

# Product data sheet

Specifications



## safety module, Harmony XPSU, Cat 4, potential free 2 NC, NO NC, 2 PNP, 24V AC or DC, screw

XPSUAF13AP

### Main

Range of product	Harmony Safety Automation
Product or component type	Safety module
Safety module name	XPSUAF
Safety module application	Monitoring antivalent contacts For emergency stop, guard and light curtain monitoring
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) Proximity sensor monitoring
Safety level	Can reach PL e/category 4 conforming to ISO 13849-1 Can reach SILCL 3 conforming to IEC 62061 Can reach SIL 3 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 <sup>2</sup> solid or flexible Removable screw terminal block, 0.25...2.5 mm <sup>2</sup> flexible with ferrule single conductor Removable screw terminal block, 0.2...1.5 mm <sup>2</sup> solid or flexible twin conductor Removable screw terminal block, 2 x 0.25...1 mm <sup>2</sup> flexible with ferrule without cable end, with bezel Removable screw terminal block, 2 x 0.5...1.5 mm <sup>2</sup> 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

<b>Input protection type</b>	Internal, electronic
<b>Safety outputs</b>	3 NO
<b>Safety inputs</b>	2 safety input 24 V DC 5 mA
<b>Maximum wire resistance</b>	500 Ohm
<b>Input compatibility</b>	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
<b>[Ie] rated operational current</b>	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
<b>Control outputs</b>	3 on/off configurable pulsed output
<b>Input/Output type</b>	Semiconductor pulsed diagnostic output 24 V DC, 20 mA Z1, not safety-related
<b>[Ith] conventional free air thermal current</b>	8 A
<b>Associated fuse rating</b>	10 A gG for NO relay output circuit conforming to IEC 60947-1
<b>Minimum output current</b>	10 mA for relay output
<b>Minimum output voltage</b>	15 V for relay output
<b>Maximum response time on input open</b>	20 ms
<b>[Ui] rated insulation voltage</b>	250 V (pollution degree 2) conforming to EN/IEC 60947-1
<b>[Uimp] rated impulse withstand voltage</b>	4 kV overvoltage category II conforming to EN/IEC 60947-1
<b>Local signalling</b>	LED (green) for power ON LED (red) for error LED (yellow) for start LED (yellow) for safety status LED (yellow) for safety input S12 LED (yellow) for safety input S22
<b>Mounting support</b>	35 mm symmetrical DIN rail
<b>Depth</b>	120 mm
<b>Height</b>	100 mm
<b>Width</b>	22.5 mm
<b>Net weight</b>	0.200 kg

## Environment

<b>Standards</b>	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
<b>Product certifications</b>	TÜV cULus
<b>IP degree of protection</b>	IP20 (terminals) conforming to EN/IEC 60529 IP40 (housing) conforming to EN/IEC 60529 IP54 (mounting area) conforming to EN/IEC 60529
<b>Ambient air temperature for storage</b>	-25...85 °C
<b>Relative humidity</b>	5...95 % non-condensing

## Packing Units

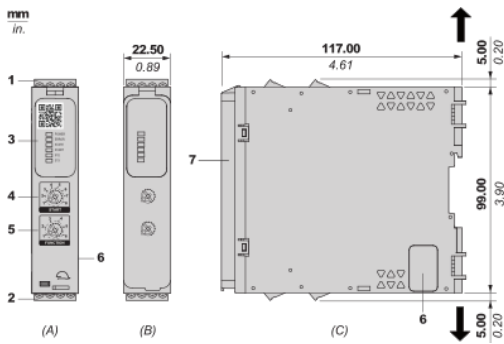
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.700 cm
Package 1 Width	13.700 cm
Package 1 Length	15.500 cm
Package 1 Weight	276.000 g
Unit Type of Package 2	S03
Number of Units in Package 2	16
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	5.100 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	50.772 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

**Dimensions**

**Front and Side Views**

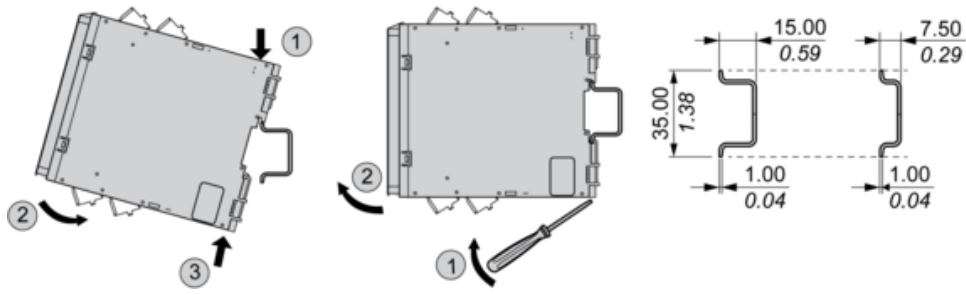


- (A) : Product drawing
- (B) : Screw clamp terminal
- (C) : Side view
- (1) : Removable terminal blocks, top
- (2) : Removable terminal blocks, bottom
- (3) : LED indicators
- (4) : Start function selector
- (5) : Function selector
- (6) : Connector for optional output extension module (lateral)
- (7) : Sealable transparent cover

mm in.	7.0–8.0 0.28–0.31					
mm <sup>2</sup>	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	
 Ø 3,5 mm (0.14 in)				Nm	0.5... 0.6	
				lb-in	4,4... 5,3	

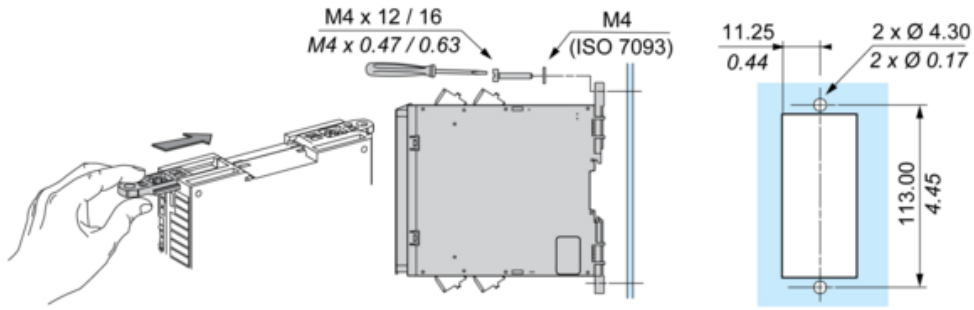
Mounting to DIN rail

mm  
in.



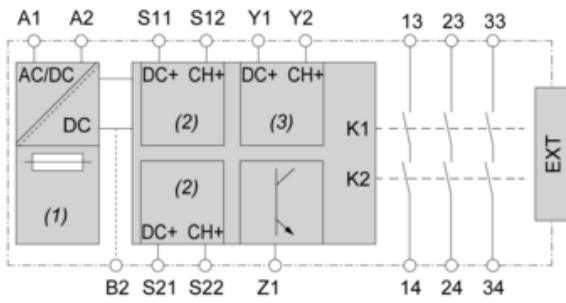
Screw-mounting

mm  
in.



**Wiring Drawing**

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(1) : A1-A2 (Power supply)

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

(3) : Y1-Y2 (Start)

13-23-33-14-24-34 : Output

EXT : Connector for optional extension module

B2 : Common ground terminal

Z1 : Pulsed output for diagnostics, not safety-related

**Recommended replacement(s)**