Product data sheet
Characteristics

XPSUVN31AP
safety module, Harmony XPS, zero speed monitoring with time delay, 48 to 240V AC or DC, screw



Main

Range of product	Harmony Safety Automation
Product or component type	Safety module
Safety module name	XPSUVN
Safety module application	For zero speed detection
Function of module	Monitoring 3-phase motor Monitoring 3-phase motor with star-delta starting Monitoring 3-phase motor with variable number of poles Monitoring 3-phase motor with variable number of poles and star-delta starting Monitoring dc motor Monitoring servo motor Monitoring 3-phase motor supplied by variable speed drive Monitoring 3-phase motor supplied by servo drive Controlling enegization to open of guard switch type XCSE, XCSLE, XCSLF, XCST
Safety level	Can reach PL e/category 3 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
Safety reliability data	MTTFd > 30 years conforming to ISO 13849-1 Dcavg = 98.9 % conforming to ISO 13849-1 PFHd = 2.44E-9 1/h conforming to ISO 13849-1 HFT = 1 conforming to IEC 62061 PFHd = 2.44E-9 1/h conforming to IEC 62061 SFF > 99% conforming to IEC 62061 HFT = 1 conforming to IEC 61508-1 PFHd = 2.44E-9 1/h conforming to IEC 61508-1 SFF > 99% conforming to IEC 61508-1 Type = B conforming to IEC 61508-1
Product certifications	TÜV[RETURN]cULus
[Us] rated supply voltage	48...240 V AC/DC - 10...10 %
Output type	Relay, 1 NO circuit(s), volt-free
Number of additional circuits	2 solid state outputs

Complementary

Power consumption in W	2.5 W
Power consumption in VA	5.5 VA
Input voltage	690 V
Input detection threshold	50 mV 65 mV 85 mV 110 mV 140 mV 180 mV 230 mV 300 mV 400 mV 500 mV
Time delay	0.5 s 1 s 2 s 3 s 5 s 8 s 12 s 20 s 35 s 60 s
[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
[Ith] conventional free air thermal current	6 A for NO relay output circuit
Associated fuse rating	6 A gG for relay output conforming to IEC 60947-1

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
Minimum output current	10 MA for relay output
Minimum output voltage	5 V for relay output
[Ui] rated insulation voltage	690 V phase to phase (pollution degree 2) conforming to IEC 60947-1 400 V phase to earth (pollution degree 2) conforming to IEC 60947-1
[Uimp] rated impulse withstand voltage	4 KV overvoltage category II conforming to IEC 60947-1
Local signalling	LED green with power marking for power ON LED red with error marking for error LED yellow with state marking for status LED yellow with L12 marking for input line comparison LED yellow with L32 marking for input line comparison
Connections - terminals	Removable screw terminal block solid or flexible cable: 0.2...2.5 mm² Removable screw terminal block flexible with ferrule cable: 0.25...2.5 mm² single conductor Removable screw terminal block solid or flexible cable: 0.2...1.5 mm² twin conductor Removable screw terminal block flexible with ferrule cable: 2 x 0.25...1 mm² without cable end, Removable screw terminal block flexible with ferrule cable: 2 x 0.5...1.5 mm² with cable end, w
Mounting support	35 mm symmetrical DIN rail
Depth	120 Mm
Height	100 Mm
Width	22.5 Mm
Net weight	0.2 Kg

Environment

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	-40…70 °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	6.5 Cm
Package 1 Width	13.5 Cm
Package 1 Length	15.5 Cm
Package 1 Weight	272.0 G
Unit Type of Package 2	S03
Number of Units in Package 2	16
Package 2 Height	30 Cm
Package 2 Width	30 Cm
Package 2 Length	40 Cm
Package 2 Weight	5.075 Kg

Offer Sustainability

Recyclability potential, in %	0
Total lifecycle Carbon footprint	86 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	4.828179975038751
Carbon footprint of the manufacturing phase [A1 to A3]	5 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.126234907243323
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.009724835587097183

Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	80.71103427526762
Carbon footprint of the use phase [B2, B3, B4, B6]	81 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	0.5946166389962003
Carbon footprint of the end-of-life phase [C1 to C4]	0.6 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	86
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	152cf799-1df7-4892-81b4-4c890187f1d1
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
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

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised