

**Changeoverswitches, T0, 20 A, centre mounting, 4 contact unit(s),
Contacts: 8, 60 °, maintained, With 0 (Off) position, 1-0-2, Design number
8213**

Part no. T0-4-8213/EZ
062575
EL Number 1417073
(Norway)

| General specifications | |
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| Product name | Eaton Moeller® series T0 Changeover switch |
| Part no. | T0-4-8213/EZ |
| EAN | 4015080625759 |
| Product Length/Depth | 125 millimetre |
| Product height | 48 millimetre |
| Product width | 48 millimetre |
| Product weight | 0.177 kilogram |
| Certifications | VDE 0660 IEC/EN 60947 CE CSA Class No.: 3211-05 CSA-C22.2 No. 94 UL File No.: E36332 CSA File No.: 012528 IEC/EN 60947-3 IEC/EN 60204 UL 60947-4-1 CSA UL Category Control No.: NLRV CSA-C22.2 No. 60947-4-1-14 UL |
| Product Tradename | T0 |
| Product Type | Changeover switch |
| Product Sub Type | None |
| Catalog Notes | Rated Short-time Withstand Current (Icw) for a time of 1 second |
| Features & Functions | |
| Enclosure material | Plastic |
| Fitted with: | 0 (off) position Black thumb grip and front plate |
| Inscription | 1-0-2 |
| Number of poles | 4 |
| General information | |
| Degree of protection | IP65 NEMA 1 NEMA 12 |
| Degree of protection (front side) | IP65 NEMA 12 |
| Lifespan, mechanical | 400,000 Operations |
| Model | Reverser |
| Mounting method | Center mounting |
| Mounting position | As required |
| Number of contact units | 4 |
| 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) Front mounting |
| Switching angle | 60 ° |

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| Type | | Changeover switch |
| Climatic environmental conditions | | |
| 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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Terminal capacities | | |
| Terminal capacity (flexible with ferrule) | | 2 x (0.75 - 2.5) mm ² , ferrules to DIN 46228 1 x (0.75 - 2.5) mm ² , ferrules to DIN 46228 |
| Terminal capacity (solid/flexible with ferrule AWG) | | 18 - 14 |
| Terminal capacity (solid/stranded) | | 1 x (1 - 2.5) mm ² 2 x (1 - 2.5) mm ² |
| Screw size | | M3.5, Terminal screw |
| Tightening torque | | 8.8 lb-in, Screw terminals 1 Nm, Screw terminals |
| Electrical rating | | |
| 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) | | 20 A at AC-3, 400 V star-delta 15.6 A at AC-3, 500 V star-delta 8.5 A at AC-3, 690 V star-delta 20 A at AC-3, 230 V star-delta |
| 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 power at AC-3, 380/400 V, 50 Hz | | 4 kW |
| Rated operational power at AC-3, 415 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 operational voltage (Ue) at AC - max | | 690 V |
| Rated uninterrupted current (Iu) | | 20 A |
| Uninterrupted current | | Rated uninterrupted current Iu is specified for max. cross-section. |

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| Short-circuit rating | | |
| Rated conditional short-circuit current (I _q) | | 6 kA |
| Rated short-time withstand current (I _{cw}) | | 320 A, Contacts, 1 second |
| Short-circuit current rating (basic rating) | | 5 kA, SCCR (UL/CSA) 50A, max. Fuse, SCCR (UL/CSA) |
| Short-circuit current rating (high fault) | | 10 kA, SCCR (UL/CSA) 20 A, Class J, max. Fuse, SCCR (UL/CSA) |
| Short-circuit protection rating | | 20 A gG/gL, Fuse, Contacts |
| Switching capacity | | |
| Load rating | | 1.6 x I _# (with intermittent operation class 12, 40 % duty factor) 2 x I _# (with intermittent operation class 12, 25 % duty factor) 1.3 x I _# (with intermittent operation class 12, 60 % 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) | | A600 (UL/CSA) P300 (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 |
| Motor rating | | |
| 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 |
| 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 | | 8 |
| Actuator | | |
| Actuator function | | Maintained With 0 (Off) position |
| Actuator type | | Short thumb-grip |
| Design verification | | |
| Equipment heat dissipation, current-dependent P _{vid} | | 0 W |
| Heat dissipation capacity P _{diss} | | 0 W |
| Heat dissipation per pole, current-dependent P _{vid} | | 0.6 W |
| Rated operational current for specified heat dissipation (I _n) | | 20 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 | | 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. |

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| 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) / Off-load switch (EC001105) | | | |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Load-break switch (ecf@ss13-27-37-14-05 [AKF062018]) | | | |
| Model | | | Reverser |
| Number of poles | | | 4 |
| With zero (off) position | | | Yes |
| With retraction in 0-position | | | No |
| Rated permanent current I _u | | A | 20 |
| Rated operation current I _e at AC-3, 400 V | | A | 11.5 |
| Rated operation power at AC-3, 400 V | | kW | 4 |
| 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 |