



**Main switch, 3-pole + 1 N/O, 20A, controlled stop function, 90 °, surface mounting**

**Part no. T0-2-15679/I2H/MBS/SVB-SW**  
**Catalog No. 182430**

**EL-Nummer 0001400405**  
**(Norway)**

## Delivery program

|                                                    |                |                 |                                                                                 |
|----------------------------------------------------|----------------|-----------------|---------------------------------------------------------------------------------|
| Product range                                      |                |                 | Main switch<br>maintenance switch<br>Repair switch                              |
| Part group reference                               |                |                 | T0                                                                              |
| Stop Function                                      |                |                 | STOP function                                                                   |
| Notes                                              |                |                 | With black rotary handle and locking ring                                       |
| Number of poles                                    |                |                 | 3 pole                                                                          |
| <b>Auxiliary contacts</b>                          |                |                 |                                                                                 |
|                                                    |                | N/O             | 1                                                                               |
|                                                    |                | N/C             | 0                                                                               |
| Locking facility                                   |                |                 | Lockable in the 0 (Off) position                                                |
| Degree of Protection                               |                |                 | IP65                                                                            |
|                                                    |                |                 | <b>totally insulated</b>                                                        |
| Design                                             |                |                 | surface mounting                                                                |
|                                                    |                |                 |                                                                                 |
| Contact sequence                                   |                |                 | <br>1 2 3 4 5 6 7 8                                                             |
| Switching angle                                    |                | °               | 90                                                                              |
| Function                                           |                |                 |                                                                                 |
| <b>Motor rating AC-23A, 50 - 60 Hz</b>             |                |                 |                                                                                 |
| 400 V                                              | P              | kW              | 5.5                                                                             |
| Rated uninterrupted current                        | I <sub>u</sub> | A               | 20                                                                              |
| 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) | 2                                                                               |

## Technical data

### General

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

|                                       |           |      |                                                                                |
|---------------------------------------|-----------|------|--------------------------------------------------------------------------------|
|                                       |           |      | 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                   |           |      |                                                                                |
| Enclosed                              |           | °C   | -20 - +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                                                                 |
| Auxiliary contacts                                  |          |           |                                                                        |
|                                                     |          | N/O       | 1                                                                      |
|                                                     |          | N/C       | 0                                                                      |
| 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                                                                      |

## Switching capacity

|                                                                |              |          |       |
|----------------------------------------------------------------|--------------|----------|-------|
| 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   | x $10^6$ | > 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 <sub>e</sub>    | A              | 11.5                                                |
| 400 V star-delta                              | I <sub>e</sub>    | A              | 20                                                  |
| 500 V                                         | I <sub>e</sub>    | A              | 9                                                   |
| 500 V star-delta                              | I <sub>e</sub>    | A              | 15.6                                                |
| 690 V                                         | I <sub>e</sub>    | A              | 4.9                                                 |
| 690 V star-delta                              | I <sub>e</sub>    | A              | 8.5                                                 |
| AC-21A                                        |                   |                |                                                     |
| Rated operational current switch              |                   |                |                                                     |
| 440 V                                         | I <sub>e</sub>    | A              | 20                                                  |
| AC-23A                                        |                   |                |                                                     |
| Motor rating AC-23A, 50 - 60 Hz               |                   |                |                                                     |
| 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 <sub>e</sub>    | A              | 13.3                                                |
| 400 V 415 V                                   | I <sub>e</sub>    | A              | 13.3                                                |
| 500 V                                         | I <sub>e</sub>    | A              | 13.3                                                |
| 690 V                                         | I <sub>e</sub>    | A              | 7.6                                                 |
| DC                                            |                   |                |                                                     |
| DC-1, Load-break switches L/R = 1 ms          |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 10                                                  |
| Voltage per contact pair in series            |                   |                |                                                     |
|                                               |                   | V              | 60                                                  |
| DC-21A                                        |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 1                                                   |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 1                                                   |
| DC-23A, motor load switch L/R = 15 ms         |                   |                |                                                     |
| 24 V                                          |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 10                                                  |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 1                                                   |
| 48 V                                          |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 10                                                  |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 2                                                   |
| 60 V                                          |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 10                                                  |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 3                                                   |
| 120 V                                         |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 5                                                   |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 3                                                   |
| 240 V                                         |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 5                                                   |
| Contacts                                      |                   |                |                                                     |
|                                               |                   | Quantity       | 5                                                   |
| DC-13, Control switches L/R = 50 ms           |                   |                |                                                     |
| Rated operational current                     |                   |                |                                                     |
|                                               | I <sub>e</sub>    | A              | 10                                                  |
| Voltage per contact pair in series            |                   |                |                                                     |
|                                               |                   | V              | 32                                                  |
| 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 (1 - 2,5)<br>2 x (1 - 2,5)       |
| Flexible with ferrules to DIN 46228  |  | mm <sup>2</sup> | 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

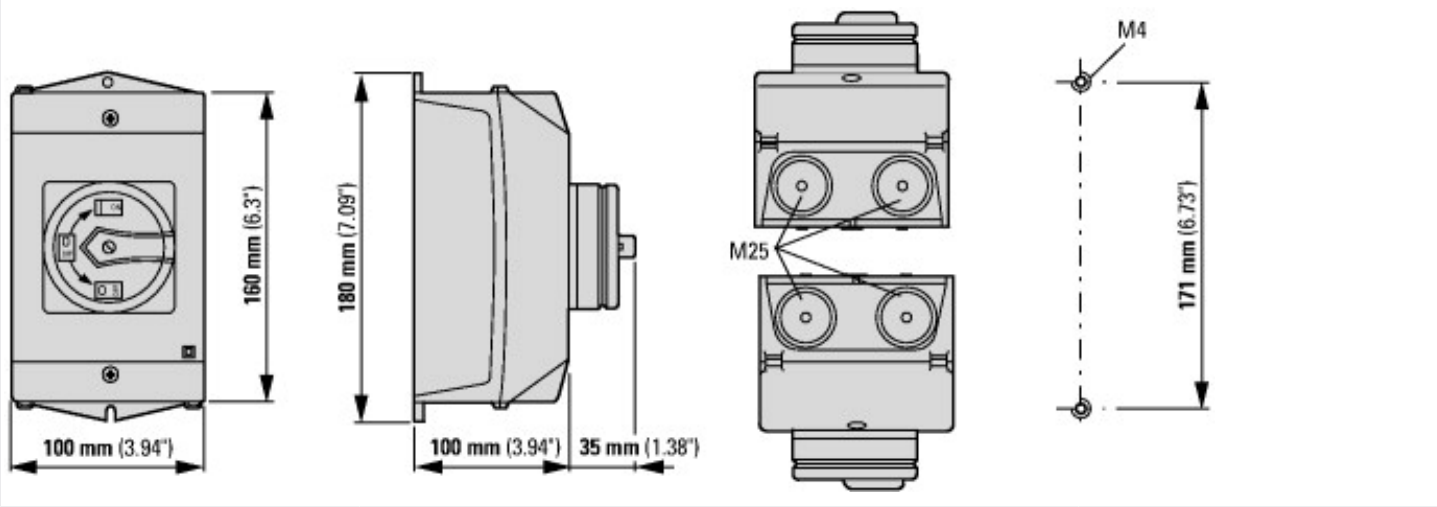
|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 20                                                                                                                               |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0.6                                                                                                                              |
| 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 | 40                                                                                                                               |
| 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 disconnector (EC000216)                                                                                                                                 |  |   |           |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (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 | 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 Icw                  | 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 Iq              | kA                         | 6    |
| Number of poles                                         |                            | 3    |
| Number of auxiliary contacts as normally closed contact |                            | 0    |
| 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                                     | Complete device in housing |      |
| Suitable for ground mounting                            | Yes                        |      |
| Suitable for front mounting 4-hole                      | No                         |      |
| Suitable for front mounting centre                      | No                         |      |
| 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)                             | Other                      |      |

## Dimensions





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

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

$$d = 0.16 - 0.31''$$

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

≤ 3 padlocks

### Assets (links)

[Declaration of CE Conformity](#)

00003075

[Instruction Leaflets](#)

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