



**Main switch, 3 pole + N + 1 N/O + 1 N/C, 32 A, STOP function, 90 °, Lockable in the 0 (Off) position, flush mounting**



**Part no. T3-3-8901/EA/SVB-SW**  
**Catalog No. 231946**

**Delivery program**

|  |                |                 |   |
|--|----------------|-----------------|---|
| Product range                                      |                |                 | Main switch<br>maintenance switch<br>Repair switch                              |
| Part group reference                               |                |                 | T3  |
| Stop Function                                      |                |                 | STOP function   |
| Number of poles                                    |                |                 | With black rotary handle and locking ring<br>3 pole + N                         |
| <b>Auxiliary contacts</b>                          |                |                 |   |
|  |                | N/O             | 1   |
|  |                | N/C             | 1   |
| Locking facility                                   |                |                 | Lockable in the 0 (Off) position  |
| Degree of Protection                               |                |                 | Front IP65  |
| Design   |                |                 | flush mounting  |
|  |                |                 |   |
| Contact sequence                                   |                |                 |   |
| Switching angle                                    |                | °               | 90  |
| Design number                                      |                |                 | 8901  |
| Function   |                |                 |   |
| <b>Motor rating AC-23A, 50 - 60 Hz</b>             |                |                 |   |
| 400 V  | P              | kW              | 15  |
| Rated uninterrupted current                        | I <sub>u</sub> | A               | 32  |
| Note on rated uninterrupted current I <sub>u</sub> |                |                 | Rated uninterrupted current I <sub>u</sub> is specified for max. cross-section. |
| Number of contact units                            |                | contact unit(s) | 3   |

**Technical data**

|                     |  |    |  |
|---------------------|--|----|--|
| <b>General</b>      |  |    |  |
| Standards           |  |    | IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL<br>Switch-disconnector according to IEC/EN 60947-3 |
| Climatic proofing   |  |    | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30                   |
| Ambient temperature |  |    |  |
| Open                |  | °C | -25 - +50  |

|                                       |           |      |             |
|---------------------------------------|-----------|------|-------------|
| Enclosed                              |           | °C   | -25 - +40   |
| Overtoltage 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 + N   |
| Auxiliary contacts                                  |          |           |  |
|   |          | N/O       | 1  |
|   |          | N/C       | 1  |
| Electrical characteristics                          |          |           |  |
| Rated operational voltage                           | $U_e$    | V AC      | 690  |
| Rated uninterrupted current                         | $I_u$    | A         | 32   |
| 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  |          | $x I_e$   | 2  |
| AB 40 % DF  |          | $x I_e$   | 1.6  |
| AB 60 % DF  |          | $x I_e$   | 1.3  |
| Short-circuit rating                                |          |           |  |
| Fuse  |          | A gG/gL   | 35   |
| Rated short-time withstand current (1 s current)    | $I_{cw}$ | $A_{rms}$ | 650  |
| Note on rated short-time withstand current $I_{cw}$ |          |           | Current for a time of 1 second   |
| Rated conditional short-circuit current             | $I_q$    | kA        | 1  |

## Switching capacity

|  |              |          |       |
|--|--------------|----------|-------|
| $\cos \varphi$ rated making capacity as per IEC 60947-3        |              | A        | 320   |
| Rated breaking capacity $\cos \varphi$ to IEC 60947-3          |              | A        |       |
| 230 V  |              | A        | 260   |
| 400/415 V  |              | A        | 260   |
| 500 V  |              | A        | 240   |
| 690 V  |              | A        | 170   |
| Safe isolation to EN 61140                                     |              |          |       |
| between the contacts   |              | V AC     | 440   |
| Current heat loss per contact at $I_e$                         |              | W        | 1.1   |
| Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V) |              | CO       | 1.1   |
| Lifespan, mechanical   | Operations   | $x 10^6$ | > 0.5 |
| Maximum operating frequency                                    | Operations/h |          | 1200  |
| AC   |              |          |       |
| AC-3   |              |          |       |
| Rating, motor load switch                                      | P            | kW       |       |
| 220 V 230 V  | P            | kW       | 5.5   |
| 230 V Star-delta   | P            | kW       | 7.5   |
| 400 V 415 V  | P            | kW       | 11    |
| 400 V Star-delta   | P            | kW       | 15    |
| 500 V  | P            | kW       | 15    |
| 500 V Star-delta   | P            | kW       | 18.5  |
| 690 V  | P            | kW       | 11    |
| 690 V Star-delta   | P            | kW       | 22    |
| Rated operational current motor load switch                    |              |          |       |
| 230 V  | $I_e$        | A        | 23.7  |
| 230 V star-delta   | $I_e$        | A        | 32    |
| 400V 415 V   | $I_e$        | A        | 23.7  |
| 400 V star-delta   | $I_e$        | A        | 32    |
| 500 V  | $I_e$        | A        | 23.7  |

|   |                   |                |  |
|---|-------------------|----------------|--|
| 500 V star-delta                              | I <sub>e</sub>    | A              | 32   |
| 690 V   | I <sub>e</sub>    | A              | 14.7   |
| 690 V star-delta                              | I <sub>e</sub>    | A              | 25.5   |
| <b>AC-21A</b>                                 |                   |                |  |
| Rated operational current switch              |                   |                |  |
| 440 V   | I <sub>e</sub>    | A              | 32   |
| <b>AC-23A</b>                                 |                   |                |  |
| Motor rating AC-23A, 50 - 60 Hz               |                   |                |  |
| 230 V   | P                 | kW             | 7.5  |
| 400 V 415 V                                   | P                 | kW             | 15   |
| 500 V   | P                 | kW             | 15   |
| 690 V   | P                 | kW             | 15   |
| Rated operational current motor load switch   |                   |                |  |
| 230 V   | I <sub>e</sub>    | A              | 32   |
| 400 V 415 V                                   | I <sub>e</sub>    | A              | 32   |
| 500 V   | I <sub>e</sub>    | A              | 26.4   |
| 690 V   | I <sub>e</sub>    | A              | 17   |
| <b>DC</b>                                     |                   |                |  |
| <b>DC-1, Load-break switches L/R = 1 ms</b>   |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 25   |
| Voltage per contact pair in series            |                   | V              | 60   |
| <b>DC-21A</b>                                 |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 1  |
| Contacts                                      |                   | Quantity       | 1  |
| <b>DC-23A, motor load switch L/R = 15 ms</b>  |                   |                |  |
| 24 V  |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 25   |
| Contacts                                      |                   | Quantity       | 1  |
| 48 V  |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 25   |
| Contacts                                      |                   | Quantity       | 2  |
| 60 V  |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 25   |
| Contacts                                      |                   | Quantity       | 3  |
| 120 V   |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 12   |
| Contacts                                      |                   | Quantity       | 3  |
| 240 V   |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 5  |
| Contacts                                      |                   | Quantity       | 5  |
| <b>DC-13, Control switches L/R = 50 ms</b>    |                   |                |  |
| Rated operational current                     | I <sub>e</sub>    | A              | 20   |
| Voltage per contact pair in series            |                   | V              | 24   |
| Control circuit reliability at 24 V DC, 10 mA | Fault probability | H <sub>F</sub> | < 10 <sup>-5</sup> , < 1 failure in 100,000 switching operations |

### Terminal capacities

|                                      |  |                 |                                  |
|--------------------------------------|--|-----------------|----------------------------------|
| Solid or stranded                    |  | mm <sup>2</sup> | 1 x (1 - 6)<br>2 x (1 - 6)       |
| Flexible with ferrules to DIN 46228  |  | mm <sup>2</sup> | 1 x (0.75 - 4)<br>2 x (0.75 - 4) |
| Terminal screw                       |  |                 | M4                               |
| Tightening torque for terminal screw |  | Nm              | 1.6                              |

### Technical safety parameters:

|              |  |  |   |
|--------------|--|--|---|
| <b>Notes</b> |  |  | B10 <sub>d</sub> values as per EN ISO 13849-1, table C1 |
|--------------|--|--|---|

### Rating data for approved types

|          |  |  |  |
|----------|--|--|--|
| Contacts |  |  |  |
|----------|--|--|--|

|  |                |       |             |
|--|----------------|-------|-------------|
| Rated operational voltage                | U <sub>e</sub> | V AC  | 600         |
| Rated uninterrupted current max.         |                |       |             |
| Main conducting paths                    |                |       |             |
| General use                              |                | A     | 25          |
| Auxiliary contacts                       |                |       |             |
| General Use                              | I <sub>U</sub> | A     | 10          |
| Pilot Duty                               |                |       | A 600       |
| Switching capacity                       |                |       |             |
| Maximum motor rating                     |                |       |             |
| Single-phase                             |                |       |             |
| 120 V AC                                 |                | HP    | 1.5         |
| 200 V AC                                 |                | HP    | 3           |
| 240 V AC                                 |                | HP    | 3           |
| Three-phase                              |                |       |             |
| 200 V AC                                 |                | HP    | 3           |
| 240 V AC                                 |                | HP    | 3           |
| 480 V AC                                 |                | HP    | 7.5         |
| 600 V AC                                 |                | HP    | 10          |
| Short Circuit Current Rating             |                | SCCR  |             |
| Basic Rating                             |                | kA    | 5           |
| max. Fuse                                |                | A     | 40          |
| High fault rating                        |                | kA    | 10          |
| max. Fuse                                |                | A     | 40, Class J |
| Terminal capacity                        |                |       |             |
| Solid or flexible conductor with ferrule |                | AWG   | 14 - 10     |
| Terminal screw                           |                |       | M4          |
| Tightening torque                        |                | lb-in | 17.7        |

## Design verification as per IEC/EN 61439

|  |                   |    |  |
|--|-------------------|----|--|
| Technical data for design verification   |                   |    |  |
| Rated operational current for specified heat dissipation   | I <sub>n</sub>    | A  | 32   |
| Heat dissipation per pole, current-dependent   | P <sub>vid</sub>  | W  | 1.1  |
| Equipment heat dissipation, current-dependent  | P <sub>vid</sub>  | W  | 0  |
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub>   | W  | 0  |
| Heat dissipation capacity  | P <sub>diss</sub> | 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])

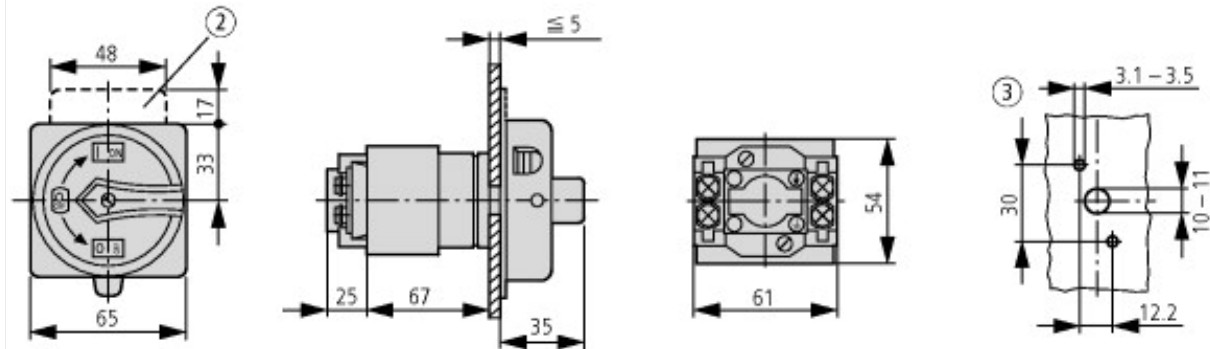
|   |    |  |
|---|----|--|
| Version as main switch                                  |    | Yes                                      |
| Version as maintenance-/service switch                  |    | Yes                                      |
| Version as safety switch                                |    | No                                       |
| Version as emergency stop installation                  |    | No                                       |
| Version as reversing switch                             |    | No                                       |
| Number of switches                                      |    | 1  |
| Max. rated operation voltage Ue AC                      | V  | 690                                      |
| Rated operating voltage                                 | V  | 690 - 690                                |
| Rated permanent current Iu                              | A  | 32                                       |
| Rated permanent current at AC-23, 400 V                 | A  | 32                                       |
| Rated permanent current at AC-21, 400 V                 | A  | 32                                       |
| Rated operation power at AC-3, 400 V                    | kW | 11                                       |
| Rated short-time withstand current Icw                  | kA | 0.65                                     |
| Rated operation power at AC-23, 400 V                   | kW | 15                                       |
| Switching power at 400 V                                | kW | 15                                       |
| Conditioned rated short-circuit current Iq              | kA | 1  |
| Number of poles   |    | 4  |
| Number of auxiliary contacts as normally closed contact |    | 1  |
| Number of auxiliary contacts as normally open contact   |    | 1  |
| 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                                     |
| Degree of protection (NEMA)                             |    | 12                                       |

## Approvals

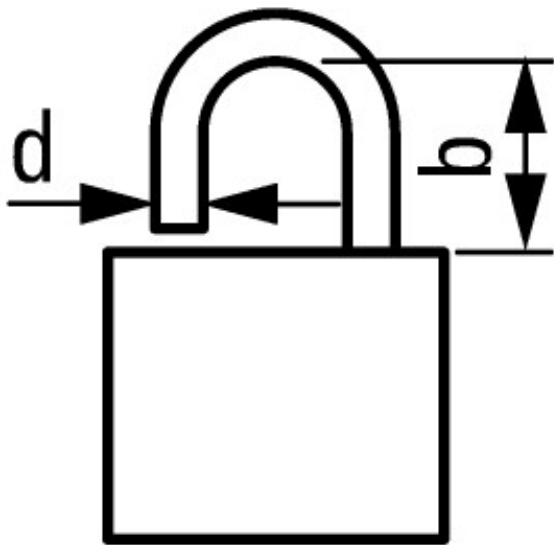
|                         |  |  |
|-------------------------|--|--|
| Product Standards       |  | UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking |
| UL File No.             |  | E36332   |
| UL Category Control No. |  | NLRV   |
| CSA File No.            |  | 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



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

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

$$d = 0.16 - 0.31''$$

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

$\leq 3$  padlocks

## Assets (links)

### Declaration of CE Conformity

00003074

### Instruction Leaflets

IL03801020Z2018\_05

## Additional product information (links)

### IL03801020Z (AWA1150-0586) Cam switch: Mounting

|  |   |
|--|---|
| IL03801020Z (AWA1150-0586) Cam switch: Mounting              | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801020Z2018_05.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801020Z2018_05.pdf</a>                           |
| Technical overview cam switch, switch-disconnector           | <a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.2</a>                                     |
| System overview cam switch T                                 | <a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.4</a>                                     |
| System overview switch-disconnector P                        | <a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.6</a>                                     |
| Key to part numbers Cam switch                               | <a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>                                     |
| Key to part numbers Switch-disconnector                      | <a href="http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8">http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&amp;startpage=4.8</a>                                     |
| Switches for ATEX  | <a href="http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html">http://www.coopercrouse-hinds.eu/en/products/25-ex-safety-and-main-current-switches.html</a> |
| Ordering form for SOND switches and SOND front plates(DE_EN) | <a href="ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf">ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008005ZU_Orderform_Customized_Switch.pdf</a>             |
| Ordering form for SOND switches and SOND front plates(DE_EN) | <a href="ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf">ftp://ftp.moeller.net/DOCUMENTATION/PDF/MZ008006ZU_Orderform_Customized_Switch.pdf</a>             |

