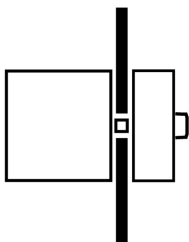




**Non-standard switch, T0, 20 A, flush mounting, 4 contact unit(s),  
Emergency switching off function, With red rotary handle and yellow  
locking ring**

**Part no. T0-4-SOND\*/EA/SVB**  
**Catalog No. 907779**

**Delivery program**

|   |       |                 |  |
|---|-------|-----------------|--|
| Product range                             |       |                 | Non-standard switch  |
| Part group reference                      |       |                 | T0   |
| Stop Function                             |       |                 | Emergency switching off function   |
|   |       |                 | With red rotary handle and yellow locking ring                                     |
| <b>Notes</b>                              |       |                 | customized version according to form   |
| Degree of Protection                      |       |                 | Front IP65   |
| Design                                    |       |                 | flush mounting   |
|   |       |                 |  |
| <b>Motor rating AC-23A, 50 - 60 Hz</b>    |       |                 |  |
| 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) | 4  |

**Technical data**

**General**

|                                       |           |      |   |
|---------------------------------------|-----------|------|---|
| Standards                             |           |      | IEC/EN 60947, VDE 0660, IEC/EN 60204<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**

|   |          |           |  |
|---|----------|-----------|--|
| 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  |          | 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   | 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                              |
| <b>Switching capacity</b>                                      |              |               |                                |
| $\cos \varphi$ rated making capacity as per IEC 60947-3        |              | A             | 130                            |
| Rated breaking capacity $\cos \varphi$ 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                           |
| <b>AC</b>  |              |               |                                |
| <b>AC-3</b>  |              |               |                                |
| 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                            |
| <b>AC-21A</b>  |              |               |                                |
| Rated operational current switch                               |              |               |                                |
| 440 V  | $I_e$        | A             | 20                             |
| <b>AC-23A</b>  |              |               |                                |
| 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                            |
| <b>DC</b>  |              |               |                                |
| <b>DC-1, Load-break switches L/R = 1 ms</b>                    |              |               |                                |
| Rated operational current                                      | $I_e$        | A             | 10                             |
| Voltage per contact pair in series                             |              | V             | 60                             |
| DC-21A   | $I_e$        | A             |                                |

|   |                   |          |  |
|---|-------------------|----------|--|
| 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                    |  | $\text{mm}^2$ | 1 x (1 - 2,5)<br>2 x (1 - 2,5)       |
| Flexible with ferrules to DIN 46228  |  | $\text{mm}^2$ | 1 x (0.75 - 2.5)<br>2 x (0.75 - 2.5) |
| Terminal screw                       |  |               | M3.5                                 |
| Tightening torque for terminal screw |  | Nm            | 1                                    |

### Technical safety parameters:

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

### Rating data for approved types

|                   |  |  |      |
|-------------------|--|--|------|
| Terminal capacity |  |  |      |
| Terminal screw    |  |  | M3.5 |

## Design verification as per IEC/EN 61439

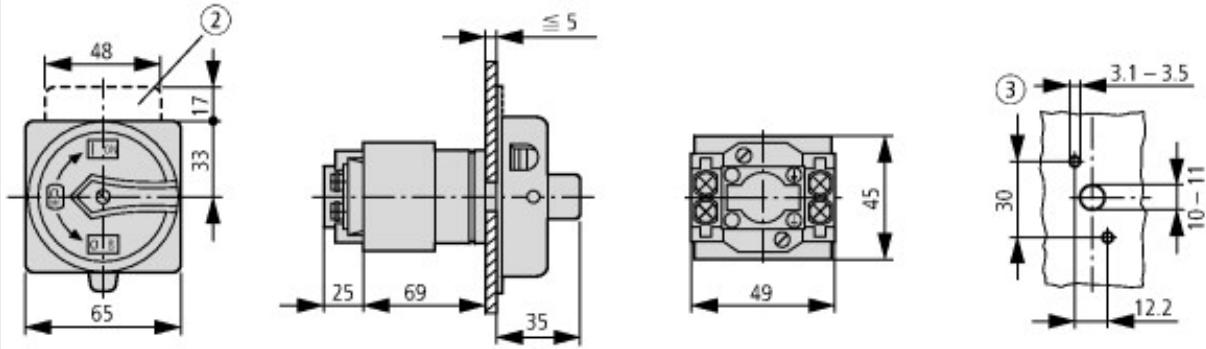
|  |            |    |  |
|--|------------|----|--|
| Technical data for design verification   |            |    |  |
| Rated operational current for specified heat dissipation   | $I_n$      | A  | 20   |
| Heat dissipation per pole, current-dependent   | $P_{vid}$  | W  | 0.6  |
| Equipment heat dissipation, 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  |            |    |  |
| 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.                         |

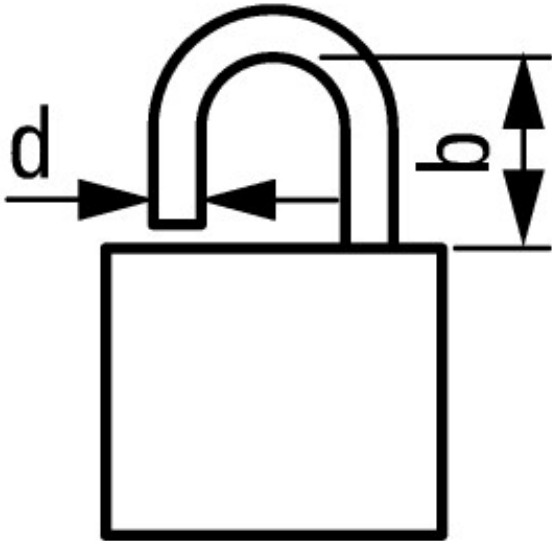
## Technical data ETIM 7.0

|   |  |    |  |
|---|--|----|--|
| 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 (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  |  |    | No                                       |
| 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  | 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 <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   |  |    | 0  |
| 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 ground mounting  |  |    | No                                       |
| Suitable for front mounting 4-hole  |  |    | Yes                                      |
| Suitable for front mounting centre  |  |    | No                                       |
| 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)   |  |    | Other                                    |

## 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)

### 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>             |