

# Product data sheet

Specifications



**safety module, Harmony XPS, time delayed output, for Estop, guard, OSSD, 24V AC or 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

<b>Power consumption in W</b>	2 W 24 V DC
<b>Power consumption in VA</b>	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 off delay
<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 IEC 60947-1
<b>[Uiimp] rated impulse withstand voltage</b>	4 kV overvoltage category II conforming to 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>	22.5 mm
<b>Product 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

IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 IP54 (mounting area) conforming to IEC 60529
Ambient air temperature for operation	-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 Height	6.800 cm
Package 1 Width	13.800 cm
Package 1 Length	15.500 cm
Package 1 Weight	285.000 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	5.292 kg



## Environmental Data

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](#)**

## Use Again

### Repack and remanufacture

End of life manual availability [End of Life Information](#)

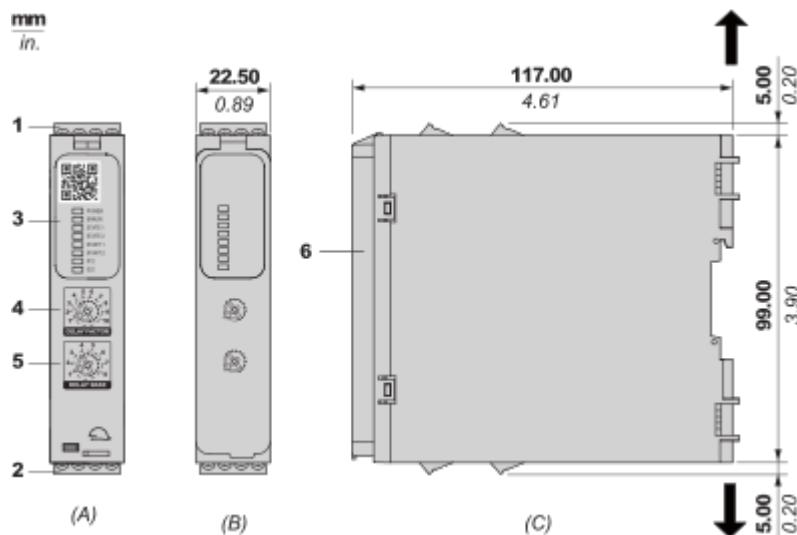
Take-back **No**

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

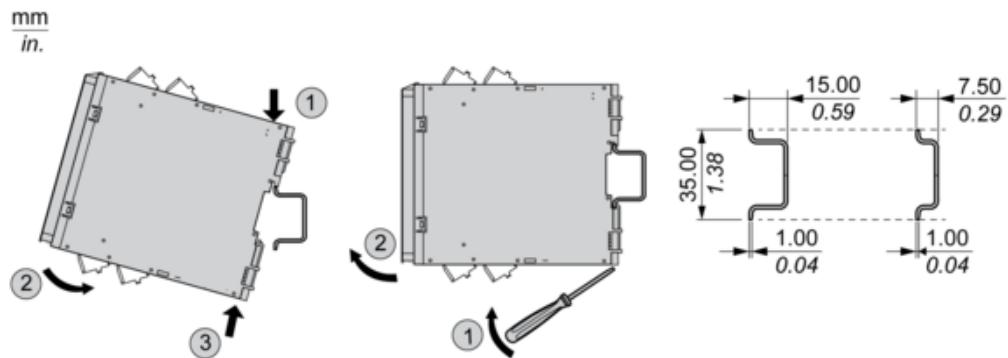
(4) : Delay factor selector

(5) : Delay base selector

(6) : Sealable transparent cover

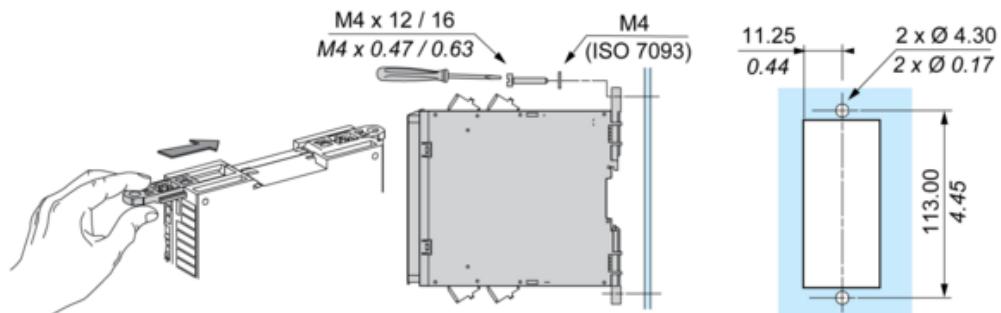
mm in.	7.0–8.0 0.28–0.31				
mm <sup>2</sup>	0,2... 2,5	0,25...2,5	0,2...1,5	0,25...1	0,5...1,5
AWG	24... 12	24...12	24...16	24...18	20...16
Ø 3,5 mm (0.14 in)		C		Nm lb-in	0.5... 0.6 4,4... 5,3

## Mounting and Clearance

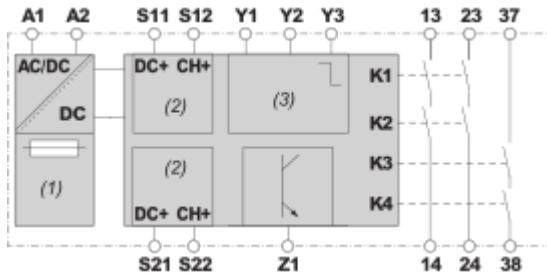
Mounting to DIN rail

Screw-mounting

mm  
in.



## Connections and Schema

Wiring Diagram

(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

Image of product / Alternate images

### Alternative

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