

Product data sheet

Specifications



safety module, Harmony XPSU, Cat 4, features XPSUAF with PNP or NPN, safety mat, 24V AC or DC, screw

XPSUAK12AP

Main

| | |
|---------------------------|--|
| Range of product | Harmony Safety Automation |
| Product or component type | Safety module |
| Safety module name | XPSUAK |
| Safety module application | Monitoring antivalent contacts For emergency stop, guard and light curtain monitoring Monitoring of pressure-sensitive 4-wire protective devices |
| Function of module | Emergency stop button with 2 NC contacts Guard monitoring with 1 or 2 limit switches Monitoring 2 PNP sensors Magnetic switch monitoring Light curtain monitoring RFID switch Monitoring of electro-sensitive protection equipment (ESPE) Sensing mat/edges Proximity sensor monitoring Monitoring 1 PNP + 1 NPN sensor |
| Safety level | Can reach PL e/category 4 for normally open relay contact conforming to ISO 13849-1 Can reach SIL 3 for normally open relay contact conforming to IEC 62061 Can reach SIL 3 for normally open relay contact conforming to IEC 61508 Can reach PL c/category 1 for normally closed relay contact conforming to ISO 13849-1 Can reach SIL CL 1 for normally closed relay contact conforming to IEC 62061 Can reach SIL 1 for normally closed relay contact conforming to IEC 61508 |
| Safety reliability data | MTTFd > 30 years conforming to ISO 13849-1 Dcavg >= 99 % conforming to ISO 13849-1 PFHd = 1.13E-09 conforming to ISO 13849-1 HFT = 1 conforming to IEC 62061 PFHd = 1.13E-09 conforming to IEC 62061 SFF > 99% conforming to IEC 62061 HFT = 1 conforming to IEC 61508-1 PFHd = 1.13E-09 conforming to IEC 61508-1 SFF > 99% conforming to IEC 61508-1 Type = B conforming to IEC 61508-1 |
| Electrical circuit type | NC pair PNP pair Antivalent pair OSSD pair |
| Connections - terminals | Removable screw terminal block, 0.2...2.5 mm ² solid or flexible Removable screw terminal block, 0.25...2.5 mm ² flexible with ferrule single conductor Removable screw terminal block, 0.2...1.5 mm ² solid or flexible twin conductor Removable screw terminal block, 2 x 0.25...1 mm ² flexible with ferrule without cable end, with bezel Removable screw terminal block, 2 x 0.5...1.5 mm ² flexible with ferrule with cable end, with bezel |
| [Us] rated supply voltage | 24 V AC - 15...10 % 24 V DC - 20...20 % |

Complementary

| | |
|---|--|
| Synchronisation time between inputs | 0.5 s 2 s 4 s |
| Type of start | Automatic/manual/monitored |
| Power consumption in W | 2.0 W 24 V DC |
| Power consumption in VA | 5.0 VA 24 V AC 50/60 Hz |
| Input protection type | Internal, electronic |
| safety outputs | 2 NO + 1 NC |
| safety inputs | 2 safety input 24 V DC 5 mA |
| maximum wire resistance | 500 Ohm |
| Input compatibility | Normally closed circuit conforming to ISO 14119 XC limit switch conforming to ISO 14119 Mechanical contact conforming to ISO 14119 Normally closed circuit conforming to ISO 13850 Antivalent pair conforming to ISO 14119 OSSD pair conforming to IEC 61496-1-2 3-wire proximity sensors PNP |
| [Ie] rated operational current | 5 A AC-1 for normally open relay contact 3 A AC-15 for normally open relay contact 5 A DC-1 for normally open relay contact 3 A DC-13 for normally open relay contact 3 A AC-1 for normally closed relay contact 1 A AC-15 for normally closed relay contact 3 A DC-1 for normally closed relay contact 1 A DC-13 for normally closed relay contact |
| control outputs | 3 on/off configurable pulsed output |
| Input/output type | Semiconductor pulsed diagnostic output 24 V DC, 20 mA Z1, not safety-related |
| [Ith] conventional free air thermal current | 8 A |
| Associated fuse rating | 10 A gG for NO relay output circuit conforming to IEC 60947-1 |
| Minimum output current | 10 mA for relay output |
| Minimum output voltage | 12 V for relay output |
| [Ui] rated insulation voltage | 250 V (pollution degree 2) conforming to IEC 60947-1 |
| [Uiimp] rated impulse withstand voltage | 4 kV overvoltage category II conforming to IEC 60947-1 |
| Mounting support | 35 mm symmetrical DIN rail |
| Depth | 120 mm |
| Height | 100 mm |
| Width | 22.5 mm |
| Net weight | 0.200 kg |

Environment

| | |
|---------------------------------------|---|
| Ambient air temperature for operation | -25...55 °C |
| Standards | IEC 60947-5-1 IEC 61508-1 functional safety standard IEC 61508-2 functional safety standard IEC 61508-3 functional safety standard IEC 61508-4 functional safety standard IEC 61508-5 functional safety standard IEC 61508-6 functional safety standard IEC 61508-7 functional safety standard ISO 13849-1 functional safety standard IEC 62061 functional safety standard |
| Product certifications | TÜV cULus |

| | |
|-------------------------|--|
| IP degree of protection | IP20 (terminals) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 IP54 (mounting area) conforming to IEC 60529 |
| Relative humidity | 5...95 % non-condensing |

Packing Units

| | |
|------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 6.500 cm |
| Package 1 Width | 13.500 cm |
| Package 1 Length | 15.500 cm |
| Package 1 Weight | 280.000 g |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 16 |
| Package 2 Height | 30.000 cm |
| Package 2 Width | 30.000 cm |
| Package 2 Length | 40.000 cm |
| Package 2 Weight | 5.186 kg |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 128 |
| Package 3 Height | 75.000 cm |
| Package 3 Width | 60.000 cm |
| Package 3 Length | 80.000 cm |
| Package 3 Weight | 50.324 kg |



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Environmental footprint

| | |
|----------------------------------|---|
| Total lifecycle Carbon footprint | 70 |
| Environmental Disclosure | Product Environmental Profile |

Use Better

Materials and Substances

| | |
|--|--|
| Packaging made with recycled cardboard | Yes |
| Packaging without single use plastic | No |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| SCIP Number | 152cf799-1df7-4892-81b4-4c890187f1d1 |
| REACH Regulation | REACH Declaration |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| PVC free | Yes |

Use Again

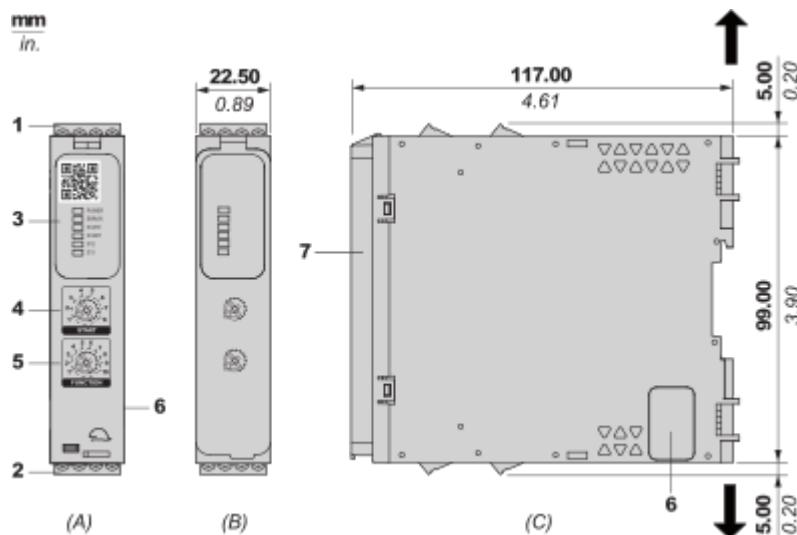
Repack and remanufacture

| | |
|---------------------------------|---|
| End of life manual availability | End of Life Information |
| Take-back | No |
| WEEE Label | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Dimensions Drawings

Dimensions

Front and Side Views



(A) : Product drawing

(B) : Screw clamp terminal

(C) : Side view

(1) : Removable terminal blocks, top

(2) : Removable terminal blocks, bottom

(3) : LED indicators

(4) : Start function selector

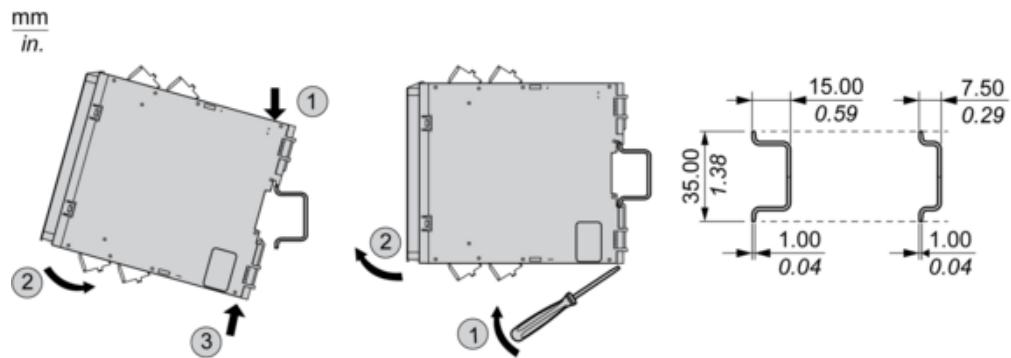
(5) : Function selector

(6) : Connector for optional output extension module (lateral)

(7) : Sealable transparent cover

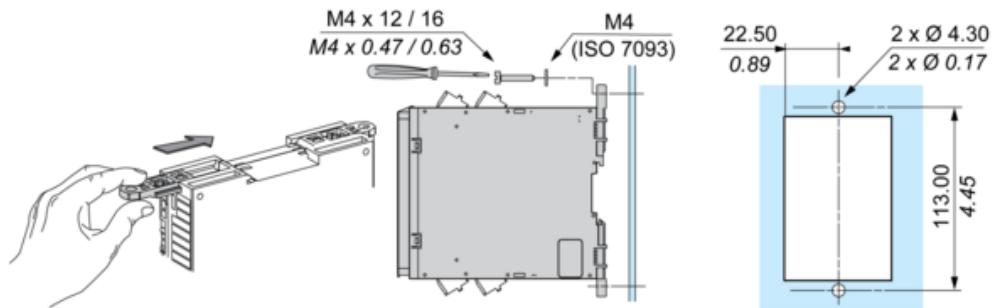
| | | | | | | | | | |
|-----------------|----------------------|------------|-----------|----------|---|----|------------|-------|------------|
| mm in. | 7.0–8.0 0.28–0.31 | | | | | | | | |
| mm ² | 0,2... 2,5 | 0,25...2,5 | 0,2...1,5 | 0,25...1 | 0,5...1,5 | | | | |
| AWG | 24... 12 | 24...12 | 24...16 | 24...18 | 20...16 | | | | |
| | | | | | <table> <tr> <td>Nm</td><td>0.5... 0.6</td></tr> <tr> <td>lb-in</td><td>4,4... 5,3</td></tr> </table> | Nm | 0.5... 0.6 | lb-in | 4,4... 5,3 |
| Nm | 0.5... 0.6 | | | | | | | | |
| lb-in | 4,4... 5,3 | | | | | | | | |

Mounting and Clearance

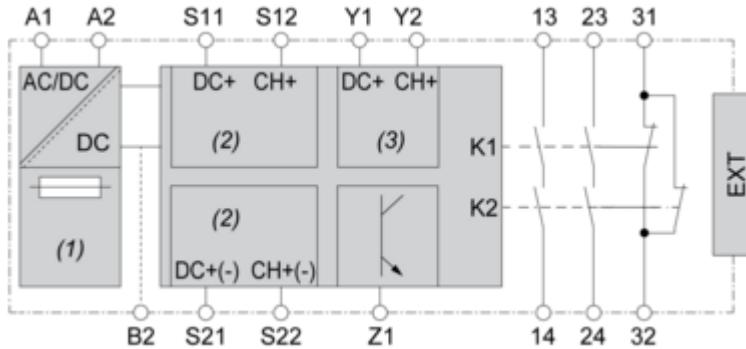
Mounting to DIN rail

Screw-mounting

mm
in.



Connections and Schema

Wiring Drawing

(1) : A1-A2 (Power supply)

(2) : S11-S12-S21-S22 (Single-channel safety input)

(3) : Y1-Y2 (Start)

13-23-31-14-24-32 : Output

EXT : Connector for optional extension module

B2 : Common ground terminal

Z1 : Pulsed output for diagnostics, not safety-related

Image of product / Alternate images

Alternative



