Safety automation system solutions

Preventa™ safety relay modules type XPSAF

For Emergency stop and switch monitoring

Operating principle

Safety modules XPSAF are designed to conform with category 4 of the standard EN 954-1/ISO 13849-1.
They are used for:
■ Monitoring Emergency stop circuits conforming to standards EN/ISO 13850 and EN/IEC 60204-1.
■ Electrical monitoring of switches activated by protection devices conforming to standard EN 1088/ISO 14119.

Housed in a compact enclosure, the modules have 3 safety outputs.
Preventa™ safety relay modules XPSAF●●●●P incorporate removable terminal blocks, thus optimizing machine maintenance.
To aid diagnostics, the modules have 3 LEDs on the front cover which provide information on the monitoring circuit status.
The Start button monitoring function is configurable depending on the wiring.

Characteristics

Module type				XPSAF5130	XPSAF5130P
Product designed for max. use in safety related parts of control systems (conforming to EN 954-1/ISO 13849-1)				Category 4 max.	
Conformity to standards				EN/IEC 60204-1, EN 1088/ISO 14119, EN/IEC 60947-5-1, EN/ISO 13850, EN 50082-2	
Product certifications				UL, CSA, BG	
Supply	Voltage		**V**	∼ and ⎓ 24	
	Voltage limits			- 15…+ 10%	
	Frequency		**Hz**	50/60	
Power consumption			**VA**	≤ 5	
Module inputs fuse protection				Internal, electronic	
Start button monitoring				Yes/No (configurable by terminal connections)	
Control unit voltage and current				⎓ 24 V/30 mA approx. (at nominal supply voltage)	
Maximum wiring resistance RL			Ω	90	
Synchronization time between inputs A and B				Unlimited	
Outputs	Voltage reference			Relay hard contacts	
	Number and type of safety circuits			3 N.O. (13-14, 23-24, 33-34)	
	Breaking capacity in AC-15		**VA**	C300: inrush 1800, maintained 180	
	Breaking capacity in DC-13			24 V/1.5 A - L/R = 50 ms	
	Max. thermal current (Ithe)		**A**	6	
	Max. total thermal current		**A**	18	
	Output fuse protection		**A**	4 gG or 6 fast acting, conforming to EN/IEC 60947-5-1, DIN VDE 0660 part 200	
	Minimum current		**mA**	10	
	Minimum voltage		**V**	17	
Electrical life				See page 2/172	
Response time on input opening			**ms**	≤ 40	
Rated insulation voltage (Ui)			**V**	300 (degree of pollution 2 conforming to EN/IEC 60947-5-1, DIN VDE 0110 parts 1 & 2)	
Rated impulse withstand voltage (Uimp.)			**kV**	4 (overvoltage category III, conforming to EN/IEC 60947-5-1, DIN VDE 0110 parts 1 & 2)	
LED display				3	
Operating temperature			**°F (°C)**	+ 14…+ 131 (- 10…+ 55)	
Storage temperature			**°F (°C)**	- 13…+ 267.8 (- 25…+ 85)	
Degree of protection conforming to IEC/EN 60529		Terminals		IP 20	
		Enclosure		IP 40	
Connections		Type		Captive screw clamp terminals	Captive screw clamp terminals, removable terminal block
	1-wire connection	Without cable end		Solid or flexible cable: 26-14 AWG (0.14…2.5 mm²)	Solid or flexible cable: 24-14 AWG (0.2…2.5 mm²)
		With cable end		Without bezel, flexible cable: 24-14 AWG (0.25…2.5 mm²)	
		With cable end		With bezel, flexible cable: 24-16 AWG (0.25…1.5 mm²)	With bezel, flexible cable: 24-14 AWG (0.25…2.5 mm²)
	2-wire connection	Without cable end		Solid or flexible cable: 26-18 AWG (0.14…0.75 mm²)	Solid cable: 24-18 AWG (0.2…1 mm²), flexible cable: 24-16 AWG (0.2…1.5 mm²)
		With cable end		Without bezel, flexible cable: 24-18 AWG (0.25…1 mm²)	
		With cable end		Double, with bezel, flexible cable: 20-16 AWG (0.5…1.5 mm²)	Double, with bezel, flexible cable: 20-16 AWG (0.5…1.5 mm²)

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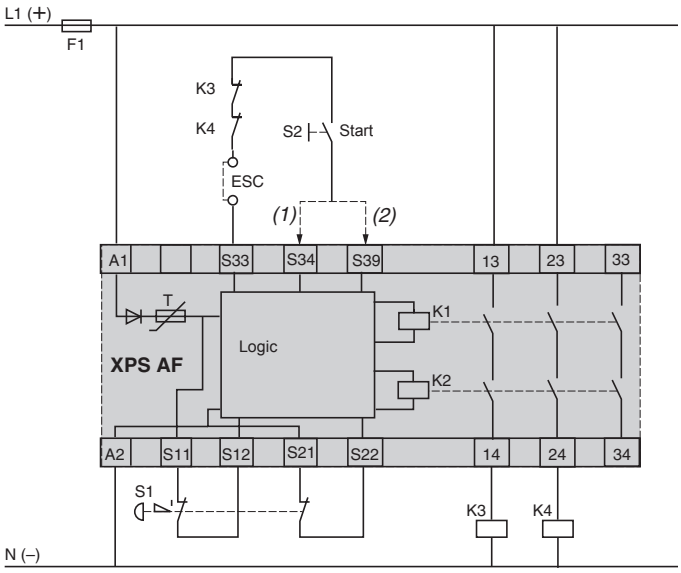
References

	Description	Type of terminal block connection	Number of safety circuits	Supply	Reference	Weight oz (kg)
 *XPSAF5130*	**Safety modules for Emergency stop and limit switch monitoring**	Integrated in module	3	∿ and ⎓ 24 V	**XPSAF5130**	8.818 (0.250)
 *XPSAF5130P*		Removable from module	3	∿ and ⎓ 24 V	**XPSAF5130P**	8.818 (0.250)

Wiring diagrams

XPSAF

Module XPSAF associated with an Emergency stop button with 2 N.C. contacts



(1) With start button monitoring.
(2) Without start button monitoring.
ESC = External start conditions.