

# Product data sheet

Specifications



## Time delayed output, Harmony XPS, for Estop, guard, OSSD, 24 V AC/DC, screw

XPSBAT12A1AP

### Main

Range of product	Harmony Safety Automation
Product or component type	Safety module
Safety module name	XPSBAT
Safety module application	For emergency stop and protective guard applications For OSSD monitoring
Function of module	Emergency stop button with 2 NC contacts Guard monitoring with 1 or 2 limit switches Light curtain monitoring RFID switch Monitoring of electro-sensitive protection equipment (ESPE)
Safety level	Can reach PL e/category 4 for normally open relay contact conforming to ISO 13849-1 Can reach SILCL 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 SILCL 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 = 0.98E-09 conforming to ISO 13849-1 for SS0 PFHd = 0.96E-09 conforming to ISO 13849-1 for SS1 HFT = 1 conforming to IEC 62061 PFHd = 0.98E-09 conforming to IEC 62061 for SS0 PFHd = 0.96E-09 conforming to IEC 62061 for SS1 SFF > 99% conforming to IEC 62061 HFT = 1 conforming to IEC 61508-1 PFHd = 0.98E-09 conforming to IEC 61508-1 for SS0 PFHd = 0.96E-09 conforming to IEC 61508-1 for SS1 SFF > 99% conforming to IEC 61508-1 Type = B conforming to IEC 61508-1
Electrical circuit type	NC 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
Type of start	Automatic/manual/monitored
Power consumption in W	2 W 24 V DC
Power consumption in VA	5 VA 24 V AC 50/60 Hz

<b>Input protection type</b>	Internal, electronic
<b>Safety outputs</b>	2 NO immediate 1 NO configurable
<b>Safety inputs</b>	2 positive safety input 24 V DC 5 mA
<b>Maximum wire resistance</b>	500 Ohm
<b>Time delay range</b>	0...900 s
<b>Input compatibility</b>	Normally closed circuit conforming to ISO 14119 Mechanical contact conforming to ISO 14119 OSSD pair conforming to IEC 61496-1-2 Normally closed circuit conforming to ISO 13850 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 output 24 V DC, 20 mA Z1, not safety-related
<b>[Ith] conventional free air thermal current</b>	12 A
<b>Associated fuse rating</b>	6 A gG for NO relay output circuit conforming to IEC 60947-1
<b>Minimum output current</b>	20 mA for relay output
<b>Minimum output voltage</b>	24 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 with power marking for power ON LED red with error marking for error LED yellow with state 1 marking for safety output instantaneous LED yellow with state 2 marking for safety output delayed LED yellow with start 1 marking for start LED yellow with start 2 marking for start LED yellow with S12 marking for safety input S12 LED yellow with S22 marking 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>	45 mm
<b>Net weight</b>	0.350 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 operation</b>	-25...55 °C

Ambient air temperature for storage	-25...85 °C
Relative humidity	5...95 % non-condensing

## Packing Units

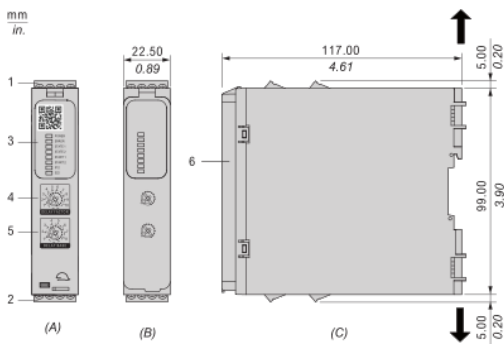
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	297 g
Package 1 Height	6.4 cm
Package 1 width	13.3 cm
Package 1 Length	15.3 cm
Unit Type of Package 2	S03
Number of Units in Package 2	16
Package 2 Weight	5.312 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm
Package 3 Height	30 cm

## 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
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</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
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**

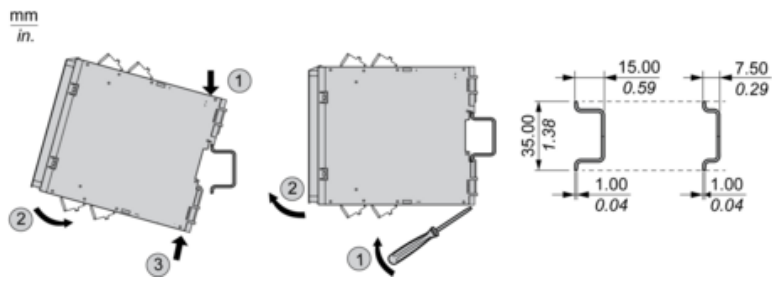


- (A) : Product drawing
- (B) : Screw clamp terminal
- (C) : Side view
- (1) : Removable terminal blocks, top
- (2) : Removable terminal blocks, bottom
- (3) : LED indicators
- (4) : Delay factor selector
- (5) : Delay base selector
- (6) : Sealable transparent cover

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 lb-in	0.5... 0.6 4,4... 5,3	

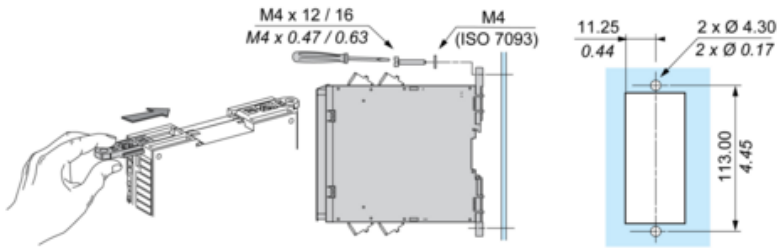
Mounting to DIN rail

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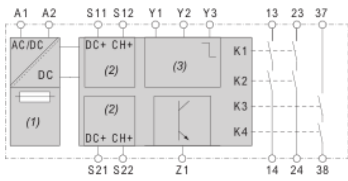
Screw-mounting

mm  
in.



Wiring Diagram

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(1) : A1-A2 (Power supply)

(2) : S11–S21 (Control outputs (DC+) of safety-related inputs), S12-S22 (Input channels (CH+) of safety-related inputs)

(3) : Y1 (Control output of Start/Restart input), Y2 (Input channel for automatic/manual start), Y3 (Input channel for monitored start with falling edge)

13-14-23-24 : Terminals of the safety-related outputs (instantaneous)

37-38 : Terminals of the safety-related outputs (delayed)

Z1 : Solid state output, not safety-related