DATASHEET - P3-100/EA/SVB



Main switch, P3, 100 A, flush mounting, 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position



Part no. P3-100/EA/SVB Catalog No. 074320

EL-Nummer 0001456132 (Norway)

Delivery program

| Delivery program | | | |
|--|----------------|-----|--|
| Product range | | | Main switch maintenance switch Repair switch |
| Part group reference | | | P3 |
| Stop Function | | | Emergency switching off function |
| | | | With red rotary handle and yellow locking ring |
| Information about equipment supplied | | | Auxiliary contact or neutral conductor fitted by user. |
| Number of poles | | | 3 pole |
| Auxiliary contacts | | | |
| 1 | | N/0 | 0 |
| 7 | | N/C | 0 |
| Locking facility | | | Lockable in the 0 (Off) position |
| Degree of Protection | | | Front IP65 |
| Design | | | flush mounting |
| | | | |
| Contact sequence | | | 0 |
| Function | | | OFF O |
| Motor rating AC-23A, 50 - 60 Hz | | | |
| 400 V | P | kW | 55 |
| Rated uninterrupted current | I _u | Α | 100 |
| Note on rated uninterrupted current !u | | | Rated uninterrupted current $\mathbf{I}_{\mathbf{U}}$ is specified for max. cross-section. |
| | | | |

Technical data General

| delicial | |
|---------------------|--|
| Standards | IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL Switch-disconnector according to IEC/EN 60947-3 NEMA12 |
| Climatic proofing | Damp heat, constant, to IEC 60068-2-78 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 _{imp} | V AC | 6000 |
| Mechanical shock resistance | · | g | 15 |
| Mounting position | | - | As required |
| Contacts | | | |
| Mechanical variables | | | |
| Number of poles | | | 3 pole |
| Auxiliary contacts | | | |
| | | N/0 | 0 |
| | | N/C | 0 |
| Electrical characteristics | | | |
| Rated operational voltage | U _e | V AC | 690 |
| Rated uninterrupted current | I _u | Α | 100 |
| Note on rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ | | | Rated uninterrupted current $\boldsymbol{l}_{\boldsymbol{u}}$ 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 | 100 |
| Rated short-time withstand current (1 s current) | I _{cw} | A _{rms} | 2000 |
| Note on rated short-time withstand current lcw | | | Current for a time of 1 second |
| Rated conditional short-circuit current | Iq | kA | 4 |
| Switching capacity | | | |
| cos φ rated making capacity as per IEC 60947-3 | | Α | 950 |
| Rated breaking capacity cos φ to IEC 60947-3 | | Α | |
| 230 V | | Α | 760 |
| 400/415 V | | Α | 740 |
| 500 V | | Α | 880 |
| 690 V | | Α | 520 |
| Safe isolation to EN 61140 | | | |
| between the contacts | | V AC | 440 |
| Current heat loss per contact at l _e | | W | 7.5 |
| Lifespan, mechanical | Operations | x 10 ⁶ | > 0.1 |
| Maximum operating frequency | Operations/h | | 1200 |
| AC | | | |
| AC-3 | | | |
| Rating, motor load switch | Р | kW | |
| 220 V 230 V | Р | kW | 22 |
| 400 V 415 V | Р | kW | 37 |
| 500 V | P | kW | 45 |
| 690 V | Р | kW | 37 |
| Rated operational current motor load switch | | A | 74 |
| 230 V | l _e | A | 71 |
| 400V 415 V | l _e | A | 71 |
| 500 V | l _e | Α | 65 |
| 690 V | l _e | Α | 23.8 |
| 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 | Р | kW | 55 |
|--|----------------|-----------------|---|
| Rated operational current motor load switch | • | KVV | |
| 230 V | ı | Α | 100 |
| | l _e | | |
| 400 V 415 V | l _e | A | 100 |
| 500 V | l _e | Α | 96 |
| 690 V | le | Α | 68 |
| DC | | | |
| DC-1, Load-break switches L/R = 1 ms | | | |
| Rated operational current | I _e | Α | 100 |
| Voltage per contact pair in series | | V | 60 |
| DC-23A, motor load switch L/R = 15 ms | | | |
| 24 V | | | |
| Rated operational current | le | Α | 50 |
| Contacts | | Quantity | 1 |
| 48 V | | | |
| Rated operational current | I _e | Α | 50 |
| Contacts | | Quantity | 2 |
| 60 V | | | |
| Rated operational current | I _e | Α | 50 |
| Contacts | | Quantity | |
| 120 V | | | |
| Rated operational current | I _e | Α | 25 |
| Contacts | | Quantity | |
| Control circuit reliability at 24 V DC, 10 mA | Fault | H _F | |
| Control circuit renability at 24 V DG, 10 IIIA | probability | ''F | < 10 ⁻⁵ ,< 1 failure in 100,000 switching operations |
| Terminal capacities | | | |
| Solid or stranded | | mm^2 | 1 x (2,5 - 35) 2 x (2,5 - 10) |
| Flexible with ferrules to DIN 46228 | | 2 | 1 x (1.5 - 25) |
| TICAIDIC WITH TOTALICS TO DITY 40220 | | mm ² | 2 x (1.5 - 6) |
| Terminal screw | | | M5 |
| Tightening torque for terminal screw | | Nm | 3 |
| Technical safety parameters: | | | |
| Notes | | | B10 _d values as per EN ISO 13849-1, table C1 |
| Rating data for approved types | | | |
| Contacts | | | |
| Rated operational voltage | U _e | V AC | 600 |
| Rated uninterrupted current max. | | | |
| Main conducting paths | | | |
| General use | | Α | 100 |
| Notes | | | If used with neutral conductor: $I_U = max. 90 A$ |
| Auxiliary contacts | | | |
| General Use | lu | Α | 10 |
| Pilot Duty | | | A 600 |
| Switching capacity | | | P 600 |
| Switching capacity Maximum motor rating | | | |
| Maximum motor rating | | | |
| Single-phase | | ЦΡ | |
| 120 V AC | | HP | 5 |
| 200 V AC | | HP | 10 |
| 240 V AC | | HP | 15 |
| Three-phase | | ш | 20 |
| 200 V AC | | HP | 20 |
| | | | · n- |
| 240 V AC | | HP | 25 |
| 240 V AC 480 V AC | | НР | 60 |
| 240 V AC | | | |

| Basic Rating | kA | 10 |
|--|-------|--------|
| max. Fuse | Α | 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

| 2001gii 1011110441011 40 por 120, 211 01 100 | | | |
|--|-------------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | In | Α | 100 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 7.5 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P _{vs} | W | 0 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 50 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects | | | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | | 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])

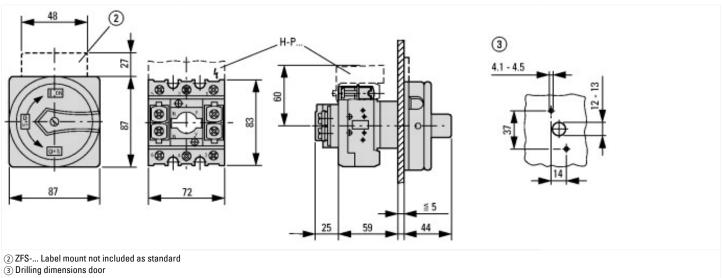
| [AKI 0000 13]) | | | |
|--|---|-----|--|
| Version as main switch | | Yes | |
| Version as maintenance-/service switch | | Yes | |
| Version as safety switch | | No | |
| Version as emergency stop installation | | Yes | |
| Version as reversing switch | | No | |
| Number of switches | | 1 | |
| Max. rated operation voltage Ue AC | V | 690 | |

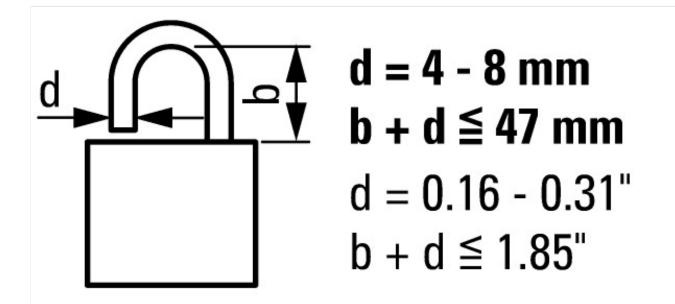
| Rated permanent current lu A 100 Rated permanent current at AC-23, 400 V A 100 Rated permanent current at AC-21, 400 V A 100 Rated permanent current at AC-23, 400 V kW 37 Rated operation power at AC-23, 400 V kW 55 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current lq kA 4 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally copen contact 0 0 Number of auxiliary contacts as normally copen contact 0 0 Number of auxiliary contacts as normally copen contact 0 0 Motor drive optional No No Motor drive integrated No No Voltage release optional Po No Device construction Po No Sutable for ground mounting Po No Sutable for ground mo | | | |
|--|---|----|--|
| Rated permanent current at AC-23, 400 V A 100 Rated permanent current at AC-21, 400 V kW 37 Rated operation power at AC-3, 400 V kW 55 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 4 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as change-over contact 0 0 Motor drive optional No No Motor drive optional No No Motor drive optional No No Suitable for ground mounting No No Suitable for front mounting 4-hole Yes No Suitable for front mounting centre No No Suitable for front mounting centre | Rated operating voltage | V | 690 - 690 |
| Rated permanent current at AC-21, 400 V A 100 Rated operation power at AC-3, 400 V kW 37 Rated short-time withstand current lcw kA 2 Rated short-time withstand current lcw kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kW 55 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally open contact 0 0 Motor drive optional No No Motor drive integrated No No Vottage release optional No No Device construction No No Suitable for ground mounting Yes No Suitable for front mounting 4-hole Yes No Suitable for finithmendiate mounting No No Suitable for intermediate mounting No No Colour control element No No Type of control element No No | Rated permanent current lu | Α | 100 |
| Rated operation power at AC-3, 400 V kW 37 Rated short-time withstand current lcw kA 2 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kA 4 Conditioned rated short-circuit current Iq kA 4 Number of poles 3 3 Number of auxiliary contacts as normally open contact 0 0 Number of auxiliary contacts as change-over contact 0 No Motor drive integrated No No Voltage release optional No No Device construction Built-in device fixed built-in technique Suitable for front mounting 4-hole Yes No Suitable for front mounting centre No No Suitable for intermediate m | Rated permanent current at AC-23, 400 V | Α | 100 |
| Rated short-time withstand current low Rated operation power at AG-23, 400 V Rwitching power at 400 V Rwitching power at 400 V Roditioned rated short-circuit current Iq Rumber of poles Rumber of auxiliary contacts as normally closed contact Rumber of auxiliary contacts as normally open contact Rumber of auxiliary contacts as normally open contact Rumber of auxiliary contacts as change-over contact Rumber of auxiliary contacts as commally closed contact Rumber of auxiliary contacts as contact as commally closed contact Rumber of auxiliary contacts as commally closed contact Rumber of auxiliary contacts as commal | Rated permanent current at AC-21, 400 V | Α | 100 |
| Rated operation power at AC-23, 400 V Switching power at 400 V Conditioned rated short-circuit current Iq Number of poles Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated Notor drive integrated built-in technique Notor drive integrated built-i | Rated operation power at AC-3, 400 V | kW | 37 |
| Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 4 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally open contact 0 0 Motor drive optional No 0 Motor drive integrated No No Voltage release optional No No Device construction Built-in device fixed built-in technique Suitable for ground mounting No No Suitable for front mounting 4-hole Yes No Suitable for front mounting centre No No Suitable for intermediate mounting No No Suitable for intermediate mounting No No Suitable for intermediate mounting No No Colour control element No No Type of control element Poor coupling rotary drive Type of control element Poor coupling rotary drive Type of electrical connection of main circuit Socrew connecti | Rated short-time withstand current lcw | kA | 2 |
| Conditioned rated short-circuit current Iq KA 4 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as normally open contact 0 0 Number of auxiliary contacts as change-over contact 0 0 Motor drive optional No 0 Motor drive integrated No 0 Voltage release optional No Built-in device fixed built-in technique Suitable for ground mounting No Built-in device fixed built-in technique Suitable for front mounting 4-hole Yes Suitable for distribution board installation No No Suitable for intermediate mounting No No Colour control element No Red Type of control element Poor coupling rotary drive Interlockable Yes Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side Fes | Rated operation power at AC-23, 400 V | kW | 55 |
| Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting 4-hole Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side No Screw connection Beginn and suitable for mental side on the circuit on the connection of main circuit Degree of protection (IP), front side | Switching power at 400 V | kW | 55 |
| Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional No Notor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre No Suitable for distribution board installation No Suitable for intermediate mounting Colour control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side O O O O O O O O O O O O O | Conditioned rated short-circuit current Iq | kA | 4 |
| Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Notor drive optional Notor drive integrated Notor drive integrated built-in technique Notor drive | Number of poles | | 3 |
| Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side | Number of auxiliary contacts as normally closed contact | | 0 |
| Motor drive optional Motor drive integrated Motor drive integrated No Voltage release optional No Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for firont mounting centre Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side | Number of auxiliary contacts as normally open contact | | 0 |
| Motor drive integrated No Voltage release optional Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side | Number of auxiliary contacts as change-over contact | | 0 |
| Voltage release optional No Device construction Built-in device fixed built-in technique Suitable for ground mounting No Suitable for front mounting 4-hole Yes Suitable for front mounting centre No Suitable for distribution board installation No Suitable for intermediate mounting No Colour control element Red Type of control element Door coupling rotary drive Interlockable Yes Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP65 | Motor drive optional | | No |
| Device construction Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Built-in device fixed built-in technique No Suitable for sixed built-in technique No Red Red Pes Screw connection IP65 | Motor drive integrated | | No |
| Suitable for ground mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No Screw connection | Voltage release optional | | No |
| Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes No No Door coupling rotary drive Yes Screw connection IP65 | Device construction | | Built-in device fixed built-in technique |
| Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No Red Door coupling rotary drive Yes Type of electrical connection of main circuit Degree of protection (IP), front side No No Screw connection No Red Door coupling rotary drive Yes Type of electrical connection of main circuit Degree of protection (IP), front side | Suitable for ground mounting | | No |
| Suitable for distribution board installation Suitable for intermediate mounting No Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No Red Door coupling rotary drive Yes Screw connection IP65 | Suitable for front mounting 4-hole | | Yes |
| Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No Red Door coupling rotary drive Yes Screw connection IP65 | Suitable for front mounting centre | | No |
| Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Red Door coupling rotary drive Yes Screw connection IP65 | Suitable for distribution board installation | | No |
| Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Door coupling rotary drive Yes Screw connection IP65 | Suitable for intermediate mounting | | No |
| Interlockable Yes Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP65 | Colour control element | | Red |
| Type of electrical connection of main circuit Degree of protection (IP), front side Screw connection IP65 | Type of control element | | Door coupling rotary drive |
| Degree of protection (IP), front side | Interlockable | | Yes |
| | Type of electrical connection of main circuit | | Screw connection |
| Degree of protection (NEMA) 12 | Degree of protection (IP), front side | | IP65 |
| | Degree of protection (NEMA) | | 12 |

Approvals

| Product Standards | UL 60947-4-1;CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking |
|-----------------------------|---|
| UL File No. | E36332 |
| UL Category Control No. | NLRV |
| CSA File No. | 12528 |
| CSA Class No. | 3211-05 |
| North America Certification | UL listed, CSA certified |
| Suitable for | Branch circuits, suitable as motor disconnect |
| Degree of Protection | IEC: IP65; UL/CSA Type 1, 12 |

Dimensions





≦3 padlocks