



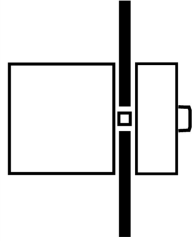
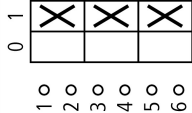
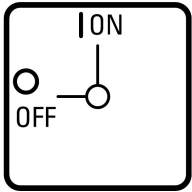
**Main switch, 3 pole, 63 A, Emergency-Stop function, 90 °, flush mounting**



Powering Business Worldwide™

**Part no.** T5B-2-1/EA/SVB  
**Article no.** 094130

**Delivery program**

|  |                |                 |  |
|--|----------------|-----------------|--|
| Product range                          |                |                 | Main switch<br>maintenance switch<br>Repair switch   |
| Part group reference                   |                |                 | T5B  |
| Stop Function                          |                |                 | Emergency switching off function<br>With red rotary handle and yellow locking ring   |
| Number of poles                        |                |                 | 3 pole   |
| Degree of Protection                   |                |                 | Front IP65   |
| Design                                 |                |                 | flush mounting   |
| Contact sequence                       |                |                 | <br> |
| Switching angle                        |                | °               | 90   |
| Function                               |                |                 |    |
| <b>Motor rating AC-23A, 50 - 60 Hz</b> |                |                 |  |
| 400 V                                  | P              | kW              | 30   |
| Rated uninterrupted current            | I <sub>u</sub> | A               | 63   |
| Number of contact units                |                | contact unit(s) | 2  |

**Technical data**

**General**

|   |                  |      |  |
|---|------------------|------|--|
| 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  |
| Overvoltage category/pollution degree                                 |                  |      | III/3  |
| Rated impulse withstand voltage                                       | U <sub>imp</sub> | V AC | 6000   |
| Mechanical shock resistance   |                  | g    | 15   |
| Mounting position   |                  |      | As required  |
| Protection against direct contact when actuated from front (EN 50274) |                  |      | Finger and back-of-hand proof  |

**Contacts**

|                            |                |      |        |
|----------------------------|----------------|------|--------|
| Mechanical variables       |                |      |        |
| Number of poles            |                |      | 3 pole |
| Electrical characteristics |                |      |        |
| Rated operational voltage  | U <sub>e</sub> | V AC | 690    |

|   |          |              |  |
|---|----------|--------------|--|
| Rated uninterrupted current                         | $I_U$    | A            | 63   |
| 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      | 80   |
| Rated short-time withstand current (1 s current)    | $I_{cw}$ | $A_{rms}$    | 1300   |
| Note on rated short-time withstand current $I_{cw}$ |          |              | Current for a time of 1 second   |
| Rated conditional short-circuit current             | $I_q$    | kA           | 2  |

### Switching capacity

|  |              |               |       |
|--|--------------|---------------|-------|
| $\cos \varphi$ rated making capacity as per IEC 60947-3        |              | A             | 800   |
| Rated breaking capacity $\cos \varphi$ to IEC 60947-3          |              | A             |       |
| 230 V  |              | A             | 520   |
| 400/415 V  |              | A             | 600   |
| 500 V  |              | A             | 480   |
| 690 V  |              | A             | 340   |
| Safe isolation to EN 61140                                     |              |               |       |
| between the contacts   |              | V AC          | 440   |
| Current heat loss per contact at $I_e$                         |              | W             | 4.5   |
| Current heat loss per auxiliary circuit at $I_e$ (AC-15/230 V) |              | CO            | 4.5   |
| Lifespan, mechanical   | Operations   | $\times 10^6$ | > 0.5 |
| Maximum operating frequency                                    | Operations/h |               | 1200  |
| AC   |              |               |       |
| AC-3   |              |               |       |
| Rating, motor load switch                                      | P            | kW            |       |
| 220 V 230 V  | P            | kW            | 15    |
| 230 V Star-delta   | P            | kW            | 18.5  |
| 400 V 415 V  | P            | kW            | 22    |
| 400 V Star-delta   | P            | kW            | 30    |
| 500 V  | P            | kW            | 22    |
| 500 V Star-delta   | P            | kW            | 37    |
| 690 V  | P            | kW            | 15    |
| 690 V Star-delta   | P            | kW            | 22    |
| Rated operational current motor load switch                    |              |               |       |
| 230 V  | $I_e$        | A             | 51    |
| 230 V star-delta   | $I_e$        | A             | 63    |
| 400V 415 V   | $I_e$        | A             | 41    |
| 400 V star-delta   | $I_e$        | A             | 63    |
| 500 V  | $I_e$        | A             | 33    |
| 500 V star-delta   | $I_e$        | A             | 57.2  |
| 690 V  | $I_e$        | A             | 17    |
| 690 V star-delta   | $I_e$        | A             | 29.4  |
| AC-21A   |              |               |       |
| Rated operational current switch                               |              |               |       |
| 440 V  | $I_e$        | A             | 63    |
| AC-23A   |              |               |       |
| Motor rating AC-23A, 50 - 60 Hz                                | P            | kW            |       |
| 230 V  | P            | kW            | 18.5  |
| 400 V 415 V  | P            | kW            | 30    |
| 500 V  | P            | kW            | 22    |
| 690 V  | P            | kW            | 22    |
| Rated operational current motor load switch                    |              |               |       |

|   |                   |                |   |
|---|-------------------|----------------|---|
| 230 V   | I <sub>e</sub>    | A              | 63  |
| 400 V 415 V                                   | I <sub>e</sub>    | A              | 63  |
| 500 V   | I <sub>e</sub>    | A              | 33  |
| 690 V   | I <sub>e</sub>    | A              | 23.8  |
| <b>DC</b>                                     |                   |                |   |
| DC-1, Load-break switches L/R = 1 ms          |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 63  |
| Voltage per contact pair in series            |                   | V              | 60  |
| DC-23A, motor load switch L/R = 15 ms         |                   |                |   |
| 24 V  |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 50  |
| Contacts                                      |                   | Quantity       | 1   |
| 48 V  |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 50  |
| Contacts                                      |                   | Quantity       | 2   |
| 60 V  |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 50  |
| Contacts                                      |                   | Quantity       | 3   |
| 120 V   |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 25  |
| Contacts                                      |                   | Quantity       | 3   |
| 240 V   |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 20  |
| Contacts                                      |                   | Quantity       | 6   |
| DC-13, Control switches L/R = 50 ms           |                   |                |   |
| Rated operational current                     | I <sub>e</sub>    | A              | 25  |
| 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 fault in 100000 operations |

### Terminal capacities

|                                     |  |                 |                                  |
|-------------------------------------|--|-----------------|----------------------------------|
| Solid or stranded                   |  | mm <sup>2</sup> | 1 x (2,5 - 35)<br>2 x (2,5 - 16) |
| Flexible with ferrules to DIN 46228 |  | mm <sup>2</sup> | 1 x (1 - 25)<br>2 x (1.5 - 10)   |
| Terminal screw                      |  |                 | M6                               |
| Max. tightening torque              |  | Nm              | 4                                |

### Technical safety parameters:

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

### Rating data for approved types

|                                  |                |      |     |
|----------------------------------|----------------|------|-----|
| <b>Contacts</b>                  |                |      |     |
| Rated operational voltage        | U <sub>e</sub> | V AC | 600 |
| Rated uninterrupted current max. |                |      |     |
| Main conducting paths            |                |      |     |
| General use                      | I <sub>U</sub> | A    | 63  |
| <b>Switching capacity</b>        |                |      |     |
| Maximum motor rating             |                |      |     |
| Single-phase                     |                |      |     |
| 120 V AC                         |                | HP   | 3   |
| 200 V AC                         |                | HP   | 7.5 |
| 240 V AC                         |                | HP   | 10  |
| Three-phase                      |                |      |     |
| 200 V AC                         |                | HP   | 15  |
| 240 V AC                         |                | HP   | 15  |
| 480 V AC                         |                | HP   | 40  |
| 600 V AC                         |                | HP   | 40  |
| Short Circuit Current Rating     |                | SCCR |     |

|  |  |       |              |
|--|--|-------|--------------|
| High fault rating                        |  | kA    | 10           |
| max. Fuse                                |  | A     | 100, Class J |
| Terminal capacity                        |  |       |              |
| Solid or flexible conductor with ferrule |  | AWG   | 12 - 4       |
| Terminal screw                           |  |       | M6           |
| Tightening torque                        |  | lb-in | 35.4         |

## Design verification as per IEC/EN 61439

|  |            |    |  |
|--|------------|----|--|
| Technical data for design verification   |            |    |  |
| Rated operational current for specified heat dissipation   | $I_n$      | A  | 63   |
| Heat dissipation per pole, current-dependent   | $P_{vid}$  | W  | 4.5  |
| 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   |            |    |  |
|  |            |    | Please enquire   |
| 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 6.0

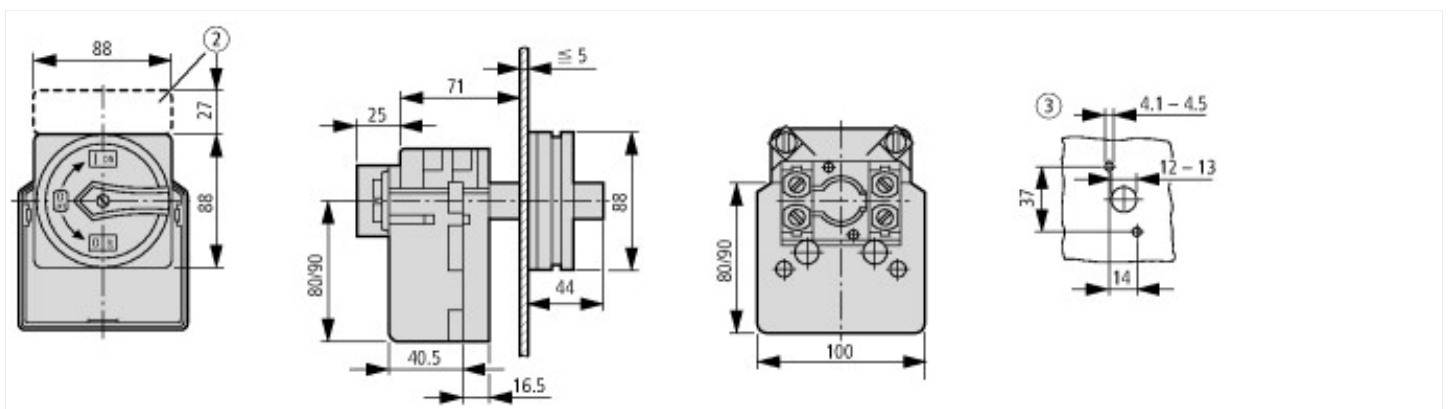
|  |  |   |           |
|--|--|---|-----------|
| Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)  |  |   |           |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss8.1-27-37-14-03 [AKF060010]) |  |   |           |
| 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        |
| Max. rated operation voltage $U_e$ AC  |  | V | 690       |
| Rated operating voltage  |  | V | 690 - 690 |

|   |    |  |
|---|----|--|
| Rated permanent current I <sub>u</sub>                  | A  | 63                                       |
| Rated permanent current at AC-21, 400 V                 | A  | 63                                       |
| Rated operation power at AC-3, 400 V                    | kW | 22                                       |
| Rated short-time withstand current I <sub>cw</sub>      | kA | 1.3                                      |
| Rated operation power at AC-23, 400 V                   | kW | 30                                       |
| Switching power at 400 V                                | kW | 30                                       |
| Conditioned rated short-circuit current I <sub>q</sub>  | kA | 2  |
| 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 ground mounting                            |    | No                                       |
| Suitable for front mounting 4-hole                      |    | No                                       |
| Suitable for front mounting center                      |    | 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                                     |

## Approvals

|                                      |  |   |
|--------------------------------------|--|---|
| Product Standards                    |  | UL 508; CSA-C22.2 No. 14-05; 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  |
| Specially designed for North America |  | Yes, with an alternative front plate and/or terminal markings to those of the IEC type in combination with "+NA" (105864) |
| 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

Cam switches T5B and T5 are of identical design, only their contacts are different




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

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

$$d = 0.16 - 0.31''$$

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

 3 padlocks

### Additional product information (links)

#### IL03801009Z (AWA1150-1692) Cam switches: switch-disconnectors

|   |   |
|---|---|
| IL03801009Z (AWA1150-1692) Cam switches: switch-disconnectors | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801009Z2016_07.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03801009Z2016_07.pdf</a>                           |
| Display flip catalog page.                                    | <a href="http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=130">http://ecat.moeller.net/flip-cat/?edition=K115A&amp;startpage=130</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> |