DATASHEET - P1-25/I2H/SVB



Main switch, 3 pole, 25 A, Emergency-Stop function, Lockable in the 0 (Off) position, surface mounting, hard knockout version



Part no. Catalog No. P1-25/I2H/SVB 226900

Technical data

| SandadNoSche Wirk, Victorian, Life, Schwirk, Victorian, Sche Schwirk, Victorian, Schwirk, Victori | General | | | |
|---|---|------------------|-------------------|--|
| Note: Second and in the Control of ECCN and | General Standards | | | |
| Barbare traperior Barbare traperior Barbare traperior Barbare traperior Excluse S | | | | Switch-disconnector according to IEC/EN 60947-3 |
| ExcludeNoSolaSolaBardampile winder durageVarigeVarigeVarigeMariner order durageVarigeVarigeVarigeAdd Sys DrVarigeVarigeVarigeAdd Sys DrVarigeVarigeVarigeAdd Sys DrVarigeVarigeVarigeMariner order durage dur | Climatic proofing | | | |
| Developing a class of symple of a symp | Ambient temperature | | | |
| Rared inputs withtand voltage Um Um Out Out< | Enclosed | | °C | -25 - +40 |
| MetalacitabackeristanceggggAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceAuralizacitabackeristanceBackaralizacitabackeristance <td>Overvoltage category/pollution degree</td> <td></td> <td></td> <td>111/3</td> | Overvoltage category/pollution degree | | | 111/3 |
| Monting positionIn equidamental sectorContractContractNumber drabbasicNumber dr | Rated impulse withstand voltage | U _{imp} | V AC | 6000 |
| Contracts Contracts <thcontracts< th=""> <thcontracts< th=""> <thc< td=""><td>Mechanical shock resistance</td><td></td><td>g</td><td>15</td></thc<></thcontracts<></thcontracts<> | Mechanical shock resistance | | g | 15 |
| Mechanical variables Analysis Analysis Number of poles Number of poles Number of poles Analysis | Mounting position | | | As required |
| Number of polesPart of polePart of poleAubiary contactsNoNoNoAubiary contactsNoNoNoRed operational voltageNoNoSoRed operational voltageNoNoSoRed operational voltageNoNoSoNote on rack uninterrupted current 1,NoNoSoAbd 25% DFNoNoSoAbd 25% DFNoNoSoAbd 5% DFNoNoAbd 5% DFNoNoSoAbd 5% DFNoNoSoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNoNoNoAbd 5% DFNo | Contacts | | | |
| Audiary contactsImage: section of the sec | Mechanical variables | | | |
| Image of the sector of the s | Number of poles | | | 3 pole |
| NCNCNCNCBetween leverated sets sets sets sets sets sets sets s | Auxiliary contacts | | | |
| Beterical characteristicsNeNeNeNeRed operational voltageNeNeSecondRed operational voltageNeSecondSecondNot on rated uninterrupted current laNeSecondSecondAB 2% DFNeSecondSecondSecondAB 2% DFNeSecondSecondSecondAB 2% DFNeSecondSecondSecondNot on rated uninterrupted current laNeSecondSecondAB 2% DFNeSecondSecondSecondNot on rated short-line voltation durint la current laNeSecondSecondNot on rated short-line voltation durint la current laNeSecondSecondNet on rated short-line voltation durint la current la curr | | | N/0 | 0 |
| Read operational voltageNeVector90Relation interrupted current lyuASNot on rated uninterrupted current lyuRelation interrupted current lySRelation interrupted current lyvRelation interrupted current lySA B d % DFvNeSSA B d % DFvNeSSA B d % DFvNeSSShort-circuit BvNeSSShort-circuit BvNeSSShort-circuit BvNeSSNot on rated short-time withstand current lowNeSSShort-circuit BNeNeSSShort-circuit BNeNeSS | | | N/C | 0 |
| Bade uninterrupted current lu Image of the second current lu sepecified for max. cross-section. Note on rated uninterrupted current lu Fee Rated uninterrupted current lu sepecified for max. cross-section. A B 25% 0 F Image of the second current lu sepecified for max. cross-section. Image of the second current lu sepecified for max. cross-section. A B 25% 0 F Image of the second current lu sepecified for max. cross-section. Image of the second current lu sepecified for max. cross-section. A B 25% 0 F Image of the second current lu sepecified for max. cross-section. Image of the second current lu second c | Electrical characteristics | | | |
| Net on rated uninterrupted current luis specified for max. cross-section.Ada 25% DFFRetuninterrupted current luis specified for max. cross-section.Ada 25% DFFRetuninterrupted current luis specified for max. cross-section.Ada 26% DFFRetuninterrupted current luis specified for max. cross-section.Ada 26% DFFRetuninterrupted current luis currentAba 26% DFFRetuninterrupted current luis currentShort-circuit ratingFRetuninterrupted current luis currentFue de contention short-tircuit currentRetuninterrupted current luis currentNet con rated short-tircuit currentRetuninterrupted current luis currentNet con rated making capacity as por IEC 60947-3Retuninterrupted current luis currentAda 200 \Retuninterrupted current luis currentAda 201 \ </td <td>Rated operational voltage</td> <td>Ue</td> <td>V AC</td> <td>690</td> | Rated operational voltage | Ue | V AC | 690 |
| datating with intermittent operation, class 12ProveRefSecondA B 2% 0 FSSSA B 0% 0 FSSSA B 0% 0 FSSSFuseA 0%SSBated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSBated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSNote our rated short-time withstand current (s current)Image: SSSBated short-time withstand current (s current)Image: SSSSNote our rated short-time withstand current (s current)Image: SSSSBated short-time withstand current (s current)Image: SS | Rated uninterrupted current | l _u | А | 25 |
| AB 2% DF اد xia 2 AB 40% DF xia 16 AB 60% DF xia 13 Short-circuit rating xia 3 Fuse A gfor 64 Atted short-time withstand current (1s current) xia A gfor Note on rated short-time withstand current (2s current) xia A gfor Stated short-time withstand current (2s current) xia A gfor Stated short-time withstand current (2s current) xia A gfor Stated short-time withstand current (2s current) xia A gfor Stated transing capacity as per IEC 60947-3 xia 3 Stated transing capacity cas per IEC 60947-3 A a 3 Stated transing capacity cas per IEC 60947-3 A a 3 Stated transing capacity cas per IEC 60947-3 A a 3 Stated transing capacity cas per IEC 60947-3 A a 3 Stated transing capacity cas per IEC 60947-3 A a 3 Stated transing capacity cas per IEC 60947-3 A a 3 State statation to EN 61140 Xia | Note on rated uninterrupted current !u | | | Rated uninterrupted current $\mathbf{I}_{\mathbf{u}}$ is specified for max. cross-section. |
| AB 40 % DF AB 60 % DF Ke Ke Ke AB 60 % DF A 60 % A 100 % A 100 % Short-circuit ator A 100 % A 100 % Current for a time of 1 second Fuse A 100 % A 100 % Current for a time of 1 second Note on rated short-time withstand current (1 s current) Ke A 100 % Current for a time of 1 second Note on rated short-time withstand current (1 s current) Ke A 10 % Current for a time of 1 second Note on rated short-time withstand current (1 s current) Ke A 10 % Current for a time of 1 second Status conditional short-time withstand current (1 s current) Ke A 10 % A 10 % Status conditional short-time withstand current (1 s current) Ke A 10 % A 10 % Status conditional short-time withstand current (1 s current) Ke A 10 % A 10 % Status conditional short-time withstand current (1 s current) Ke A 10 % A 10 % Status conditional short-time with short contact short sh | Load rating with intermittent operation, class 12 | | | |
| AB 60 % DFAB 60 % DFAB 60 % DFAB 60 % DFAB 60 % DFA 60 % DF | AB 25 % DF | | x I _e | 2 |
| Bis Image: state short-inc withstand current (1 s current) Image: state short-inc with (1 | AB 40 % DF | | x I _e | 1.6 |
| FuseIntermediate secondIntermediate secondIntermediate secondRated short-time withstand current lowIntermediate secondIntermediate secondNameIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated conditional short-circuit currentIntermediate secondIntermediate secondIntermediate secondRated breaking capacity as per IEC 60947-3Intermediate secondIntermediate secondIntermediate second230 VIntermediate secondIntermediate secondIntermediate secondIntermediate second200 VIntermediate secondIntermediate secondIntermediate secondIntermediate second600 VIntermediate secondIntermediate seco | AB 60 % DF | | x I _e | 1.3 |
| Aled short-time withstand current [1 s current] Image: Participation of the stand current [1 s current] Participation [1 s current] Participatin [1 s current] Participation [1 s current] | Short-circuit rating | | | |
| Note on rated short-time withstand current low Note Note Test of a time of 1 second Rated conditional short-circuit current I I current for a time of 1 second I current for a time of 1 second Switching capacity Sourceine I current for a time of 1 second I current for a time of 1 second Switching capacity Sourceine I current for a time of 1 second I current for a time of 1 second Switching capacity Sourceine I current for a time of 1 second I current for a time of 1 second Switching capacity Sourceine I current for a time of 1 second I current for a time of 1 second Switching capacity core to IEC 60947-3 I current for a time of 1 second I current for a time of 1 second Sourceine I current for a time of 1 second I current for a time of 1 second I current for a time of 1 second Sourceine I current for a time of 1 second I current for a time of 1 second I current for a time of 1 second Sourceine I current for a time of 1 second I current for a time of 1 second I current for a time of 1 second Sourceine I current for a time of 1 second I current for a time of 1 second I current for a time of 1 second | Fuse | | A gG/gL | 25 |
| Rade conditional short-circuit current Iq Rade Solution Source-construit current Image: Solution of the state shore s | Rated short-time withstand current (1 s current) | I _{cw} | A _{rms} | 640 |
| Automatical space by as per IEC 60947-3 Automatical space by as pe | Note on rated short-time withstand current lcw | | | Current for a time of 1 second |
| cos φ rated making capacity as per IEC 60947-3 A 40 Rated breaking capacity cos φ to IEC 60947-3 A A 230 V A 90 400/415 V A 90 500 V A 10 690 V A 70 Sete isolation to EN 61140 A A between the contacts VAC 40 Curren theat loss per contact at I ₀ VAC 40 Maximum operating frequency Operations x10 ⁶ AC-3 Per tots 20 Rating, motr load switch Per tots X10 ⁶ Rating, motr load switch Per tots X10 ⁶ | Rated conditional short-circuit current | Ιq | kA | 50 |
| Ated breaking capacity cos & to LEC 60947-3AA230 VAA50400/15 VA5050500 VA7070690 VA1070501 VVVV502 VVV70503 VVV70504 vVV70505 VVV10505 VVVV505 VVVV505 VVVV505 VVVV505 VVVV505 V | Switching capacity | | | |
| 230 VA9400/415 VA10500 VA10690 VA10690 VA10Stafe isolation to EN 61140VAbetween the contactsV40Current heat loss per contact at I _e OperationsNAtimum operating frequencyOperationsNAC-3A10Ating, moto load switchPKWAting, moto load switchPKW | cos φ rated making capacity as per IEC 60947-3 | | A | 240 |
| 400/415 V A 50 500 V A 70 600 V A 50 600 V A 50 600 V A 50 Safe isolation to EN 61140 V V between the contacts at I _e V V Current heat loss per contact at I _e V V Lifespan, mechanical Operations/ Y Act Dereations/ Y Act A Sol Act Act P W Rating moter load switch P W | Rated breaking capacity cos φ to IEC 60947-3 | | A | |
| 50 VA70690 VA50Safe isolation to EN 61140VVbetween the contactsVACVACformer theat loss per contact at IgVACVACLifespan, mechanicalOperationsYaGActionPerations/HSoActionPerations/HPerations/HAction< | 230 V | | А | 190 |
| فول المعالية | 400/415 V | | A | |
| Safe isolation to EN 61140 Image: solation to EN 61140 between the contacts V AC between the contacts at le V AC Current heat loss per contact at le V AC Lifespan, mechanical Operations Act-a V AC | 500 V | | A | 170 |
| between the contacts at lease per contact at lease | 690 V | | A | 150 |
| Current heat loss per contact at le W 1.1 Lifespan, mechanical Operations ${}_{10}^{OP}$ >0.3 Maximum operating frequency Operations/h ${}_{10}^{OP}$ >0.3 AC-3 Action Action Action Action Rating, motor load switch P Action Action | Safe isolation to EN 61140 | | | |
| Lifespan, mechanical Operations x 10 ⁶ > 0.3 Maximum operating frequency Operations/h 120 AC-3 I I Rating, motor load switch P KW | between the contacts | | | 440 |
| Maximum operating frequency Operations/h 1200 AC-3 F F Rating, motor load switch P KW | Current heat loss per contact at l _e | | W | 1.1 |
| AC-3 P kW | Lifespan, mechanical | Operations | x 10 ⁶ | > 0.3 |
| AC-3 Rating, motor load switch P kW | Maximum operating frequency | Operations/h | | 1200 |
| Rating, motor load switch P kW | AC | | | |
| - | AC-3 | | | |
| 220 V 230 V P kW 5.5 | Rating, motor load switch | Р | kW | |
| | 220 V 230 V | Р | kW | 5.5 |

| 400 V 415 V | Р | kW | 7.5 |
|---|----------------------|-----------------|---|
| 500 V | Р | kW | 7.5 |
| 690 V | Р | kW | 7.5 |
| Rated operational current motor load switch | | | |
| 230 V | ۱ _e | А | 19.6 |
| 400V 415 V | le | A | 15.2 |
| 500 V | I _e | A | 12.1 |
| 690 V | l _e | A | 8.8 |
| AC-21A | ·e | ~ | |
| | | | |
| Rated operational current switch | | ٨ | 25 |
| 440 V | l _e | A | 25 |
| AC-23A | | | |
| Motor rating AC-23A, 50 - 60 Hz | Р | kW | |
| 230 V | Р | kW | 5.5 |
| 400 V 415 V | Р | kW | 11 |
| 500 V | Р | kW | 11 |
| 690 V | Р | kW | 11 |
| Rated operational current motor load switch | | | |
| 230 V | ۱ _e | А | 25 |
| 400 V 415 V | ۱ _e | А | 25 |
| 500 V | Ι _e | А | 17.4 |
| 690 V | l _e | А | 12.6 |
| DC | | | |
| DC-1, Load-break switches L/R = 1 ms | | | |
| Rated operational current | l _e | A | 25 |
| Voltage per contact pair in series | 0 | V | 60 |
| DC-23A, motor load switch L/R = 15 ms | | - | |
| 24 V | | | |
| Rated operational current | I _e | A | 25 |
| Contacts | ·e | Quantity | |
| 48 V | | Quantity | |
| Rated operational current | | A | 25 |
| | l _e | Quantity | |
| Contacts | | uuanuty | 2 |
| 60 V | | | |
| Rated operational current | l _e | A | 25 |
| Contacts | | Quantity | 2 |
| 120 V | | | |
| Rated operational current | l _e | A | 12 |
| Contacts | | Quantity | 3 |
| Control circuit reliability at 24 V DC, 10 mA | Fault probability | H _F | < 10 ⁻⁵ , < 1 fault in 100000 operations |
| Terminal capacities | | • | 4 (45 0) |
| Solid or stranded | | | 1 x (1,5 - 6) 2 x (1,5 - 6) |
| Flexible with ferrules to DIN 46228 | | mm ² | 1 x (1 - 4) 2 x (1 - 4) |
| Terminal screw | | | M4 |
| Tightening torque for terminal screw | | Nm | 1.6 |
| 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 | | А | 20 |
| | | | |

| Auxiliary contacts | | | |
|--|----|-------|----------------|
| General Use | lu | А | 10 |
| Pilot Duty | | | A 600 P 600 |
| Switching capacity | | | |
| Maximum motor rating | | | |
| Single-phase | | | |
| 120 V AC | | HP | 1 |
| 200 V AC | | HP | 2 |
| 240 V AC | | HP | 3 |
| Three-phase | | | |
| 200 V AC | | HP | 3 |
| 240 V AC | | HP | 5 |
| 480 V AC | | HP | 10 |
| 600 V AC | | HP | 15 |
| Short Circuit Current Rating | | SCCR | |
| Basic Rating | | kA | 5 |
| max. Fuse | | А | 110 |
| High fault rating | | kA | 10 |
| max. Fuse | | Α | 50, Class J |
| Terminal capacity | | | |
| Solid or flexible conductor with ferrule | | AWG | 14 - 8 |
| Terminal screw | | | M4 |
| Tightening torque | | lb-in | 14.1 |

Design verification as per IEC/EN 61439

| . | | | |
|---|-------------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | In | А | 25 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 1.1 |
| 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 | 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])

| [ARI 000010]) | | |
|---|----|----------------------------|
| 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 |
| Rated permanent current lu | А | 25 |
| Rated permanent current at AC-23, 400 V | А | 25 |
| Rated permanent current at AC-21, 400 V | А | 25 |
| Rated operation power at AC-3, 400 V | kW | 7.5 |
| Rated short-time withstand current lcw | kA | 0.64 |
| Rated operation power at AC-23, 400 V | kW | 13 |
| Switching power at 400 V | kW | 13 |
| Conditioned rated short-circuit current Iq | kA | 80 |
| Number of poles | | 3 |
| Number of auxiliary contacts as normally closed contact | | 0 |
| Number of auxiliary contacts as normally open contact | | 0 |
| Number of auxiliary contacts as change-over contact | | 0 |
| Motor drive optional | | No |
| Motor drive integrated | | No |
| Voltage release optional | | No |
| Device construction | | 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 | | 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 |
| 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 |

Specially designed for North America

Suitable for

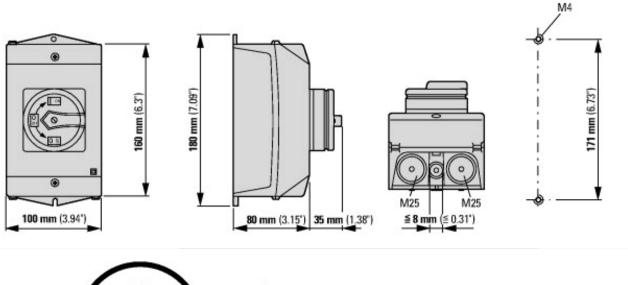
Degree of Protection

Yes, additional labeling according to UL on the enclosure in combination with "+NA-12" (105866)

Branch circuits, suitable as motor disconnect

IEC: IP65; UL/CSA Type 1, 12

Dimensions



d = 4 - 8 mm $b + d \leq 47 mm$ d = 0.16 - 0.31'' $b + d \leq 1.85''$

≦ 3 padlocks