                                                                                         |
| <b>RATED BREAKING CAPACITY AT 400/415 V (COS PHI TO IEC 60947-3)</b> | 110 A                                                                                                                                                                                                                                         |
| <b>RATED BREAKING CAPACITY AT 500 V (COS PHI TO IEC 60947-3)</b>     | 80 A                                                                                                                                                                                                                                          |
| <b>RATED BREAKING CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)</b> | 60 A                                                                                                                                                                                                                                          |
| <b>RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)</b> | 130 A                                                                                                                                                                                                                                         |

|                                                                                           |                                                                                                                            |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-21,<br/>440 V</b>                             | 20 A                                                                                                                       |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>230 V</b>                            | 13.3 A                                                                                                                     |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>400 V, 415 V</b>                     | 13.3 A                                                                                                                     |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>500 V</b>                            | 13.3 A                                                                                                                     |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-23A,<br/>690 V</b>                            | 7.6 A                                                                                                                      |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>220 V, 230 V, 240 V</b>                | 11.5 A                                                                                                                     |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>380 V, 400 V, 415 V</b>                | 11.5 A                                                                                                                     |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>500 V</b>                              | 9 A                                                                                                                        |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT AC-3,<br/>660 V, 690 V</b>                       | 4.9 A                                                                                                                      |
| <b>SAFETY PARAMETER (EN<br/>ISO 13849-1)</b>                                              | B10d values as per EN ISO<br>13849-1, table C.1                                                                            |
| <b>SHORT-CIRCUIT<br/>PROTECTION RATING</b>                                                | 20 A gG/gL, Fuse, Contacts                                                                                                 |
| <b>TERMINAL CAPACITY<br/>(FLEXIBLE WITH<br/>FERRULE)</b>                                  | 1 x (0.75 - 2.5) mm <sup>2</sup> ,<br>ferrules to DIN 46228<br>2 x (0.75 - 2.5) mm <sup>2</sup> ,<br>ferrules to DIN 46228 |
| <b>SUITABLE FOR</b>                                                                       | Ground mounting<br>Front mounting                                                                                          |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-1,<br/>LOAD-BREAK SWITCHES<br/>L/R = 1 MS</b> | 10 A                                                                                                                       |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-13,<br/>CONTROL SWITCHES L/R<br/>= 50 MS</b>  | 10 A                                                                                                                       |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-21,<br/>240 V</b>                             | 1 A                                                                                                                        |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,<br/>120 V</b>                            | 5 A                                                                                                                        |
| <b>RATED OPERATIONAL<br/>CURRENT (IE) AT DC-23A,</b>                                      | 10 A                                                                                                                       |

|                                                                      |        |
|----------------------------------------------------------------------|--------|
| <b>24 V</b>                                                          |        |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V</b>               | 5 A    |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V</b>                | 10 A   |
| <b>RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V</b>                | 10 A   |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 20 A   |
| <b>RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ</b>           | 3 kW   |
| <b>RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ</b>               | 5.5 kW |
| <b>RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ</b>               | 7.5 kW |
| <b>RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ</b>               | 5.5 kW |
| <b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>             | 4 kW   |
| <b>RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ</b>                 | 5.5 kW |
| <b>RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ</b>                 | 4 kW   |
| <b>RATED OPERATIONAL POWER STAR-DELTA AT 220/230 V, 50 HZ</b>        | 5.5 kW |
| <b>RATED OPERATIONAL POWER STAR-DELTA AT 380/400 V, 50 HZ</b>        | 7.5 kW |
| <b>RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ</b>            | 7.5 kW |
| <b>RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ</b>            | 5.5 kW |
| <b>RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX</b>                    | 690 V  |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b>                              | 20 A   |
| <b>STATIC HEAT</b>                                                   | 0 W    |

|                                           |                                                                                       |
|-------------------------------------------|---------------------------------------------------------------------------------------|
| DISSIPATION, NON-CURRENT-DEPENDENT<br>PVS |                                                                                       |
| SWITCHING ANGLE                           | 45 °                                                                                  |
| VOLTAGE PER CONTACT<br>PAIR IN SERIES     | 60 V                                                                                  |
| TERMINAL CAPACITY<br>(SOLID/STRANDED)     | 1 x (1 - 2.5) mm <sup>2</sup><br>2 x (1 - 2.5) mm <sup>2</sup>                        |
| UNINTERRUPTED<br>CURRENT                  | Rated uninterrupted<br>current I <sub>u</sub> is specified for<br>max. cross-section. |
| DESIGN                                    | 8314                                                                                  |

|  |
|--|
|  |
|  |
|  |
|  |