

**Main switch, T0, 20 A, flush mounting, 2 contact unit(s), 3 pole,  
Emergency switching off function, With red rotary handle and yellow  
locking ring, Lockable in the 0 (Off) position**

**Part no.** T0-2-1/EA/SVB  
038873  
**EL Number** 1456246  
**(Norway)**

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|--|--|---|
| <b>General specifications</b>            |  |   |
| Product name                             |  | Eaton Moeller® series T0 Main switch  |
| Part no.                                 |  | T0-2-1/EA/SVB   |
| EAN                                      |  | 4015080388739   |
| Product Length/Depth                     |  | 111 millimetre  |
| Product height                           |  | 74 millimetre   |
| Product width                            |  | 65 millimetre   |
| Product weight                           |  | 0.142 kilogram  |
| Certifications                           |  | IEC/EN 60947-3<br>CSA File No.: 012528<br>VDE 0660<br>CE<br>CSA Class No.: 3211-05<br>UL<br>UL 60947-4-1<br>IEC/EN 60204<br>UL File No.: E36332<br>UL Category Control No.: NLRV<br>CSA-C22.2 No. 60947-4-1-14<br>CSA-C22.2 No. 94<br>IEC/EN 60947<br>CSA |
| Product Tradename                        |  | T0  |
| Product Type                             |  | Main switch   |
| Product Sub Type                         |  | None  |
| Catalog Notes                            |  | Rated Short-time Withstand Current (Icw) for a time of 1 second   |
| <b>Features &amp; Functions</b>          |  |   |
| Features                                 |  | Version as maintenance-/service switch<br>Version as emergency stop installation<br>Version as main switch  |
| Fitted with:                             |  | Red rotary handle and yellow locking ring   |
| Functions                                |  | Interlockable<br>Emergency switching off function   |
| Locking facility                         |  | Lockable in the 0 (Off) position  |
| Number of poles                          |  | Three-pole  |
| <b>General information</b>               |  |   |
| Degree of protection                     |  | NEMA 12   |
| Degree of protection (front side)        |  | IP65  |
| Lifespan, mechanical                     |  | 400,000 Operations  |
| Mounting method                          |  | Flush 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)   |  | 6000 V AC   |
| Safe isolation                           |  | 440 V AC, Between the contacts, According to EN 61140   |
| Safety parameter (EN ISO 13849-1)        |  | B10d values as per EN ISO 13849-1, table C.1  |
| Shock resistance                         |  | 15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms   |
| Suitable for                             |  | Branch circuits, suitable as motor disconnect, (UL/CSA)<br>Front mounting center  |
| Switching angle                          |  | 90 °  |
| <b>Climatic environmental conditions</b> |  |   |

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| 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   |
| Climatic proofing  |  | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78  |
| <b>Terminal capacities</b>   |  |   |
| Terminal capacity  |  | 1 x (1 - 2.5) mm <sup>2</sup> , solid or stranded<br>2 x (0.75 - 2.5) mm <sup>2</sup> , flexible with ferrules to DIN 46228<br>18 - 14 AWG, solid or flexible with ferrule<br>1 x (0.75 - 2.5) mm <sup>2</sup> , flexible with ferrules to DIN 46228<br>2 x (1 - 2.5) mm <sup>2</sup> , solid or stranded |
| Screw size   |  | M3.5, Terminal screw  |
| Tightening torque  |  | 8.8 lb-in, Screw terminals<br>1 Nm, Screw terminals   |
| <b>Electrical rating</b>   |  |   |
| Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)          |  | 100 A   |
| Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)          |  | 110 A   |
| Rated breaking capacity at 500 V (cos phi to IEC 60947-3)              |  | 80 A  |
| Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)          |  | 60 A  |
| Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V            |  | 11.5 A  |
| Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V            |  | 11.5 A  |
| Rated operational current (Ie) at AC-3, 500 V                          |  | 9 A   |
| Rated operational current (Ie) at AC-3, 660 V, 690 V                   |  | 4.9 A   |
| Rated operational current (Ie) at AC-21, 440 V                         |  | 20 A  |
| Rated operational current (Ie) at AC-23A, 230 V                        |  | 13.3 A  |
| Rated operational current (Ie) at AC-23A, 400 V, 415 V                 |  | 13.3 A  |
| Rated operational current (Ie) at AC-23A, 500 V                        |  | 13.3 A  |
| Rated operational current (Ie) at AC-23A, 690 V                        |  | 7.6 A   |
| Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms |  | 10 A  |
| Rated operational current (Ie) at DC-13, control switches L/R = 50 ms  |  | 10 A  |
| Rated operational current (Ie) at DC-21, 240 V                         |  | 1 A   |
| Rated operational current (Ie) at DC-23A, 24 V                         |  | 10 A  |
| Rated operational current (Ie) at DC-23A, 48 V                         |  | 10 A  |
| Rated operational current (Ie) at DC-23A, 60 V                         |  | 10 A  |
| Rated operational current (Ie) at DC-23A, 120 V                        |  | 5 A   |
| Rated operational current (Ie) at DC-23A, 240 V                        |  | 5 A   |
| Rated operational current (Ie) star-delta at AC-3, 220/230 V           |  | 20 A  |
| Rated operational current (Ie) star-delta at AC-3, 380/400 V           |  | 20 A  |
| Rated operational current (Ie) star-delta at AC-3, 500 V               |  | 15.6 A  |
| Rated operational current (Ie) star-delta at AC-3, 690 V               |  | 8.5 A   |
| Rated operational power at AC-3, 380/400 V, 50 Hz                      |  | 5.5 kW  |
| Rated operational power at AC-3, 415 V, 50 Hz                          |  | 5.5 kW  |
| Rated operational power at AC-3, 500 V, 50 Hz                          |  | 5.5 kW  |
| Rated operational power at AC-3, 690 V, 50 Hz                          |  | 4 kW  |
| Rated operational power at AC-23A, 220/230 V, 50 Hz                    |  | 3 kW  |
| Rated operational power at AC-23A, 400 V, 50 Hz                        |  | 5.5 kW  |
| Rated operational power at AC-23A, 500 V, 50 Hz                        |  | 7.5 kW  |
| Rated operational power at AC-23A, 690 V, 50 Hz                        |  | 5.5 kW  |
| Rated operational power star-delta at 220/230 V, 50 Hz                 |  | 5.5 kW  |
| Rated operational power star-delta at 380/400 V, 50 Hz                 |  | 7.5 kW  |
| Rated operational power star-delta at 500 V, 50 Hz                     |  | 7.5 kW  |
| Rated operational power star-delta at 690 V, 50 Hz                     |  | 5.5 kW  |
| Rated uninterrupted current (Iu)                                       |  | 20 A  |
| Uninterrupted current  |  | Rated uninterrupted current Iu is specified for max. cross-section.   |
| <b>Short-circuit rating</b>  |  |   |
| Rated conditional short-circuit current (Iq)                           |  | 6 kA  |

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| Rated short-time withstand current (I <sub>cs</sub> )                            |  | 320 A, Contacts, 1 second<br>0.32 kA  |
| Short-circuit current rating (basic rating)                                      |  | 50A, max. Fuse, SCCR (UL/CSA)<br>5 kA, SCCR (UL/CSA)  |
| Short-circuit current rating (high fault)  |  | 10 kA, SCCR (UL/CSA)<br>20 A, Class J, max. Fuse, SCCR (UL/CSA)   |
| Short-circuit protection rating  |  | 20 A gG/gL, Fuse, Contacts  |
| <b>Switching capacity</b>  |  |   |
| Load rating  |  | 1.6 x I <sub>#</sub> (with intermittent operation class 12, 40 % duty factor)<br>1.3 x I <sub>#</sub> (with intermittent operation class 12, 60 % duty factor)<br>2 x I <sub>#</sub> (with intermittent operation class 12, 25 % duty factor) |
| Number of contacts in series at DC-21A, 240 V                                    |  | 1   |
| Number of contacts in series at DC-23A, 24 V                                     |  | 1   |
| Number of contacts in series at DC-23A, 48 V                                     |  | 2   |
| Number of contacts in series at DC-23A, 60 V                                     |  | 3   |
| Number of contacts in series at DC-23A, 120 V                                    |  | 3   |
| Number of contacts in series at DC-23A, 240 V                                    |  | 5   |
| Switching capacity (main contacts, general use)                                  |  | 16 A, Rated uninterrupted current max. (UL/CSA)   |
| Switching capacity (auxiliary contacts, general use)                             |  | 10A, IU, (UL/CSA)   |
| Switching capacity (auxiliary contacts, pilot duty)                              |  | P300 (UL/CSA)<br>A600 (UL/CSA)  |
| Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)                    |  | 130 A   |
| Voltage per contact pair in series   |  | 60 V  |
| <b>Motor rating</b>  |  |   |
| Assigned motor power at 115/120 V, 60 Hz, 1-phase                                |  | 0.5 HP  |
| Assigned motor power at 200/208 V, 60 Hz, 1-phase                                |  | 1 HP  |
| Assigned motor power at 200/208 V, 60 Hz, 3-phase                                |  | 3 HP  |
| Assigned motor power at 230/240 V, 60 Hz, 1-phase                                |  | 1.5 HP  |
| Assigned motor power at 230/240 V, 60 Hz, 3-phase                                |  | 3 HP  |
| Assigned motor power at 460/480 V, 60 Hz, 3-phase                                |  | 7.5 HP  |
| Assigned motor power at 575/600 V, 60 Hz, 3-phase                                |  | 7.5 HP  |
| <b>Contacts</b>  |  |   |
| 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   |
| <b>Actuator</b>  |  |   |
| Actuator color   |  | Red   |
| Actuator type  |  | Door coupling rotary drive  |
| <b>Design verification</b>   |  |   |
| Equipment heat dissipation, current-dependent P <sub>vid</sub>                   |  | 0 W   |
| Heat dissipation capacity P <sub>diss</sub>                                      |  | 0 W   |
| Heat dissipation per pole, current-dependent P <sub>vid</sub>                    |  | 0.6 W   |
| Rated operational current for specified heat dissipation (I <sub>n</sub> )       |  | 20 A  |
| Static heat dissipation, non-current-dependent P <sub>vs</sub>                   |  | 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.  |

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| 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 8.0

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| Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)   |  |    |  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecI@ss10.0.1-27-37-14-03 [AKF060013]) |  |    |  |
| Version as main switch  |  |    | Yes                                      |
| Version as maintenance-/service switch  |  |    | Yes                                      |
| Version as safety switch  |  |    | No                                       |
| Version as emergency stop installation  |  |    | Yes                                      |
| Version as reversing switch   |  |    | No                                       |
| Number of switches  |  |    | 1  |
| Max. rated operation voltage U <sub>e</sub> AC  |  | V  | 690                                      |
| Rated operating voltage   |  | V  | 690 - 690                                |
| Rated permanent current I <sub>u</sub>  |  | A  | 20                                       |
| Rated permanent current at AC-23, 400 V   |  | A  |  |
| Rated permanent current at AC-21, 400 V   |  | A  | 20                                       |
| Rated operation power at AC-3, 400 V  |  | kW | 5.5                                      |
| Rated short-time withstand current I <sub>cw</sub>  |  | kA | 0.32                                     |
| Rated operation power at AC-23, 400 V   |  | kW | 5.5                                      |
| Switching power at 400 V  |  | kW | 5.5                                      |
| Conditioned rated short-circuit current I <sub>q</sub>  |  | kA | 6  |
| Number of poles   |  |    | 3  |
| 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  |
| Motor drive optional  |  |    | No                                       |
| Motor drive integrated  |  |    | No                                       |
| Voltage release optional  |  |    | No                                       |
| Device construction   |  |    | Built-in device fixed built-in technique |
| Suitable for floor mounting   |  |    | No                                       |
| Suitable for front mounting 4-hole  |  |    | No                                       |
| Suitable for front mounting centre  |  |    | Yes                                      |
| Suitable for distribution board installation  |  |    | No                                       |
| Suitable for intermediate mounting  |  |    | No                                       |
| Colour control element  |  |    | Red                                      |
| Type of control element   |  |    | Door coupling rotary drive               |
| Interlockable   |  |    | Yes                                      |
| Type of electrical connection of main circuit   |  |    | Screw connection                         |
| Degree of protection (IP), front side   |  |    | IP65                                     |
| Degree of protection (NEMA)   |  |    | 12                                       |