



Main switch, T0, 20 A, flush mounting, 2 contact unit(s), 3 pole, 1 N/C, STOP function, With black rotary handle and locking ring

Part no. T0-2-113/EA/SVB-SW
Catalog No. 007952

Delivery program

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------|-----------------|--|--|---|---|-----|--|---|-----|--|---|-----|--|---|-----|--|---|-----|--|---|-----|--|---|------|---|--|------|---|--|
| Product range | | | Main switch maintenance switch Repair switch | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Part group reference | | | T0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stop Function | | | STOP function | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of poles | | | With black rotary handle and locking ring 3 pole | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Auxiliary contacts | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | N/O | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | N/C | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degree of Protection | | | Front IP65 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design | | | flush mounting | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contact sequence | | | <table border="1"> <tr> <td></td> <td>0</td> <td>1</td> </tr> <tr> <td>1 ○</td> <td></td> <td>X</td> </tr> <tr> <td>2 ○</td> <td></td> <td>X</td> </tr> <tr> <td>3 ○</td> <td></td> <td>X</td> </tr> <tr> <td>4 ○</td> <td></td> <td>X</td> </tr> <tr> <td>5 ○</td> <td></td> <td>X</td> </tr> <tr> <td>6 ○</td> <td></td> <td>X</td> </tr> <tr> <td>11 ○</td> <td>X</td> <td></td> </tr> <tr> <td>12 ○</td> <td>X</td> <td></td> </tr> </table> | | 0 | 1 | 1 ○ | | X | 2 ○ | | X | 3 ○ | | X | 4 ○ | | X | 5 ○ | | X | 6 ○ | | X | 11 ○ | X | | 12 ○ | X | |
| | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 ○ | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 ○ | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 ○ | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Switching angle | | ° | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design number | | | 113 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Function | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Motor rating AC-23A, 50 - 60 Hz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 400 V | P | kW | 5.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated uninterrupted current | I _u | A | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note on rated uninterrupted current I _u | | | Rated uninterrupted current I _u is specified for max. cross-section. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of contact units | | contact unit(s) | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Technical data

General

| | | | |
|---------------------------------------|-----------|------|--|
| Standards | | | IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL Switch-disconnector according to IEC/EN 60947-3 |
| Climatic proofing | | | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature | | | |
| Open | | °C | -25 - +50 |
| Enclosed | | °C | -25 - +40 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated impulse withstand voltage | U_{imp} | V AC | 6000 |
| Mechanical shock resistance | | g | 15 |
| Mounting position | | | As required |

Contacts

| | | | |
|---|----------|--------------|--|
| Mechanical variables | | | |
| Number of poles | | | 3 pole |
| Auxiliary contacts | | | |
| | | N/O | 0 |
| | | N/C | 1 |
| Electrical characteristics | | | |
| Rated operational voltage | U_e | V AC | 690 |
| Rated uninterrupted current | I_u | A | 20 |
| Note on rated uninterrupted current I_u | | | Rated uninterrupted current I_u is specified for max. cross-section. |
| Load rating with intermittent operation, class 12 | | | |
| AB 25 % DF | | $\times I_e$ | 2 |
| AB 40 % DF | | $\times I_e$ | 1.6 |
| AB 60 % DF | | $\times I_e$ | 1.3 |
| Short-circuit rating | | | |
| Fuse | | A gG/gL | 20 |
| Rated short-time withstand current (1 s current) | I_{cw} | A_{rms} | 320 |
| Note on rated short-time withstand current I_{cw} | | | Current for a time of 1 second |
| Rated conditional short-circuit current | I_q | kA | 6 |

Switching capacity

| | | | |
|--|--------------|---------------|-------|
| cos ϕ rated making capacity as per IEC 60947-3 | | A | 130 |
| Rated breaking capacity cos ϕ to IEC 60947-3 | | A | |
| 230 V | | A | 100 |
| 400/415 V | | A | 110 |
| 500 V | | A | 80 |
| 690 V | | A | 60 |
| Safe isolation to EN 61140 | | | |
| between the contacts | | V AC | 440 |
| Current heat loss per contact at I_e | | W | 0.6 |
| Current heat loss per auxiliary circuit at I_e (AC-15/230 V) | | CO | 0.6 |
| Lifespan, mechanical | Operations | $\times 10^6$ | > 0.4 |
| Maximum operating frequency | Operations/h | | 1200 |
| AC | | | |
| AC-3 | | | |
| Rating, motor load switch | P | kW | |
| 220 V 230 V | P | kW | 3 |
| 230 V Star-delta | P | kW | 5.5 |
| 400 V 415 V | P | kW | 5.5 |
| 400 V Star-delta | P | kW | 7.5 |
| 500 V | P | kW | 5.5 |
| 500 V Star-delta | P | kW | 7.5 |
| 690 V | P | kW | 4 |
| 690 V Star-delta | P | kW | 5.5 |

| | | | |
|---|----------------|-------------------|---|
| Rated operational current motor load switch | | | |
| 230 V | I _e | A | 11.5 |
| 230 V star-delta | I _e | A | 20 |
| 400V 415 V | I _e | A | 11.5 |
| 400 V star-delta | I _e | A | 20 |
| 500 V | I _e | A | 9 |
| 500 V star-delta | I _e | A | 15.6 |
| 690 V | I _e | A | 4.9 |
| 690 V star-delta | I _e | A | 8.5 |
| AC-21A | | | |
| Rated operational current switch | | | |
| 440 V | I _e | A | 20 |
| AC-23A | | | |
| Motor rating AC-23A, 50 - 60 Hz | | P | kW |
| 230 V | P | kW | 3 |
| 400 V 415 V | P | kW | 5.5 |
| 500 V | P | kW | 7.5 |
| 690 V | P | kW | 5.5 |
| Rated operational current motor load switch | | | |
| 230 V | I _e | A | 13.3 |
| 400 V 415 V | I _e | A | 13.3 |
| 500 V | I _e | A | 13.3 |
| 690 V | I _e | A | 7.6 |
| DC | | | |
| DC-1, Load-break switches L/R = 1 ms | | | |
| Rated operational current | | I _e | A 10 |
| Voltage per contact pair in series | | V | 60 |
| DC-21A | | | |
| Rated operational current | | I _e | A 1 |
| Contacts | | Quantity | 1 |
| DC-23A, motor load switch L/R = 15 ms | | | |
| 24 V | | | |
| Rated operational current | | I _e | A 10 |
| Contacts | | Quantity | 1 |
| 48 V | | | |
| Rated operational current | | I _e | A 10 |
| Contacts | | Quantity | 2 |
| 60 V | | | |
| Rated operational current | | I _e | A 10 |
| Contacts | | Quantity | 3 |
| 120 V | | | |
| Rated operational current | | I _e | A 5 |
| Contacts | | Quantity | 3 |
| 240 V | | | |
| Rated operational current | | I _e | A 5 |
| Contacts | | Quantity | 5 |
| DC-13, Control switches L/R = 50 ms | | | |
| Rated operational current | | I _e | A 10 |
| Voltage per contact pair in series | | V | 32 |
| Control circuit reliability at 24 V DC, 10 mA | | Fault probability | H _F < 10 ⁻⁵ , < 1 failure in 100,000 switching operations |

Terminal capacities

| | | |
|-------------------------------------|-----------------|--------------------------------|
| Solid or stranded | mm ² | 1 x (1 - 2,5) 2 x (1 - 2,5) |
| Flexible with ferrules to DIN 46228 | mm ² | 1 x (0.75 - 2.5) |

| | | | |
|--------------------------------------|--|----|------------------|
| Terminal screw | | | 2 x (0.75 - 2.5) |
| Tightening torque for terminal screw | | Nm | 1 |

Technical safety parameters:

| | | | |
|-------|--|--|---|
| Notes | | | B10 _d values as per EN ISO 13849-1, table C1 |
|-------|--|--|---|

Rating data for approved types

| | | | |
|--|----------------|-------|----------------|
| Contacts | | | |
| Rated operational voltage | U _e | V AC | 600 |
| Rated uninterrupted current max. | | | |
| Main conducting paths | | | |
| General use | | A | 16 |
| Auxiliary contacts | | | |
| General Use | I _U | A | 10 |
| Pilot Duty | | | A 600 P 300 |
| Switching capacity | | | |
| Maximum motor rating | | | |
| Single-phase | | | |
| 120 V AC | | HP | 0.5 |
| 200 V AC | | HP | 1 |
| 240 V AC | | HP | 1.5 |
| Three-phase | | | |
| 200 V AC | | HP | 3 |
| 240 V AC | | HP | 3 |
| 480 V AC | | HP | 7.5 |
| 600 V AC | | HP | 7.5 |
| Short Circuit Current Rating | | | |
| | | SCCR | |
| Basic Rating | | kA | 5 |
| max. Fuse | | A | 50 |
| High fault rating | | kA | 10 |
| max. Fuse | | A | 20, Class J |
| Terminal capacity | | | |
| Solid or flexible conductor with ferrule | | AWG | 18 - 14 |
| Terminal screw | | | M3.5 |
| Tightening torque | | lb-in | 8.8 |

Design verification as per IEC/EN 61439

| | | | |
|--|-------------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I _n | A | 20 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 0.6 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P _{vs} | W | 0 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 50 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties | | |
| 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. |

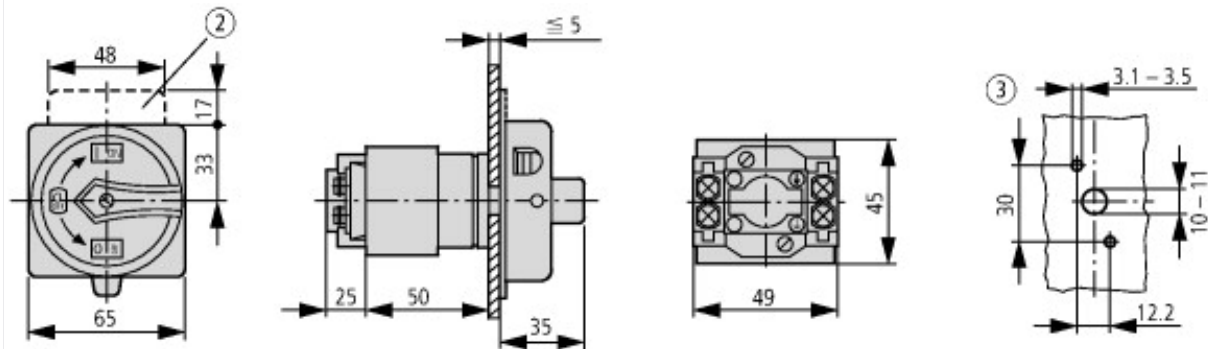
Technical data ETIM 7.0

| | | | |
|---|--|----|--|
| 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 (ecl@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 | | | No |
| Version as reversing switch | | | No |
| Number of switches | | | 1 |
| Max. rated operation voltage U _e AC | | V | 690 |
| Rated operating voltage | | V | 690 - 690 |
| Rated permanent current I _u | | A | 20 |
| Rated permanent current at AC-23, 400 V | | A | 13.3 |
| 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 _{cw} | | 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 _q | | kA | 6 |
| Number of poles | | | 3 |
| Number of auxiliary contacts as normally closed contact | | | 1 |
| 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 ground 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 | | | Black |
| 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 |

Approvals

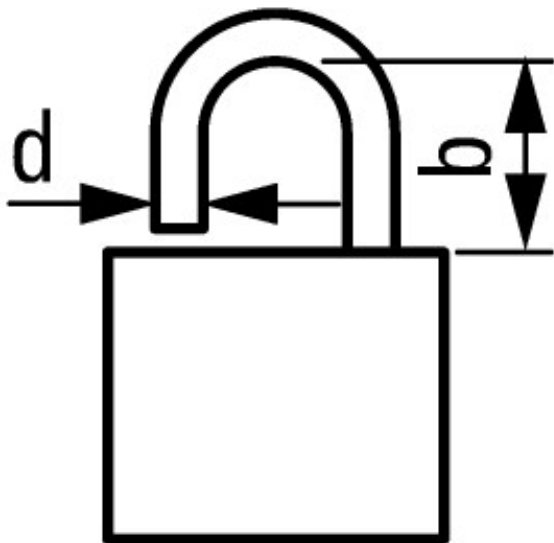
| | |
|-----------------------------|--|
| Product Standards | UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking |
| UL File No. | E36332 |
| UL Category Control No. | NLRV |
| CSA File No. | 12528 |
| CSA Class No. | 3211-05 |
| North America Certification | UL listed, CSA certified |
| Suitable for | Branch circuits, suitable as motor disconnect |
| Degree of Protection | IEC: IP65; UL/CSA Type 1, 12 |

Dimensions



② ZFS-... Label mount not included as standard

③ Drilling dimensions door



$$d = 4 - 8 \text{ mm}$$

$$b + d \leq 47 \text{ mm}$$

$$d = 0.16 - 0.31''$$

$$b + d \leq 1.85''$$

≤ 3 padlocks

Assets (links)

Declaration of CE Conformity

00003075

Instruction Leaflets

IL03801020Z2018_05

Additional product information (links)

IL03801020Z (AWA1150-0586) Cam switches: flush mounting

IL03801020Z (AWA1150-0586) Cam switches: flush mounting ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801020Z2018_05.pdf

Display flip catalog page. <http://ecat.moeller.net/flip-cat/?edition=K115A&startpage=40>

Technical overview cam switch, switch-disconnector <http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.2>

| | |
|--|---|
| System overview cam switch T | http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.4 |
| System overview switch-disconnector P | http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.6 |
| Key to part numbers Cam switch | http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8 |
| Key to part numbers Switch-disconnector | http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=4.8 |
| Switches for ATEX | http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html |
| Ordering form for SOND switches and SOND front plates(DE_EN) | ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf |
| Ordering form for SOND switches and SOND front plates(DE_EN) | ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf |