



**Main switch, 3 pole + N, 100 A, Emergency-Stop function, Lockable in the 0 (Off) position, rear mounting**

**Part no. P3-100/V/SVB/N**  
**Catalog No. 024636**

**EL-Nummer 0001417019**  
**(Norway)**

## Delivery program

|                                                    |                |     |                                                                                 |
|----------------------------------------------------|----------------|-----|---------------------------------------------------------------------------------|
| Product range                                      |                |     | Main switch<br>maintenance switch<br>Repair switch                              |
| Part group reference                               |                |     | P3                                                                              |
| Stop Function                                      |                |     | Emergency switching off function                                                |
| Information about equipment supplied               |                |     | With red rotary handle and yellow locking ring                                  |
| Number of poles                                    |                |     | 3 pole + N                                                                      |
| <b>Auxiliary contacts</b>                          |                |     |                                                                                 |
|                                                    |                | N/O | 0                                                                               |
|                                                    |                | N/C | 0                                                                               |
| Locking facility                                   |                |     | Lockable in the 0 (Off) position                                                |
| Degree of Protection                               |                |     | Front IP65                                                                      |
| Design                                             |                |     | rear mounting                                                                   |
|                                                    |                |     |                                                                                 |
| Contact sequence                                   |                |     |                                                                                 |
| Function                                           |                |     |                                                                                 |
| <b>Motor rating AC-23A, 50 - 60 Hz</b>             |                |     |                                                                                 |
| 400 V                                              | P              | kW  | 55                                                                              |
| Rated uninterrupted current                        | I <sub>u</sub> | A   | 100                                                                             |
| 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, CSA, UL<br>Switch-disconnector according to IEC/EN 60947-3<br>NEMA12 |
| 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 |

## Contacts

|                                                            |                 |                  |                                                                                 |
|------------------------------------------------------------|-----------------|------------------|---------------------------------------------------------------------------------|
| Mechanical variables                                       |                 |                  |                                                                                 |
| Number of poles                                            |                 |                  | 3 pole + N                                                                      |
| Auxiliary contacts                                         |                 |                  |                                                                                 |
|                                                            |                 | N/O              | 0                                                                               |
|                                                            |                 | N/C              | 0                                                                               |
| Electrical characteristics                                 |                 |                  |                                                                                 |
| Rated operational voltage                                  | U <sub>e</sub>  | V AC             | 690                                                                             |
| Rated uninterrupted current                                | I <sub>u</sub>  | A                | 100                                                                             |
| 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          | 100                                                                             |
| Rated short-time withstand current (1 s current)           | I <sub>cw</sub> | A <sub>rms</sub> | 2000                                                                            |
| 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               | 4                                                                               |

## Switching capacity

|                                                 |                |                   |       |
|-------------------------------------------------|----------------|-------------------|-------|
| cos φ rated making capacity as per IEC 60947-3  |                | A                 | 950   |
| Rated breaking capacity cos φ to IEC 60947-3    |                | A                 |       |
| 230 V                                           |                | A                 | 760   |
| 400/415 V                                       |                | A                 | 740   |
| 500 V                                           |                | A                 | 880   |
| 690 V                                           |                | A                 | 520   |
| Safe isolation to EN 61140                      |                |                   |       |
| between the contacts                            |                | V AC              | 440   |
| Current heat loss per contact at I <sub>e</sub> |                | W                 | 7.5   |
| Lifespan, mechanical                            | Operations     | x 10 <sup>6</sup> | > 0.1 |
| Maximum operating frequency                     | Operations/h   |                   | 1200  |
| AC                                              |                |                   |       |
| AC-3                                            |                |                   |       |
| Rating, motor load switch                       | P              | kW                |       |
| 220 V 230 V                                     | P              | kW                | 22    |
| 400 V 415 V                                     | P              | kW                | 37    |
| 500 V                                           | P              | kW                | 45    |
| 690 V                                           | P              | kW                | 37    |
| Rated operational current motor load switch     |                |                   |       |
| 230 V                                           | I <sub>e</sub> | A                 | 71    |
| 400V 415 V                                      | I <sub>e</sub> | A                 | 71    |
| 500 V                                           | I <sub>e</sub> | A                 | 65    |
| 690 V                                           | I <sub>e</sub> | A                 | 23.8  |
| AC-21A                                          |                |                   |       |
| Rated operational current switch                |                |                   |       |
| 440 V                                           | I <sub>e</sub> | A                 | 100   |
| AC-23A                                          |                |                   |       |
| Motor rating AC-23A, 50 - 60 Hz                 | P              | kW                |       |
| 230 V                                           | P              | kW                | 30    |
| 400 V 415 V                                     | P              | kW                | 55    |
| 500 V                                           | P              | kW                | 55    |

|                                               |                   |                |                                                     |
|-----------------------------------------------|-------------------|----------------|-----------------------------------------------------|
| 690 V                                         | P                 | kW             | 55                                                  |
| Rated operational current motor load switch   |                   |                |                                                     |
| 230 V                                         | I <sub>e</sub>    | A              | 100                                                 |
| 400 V 415 V                                   | I <sub>e</sub>    | A              | 100                                                 |
| 500 V                                         | I <sub>e</sub>    | A              | 96                                                  |
| 690 V                                         | I <sub>e</sub>    | A              | 68                                                  |
| DC                                            |                   |                |                                                     |
| DC-1, Load-break switches L/R = 1 ms          |                   |                |                                                     |
| Rated operational current                     | I <sub>e</sub>    | A              | 100                                                 |
| 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       | 2                                                   |
| 120 V                                         |                   |                |                                                     |
| Rated operational current                     | I <sub>e</sub>    | A              | 25                                                  |
| 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 (2,5 - 35)<br>2 x (2,5 - 10) |
| Flexible with ferrules to DIN 46228  |  | mm <sup>2</sup> | 1 x (1.5 - 25)<br>2 x (1.5 - 6)  |
| Terminal screw                       |  |                 | M5                               |
| Tightening torque for terminal screw |  | Nm              | 3                                |

### Technical safety parameters:

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

### Rating data for approved types

|                                  |                |      |                |
|----------------------------------|----------------|------|----------------|
| Contacts                         |                |      |                |
| Rated operational voltage        | U <sub>e</sub> | V AC | 600            |
| Rated uninterrupted current max. |                |      |                |
| Main conducting paths            |                |      |                |
| General use                      |                | A    | 90             |
| Auxiliary contacts               |                |      |                |
| General Use                      | I <sub>U</sub> | A    | 10             |
| Pilot Duty                       |                |      | A 600<br>P 600 |
| Switching capacity               |                |      |                |
| Maximum motor rating             |                |      |                |
| Single-phase                     |                |      |                |
| 120 V AC                         |                | HP   | 5              |
| 200 V AC                         |                | HP   | 10             |
| 240 V AC                         |                | HP   | 15             |
| Three-phase                      |                |      |                |
| 200 V AC                         |                | HP   | 20             |
| 240 V AC                         |                | HP   | 25             |
| 480 V AC                         |                | HP   | 60             |
| 600 V AC                         |                | HP   | 75             |
| Short Circuit Current Rating     |                | SCCR |                |
| Basic Rating                     |                | kA   | 10             |

|                                          |       |        |
|------------------------------------------|-------|--------|
| max. Fuse                                | A     | 150    |
| Terminal capacity                        |       |        |
| Solid or flexible conductor with ferrule | AWG   | 14 - 2 |
| Terminal screw                           |       | M5     |
| Tightening torque                        | lb-in | 26.5   |

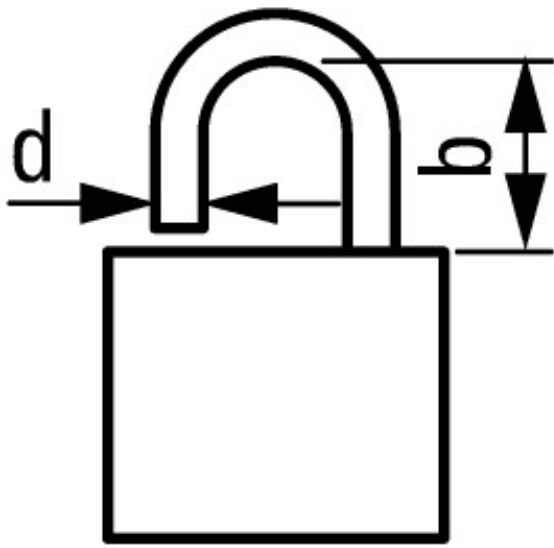
## Design verification as per IEC/EN 61439

|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 100                                                                                                                              |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 7.5                                                                                                                              |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Static heat dissipation, non-current-dependent                                                                         | P <sub>vs</sub>   | W  | 0                                                                                                                                |
| Heat dissipation capacity                                                                                              | P <sub>diss</sub> | W  | 0                                                                                                                                |
| Operating ambient temperature min.                                                                                     |                   | °C | -25                                                                                                                              |
| Operating ambient temperature max.                                                                                     |                   | °C | 50                                                                                                                               |
| IEC/EN 61439 design verification                                                                                       |                   |    |                                                                                                                                  |
| 10.2 Strength of materials and parts                                                                                   |                   |    |                                                                                                                                  |
| 10.2.2 Corrosion resistance                                                                                            |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.1 Verification of thermal stability of enclosures                                                               |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat                                             |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.2.4 Resistance to ultra-violet (UV) radiation                                                                       |                   |    | UV resistance only in connection with protective shield.                                                                         |
| 10.2.5 Lifting                                                                                                         |                   |    | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.2.6 Mechanical impact                                                                                               |                   |    | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.2.7 Inscriptions                                                                                                    |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.3 Degree of protection of ASSEMBLIES                                                                                |                   |    | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.4 Clearances and creepage distances                                                                                 |                   |    | Meets the product standard's requirements.                                                                                       |
| 10.5 Protection against electric shock                                                                                 |                   |    | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.6 Incorporation of switching devices and components                                                                 |                   |    | Does not apply, since the entire switchgear needs to be evaluated.                                                               |
| 10.7 Internal electrical circuits and connections                                                                      |                   |    | Is the panel builder's responsibility.                                                                                           |
| 10.8 Connections for external conductors                                                                               |                   |    | Is the panel builder's responsibility.                                                                                           |
| 10.9 Insulation properties                                                                                             |                   |    |                                                                                                                                  |
| 10.9.2 Power-frequency electric strength                                                                               |                   |    | Is the panel builder's responsibility.                                                                                           |
| 10.9.3 Impulse withstand voltage                                                                                       |                   |    | Is the panel builder's responsibility.                                                                                           |
| 10.9.4 Testing of enclosures made of insulating material                                                               |                   |    | Is the panel builder's responsibility.                                                                                           |
| 10.10 Temperature rise                                                                                                 |                   |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating                                                                                             |                   |    | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.12 Electromagnetic compatibility                                                                                    |                   |    | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| 10.13 Mechanical function                                                                                              |                   |    | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## Technical data ETIM 7.0

|                                                                                                                                                                                                               |  |   |           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|-----------|
| Low-voltage industrial components (EG000017) / Switch 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                                                                                                                                                                        |  |   | Yes       |
| Version as reversing switch                                                                                                                                                                                   |  |   | No        |
| Number of switches                                                                                                                                                                                            |  |   | 1         |
| Max. rated operation voltage Ue AC                                                                                                                                                                            |  | V | 690       |
| Rated operating voltage                                                                                                                                                                                       |  | V | 690 - 690 |





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

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

$$d = 0.16 - 0.31''$$

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

≤ 3 padlocks

### Assets (links)

[Declaration of CE Conformity](#)

00003104

[Instruction Leaflets](#)

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