



**Main switch, 3p+1S+10, 32A, controlled stop function, lockable in the 0 (Off) position, surface mounting, hard knockout version, with mounting plate screen**

**Part no.** P1-32/I2H/MBS/SVB-SW/HI11  
**Catalog No.** 182420

**EL-Nummer (Norway)** 0001400420

## Delivery program

|                                                    |                |     |                                                                                 |
|----------------------------------------------------|----------------|-----|---------------------------------------------------------------------------------|
| Product range                                      |                |     | Main switch<br>maintenance switch<br>Repair switch                              |
| Part group reference                               |                |     | P1                                                                              |
| Stop Function                                      |                |     | STOP function                                                                   |
|                                                    |                |     | With black rotary handle and locking ring                                       |
| Information about equipment supplied               |                |     | Auxiliary contact or neutral conductor fitted by user.                          |
| Notes                                              |                |     | hard knockout version<br>with assembly sheet screen                             |
| Number of poles                                    |                |     | 3 pole                                                                          |
| <b>Auxiliary contacts</b>                          |                |     |                                                                                 |
|                                                    |                | N/O | 1                                                                               |
|                                                    |                | N/C | 1                                                                               |
| Locking facility                                   |                |     | Lockable in the 0 (Off) position                                                |
| Degree of Protection                               |                |     | IP65                                                                            |
|                                                    |                |     | <b>totally insulated</b>                                                        |
| Design                                             |                |     | surface mounting                                                                |
|                                                    |                |     |                                                                                 |
| Contact sequence                                   |                |     |                                                                                 |
| 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. |

## Technical data

|                   |  |  |                                                                                         |
|-------------------|--|--|-----------------------------------------------------------------------------------------|
| <b>General</b>    |  |  |                                                                                         |
| 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                                                  |

|                                       |                  |      |                                      |
|---------------------------------------|------------------|------|--------------------------------------|
|                                       |                  |      | Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature                   |                  |      |                                      |
| Enclosed                              |                  | °C   | -20 - +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                          |

## Contacts

|                                                            |                 |                  |                                                                                 |
|------------------------------------------------------------|-----------------|------------------|---------------------------------------------------------------------------------|
| Mechanical variables                                       |                 |                  |                                                                                 |
| Number of poles                                            |                 |                  | 3 pole                                                                          |
| Auxiliary contacts                                         |                 |                  |                                                                                 |
|                                                            |                 | N/O              | 1                                                                               |
|                                                            |                 | N/C              | 1                                                                               |
| Electrical characteristics                                 |                 |                  |                                                                                 |
| Rated operational voltage                                  | U <sub>e</sub>  | V AC             | 690                                                                             |
| 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. |
| Load rating with intermittent operation, class 12          |                 |                  |                                                                                 |
| AB 25 % DF                                                 |                 | x I <sub>e</sub> | 2                                                                               |
| AB 40 % DF                                                 |                 | x I <sub>e</sub> | 1.6                                                                             |
| AB 60 % DF                                                 |                 | x I <sub>e</sub> | 1.3                                                                             |
| Short-circuit rating                                       |                 |                  |                                                                                 |
| Fuse                                                       |                 | A gG/gL          | 50                                                                              |
| Rated short-time withstand current (1 s current)           | I <sub>cw</sub> | A <sub>rms</sub> | 640                                                                             |
| Note on rated short-time withstand current I <sub>cw</sub> |                 |                  | Current for a time of 1 second                                                  |
| Rated conditional short-circuit current                    | I <sub>q</sub>  | kA               | 80                                                                              |

## Switching capacity

|                                                                         |                |                   |       |
|-------------------------------------------------------------------------|----------------|-------------------|-------|
| cos φ rated making capacity as per IEC 60947-3                          |                | A                 | 320   |
| Rated breaking capacity cos φ to IEC 60947-3                            |                | A                 |       |
| 230 V                                                                   |                | A                 | 260   |
| 400/415 V                                                               |                | A                 | 300   |
| 500 V                                                                   |                | A                 | 290   |
| 690 V                                                                   |                | A                 | 250   |
| Safe isolation to EN 61140                                              |                |                   |       |
| between the contacts                                                    |                | V AC              | 440   |
| Current heat loss per contact at I <sub>e</sub>                         |                | W                 | 1.8   |
| Current heat loss per auxiliary circuit at I <sub>e</sub> (AC-15/230 V) |                | CO                | 0.2   |
| Lifespan, mechanical                                                    | Operations     | x 10 <sup>6</sup> | > 0.3 |
| Maximum operating frequency                                             | Operations/h   |                   | 1200  |
| AC                                                                      |                |                   |       |
| AC-3                                                                    |                |                   |       |
| Rating, motor load switch                                               | P              | kW                |       |
| 220 V 230 V                                                             | P              | kW                | 7.5   |
| 400 V 415 V                                                             | P              | kW                | 13    |
| 500 V                                                                   | P              | kW                | 18.5  |
| 690 V                                                                   | P              | kW                | 15    |
| Rated operational current motor load switch                             |                |                   |       |
| 230 V                                                                   | I <sub>e</sub> | A                 | 26.4  |
| 400V 415 V                                                              | I <sub>e</sub> | A                 | 26.4  |
| 500 V                                                                   | I <sub>e</sub> | A                 | 23.4  |
| 690 V                                                                   | I <sub>e</sub> | A                 | 14.7  |
| AC-21A                                                                  |                |                   |       |
| Rated operational current switch                                        |                |                   |       |
| 440 V                                                                   | I <sub>e</sub> | A                 | 32    |

|                                               |                   |                |                                                     |
|-----------------------------------------------|-------------------|----------------|-----------------------------------------------------|
| AC-23A                                        |                   |                |                                                     |
| Motor rating AC-23A, 50 - 60 Hz               | P                 | kW             |                                                     |
| 230 V                                         | P                 | kW             | 7.5                                                 |
| 400 V 415 V                                   | P                 | kW             | 15                                                  |
| 500 V                                         | P                 | kW             | 18.5                                                |
| 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              | 30                                                  |
| 690 V                                         | I <sub>e</sub>    | A              | 19.8                                                |
| DC                                            |                   |                |                                                     |
| DC-1, Load-break switches L/R = 1 ms          |                   |                |                                                     |
| Rated operational current                     | I <sub>e</sub>    | A              | 32                                                  |
| 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              | 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       | 2                                                   |
| 120 V                                         |                   |                |                                                     |
| Rated operational current                     | I <sub>e</sub>    | A              | 12                                                  |
| Contacts                                      |                   | Quantity       | 3                                                   |
| 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 (1,5 - 6)<br>2 x (1,5 - 6) |
| Flexible with ferrules to DIN 46228  |  | mm <sup>2</sup> | 1 x (1 - 4)<br>2 x (1 - 4)     |
| Terminal screw                       |  |                 | M4                             |
| Tightening torque for terminal screw |  | Nm              | 1.6                            |

### 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    |  |  | M4 |

## 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  | 1.8                                        |
| 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. |

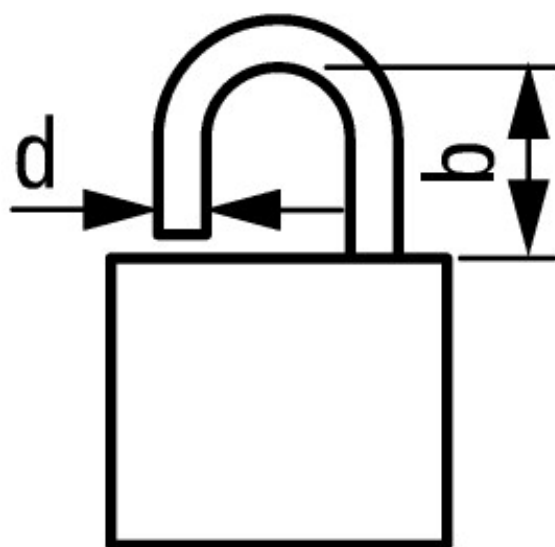
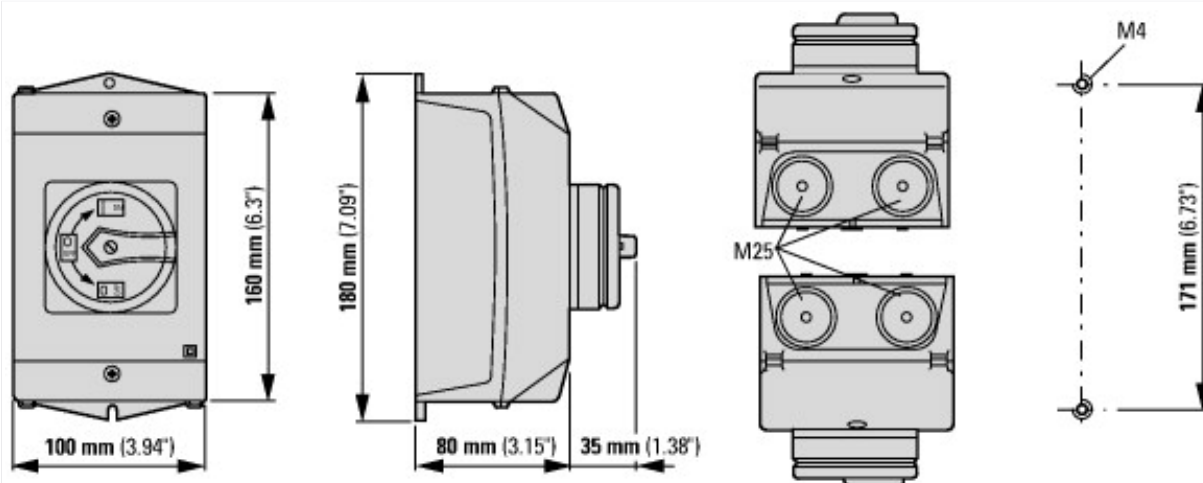
|                                                                                                                        |  |  |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------------------------------------------------------|
| 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 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 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 | 13                         |
| Rated short-time withstand current Icw                                                                                                                                                                        |  | kA | 0.64                       |
| Rated operation power at AC-23, 400 V                                                                                                                                                                         |  | kW | 15                         |
| Switching power at 400 V                                                                                                                                                                                      |  | kW | 15                         |
| Conditioned rated short-circuit current Iq                                                                                                                                                                    |  | kA | 80                         |
| Number of poles                                                                                                                                                                                               |  |    | 3                          |
| 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                                                                                                                                                                                           |  |    | 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](#)

00003102

[Instruction Leaflets](#)

IL03802001Z2018\_04