

Product data sheet

Specifications



safety controller XPS-MC - 24 V DC - 16 input - 32 LEDs signalling

XPSMC16ZP

Main

Range of product	Preventa Safety automation
Product or component type	Configurable safety controller
Safety module name	XPSMC
Safety use category	Category 4 maximum EN 954-1/EN/ISO 13849-1 PLE maximum ISO 13849-1 SIL 3 maximum IEC 61508
Type of start	Configurable
Standards	EN 1760-1/ISO 13856-1 EN 574/ISO 13851 IEC 60947-5-1 IEC 61508 IEC 60204-1 EN 954-1/EN/ISO 13849-1 IEC 61496-1
Product certifications	UL CSA TÜV
[Us] rated supply voltage	24 V DC - 20...20 %
Number of inputs	16
Communication port protocol	Modbus 1 RJ45, serial link 1200 bps, 2400 bps, 4800 bps, 9600 bps or 19200 bps Profibus 1 SUB-D 9-pin female, serial link 12 Mbps
Safety level	Can reach PL e/category 4 EN 954-1/EN/ISO 13849-1 Can reach SIL 3 IEC 61508

Complementary

Function of module	Emergency stop monitoring, with or without time delay, 1 or 2-channel wiring Enabling switch monitoring, 2 or 3 contacts Foot switch monitoring Guard monitoring with 1 or 2 limit switches Magnetic switch monitoring category 4 EN/IEC 61496 Muting function of light curtains Position selector Safety mat monitoring Safety time delays Shaft/chain breaking monitor Zero speed detection Light curtain monitoring category 4 IEC 61496 Two-hand control category 3 EN 574/ISO 13851
Synchronisation time between inputs	Depending on configuration selected
Power consumption in W	12 W
Input protection type	External fuse 16 A
[Uc] control circuit voltage	28.8 V
Maximum line resistance	100 Ohm <6561.7 ft (2000 m)

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Output type	2 relays, 2 NO contacts (4 NO total) Solid state, 6, volt-free
Breaking capacity	180 VA holding AC-15 C300 relay output 1800 VA inrush AC-15 C300 relay output
Breaking capacity	2 A 24 V static output circuit 1.5 A 24 V DC-13)50 ms relay output
Output thermal current	4 A for both outputs simultaneously 6 A for 1 output and 2 A for the other relay output
[Ith] conventional free air thermal current	16 A relay output 6.5 A static output circuit
Associated fuse rating	16 A gL power supply 4 A gL relay output 6 A fast blow relay output
Minimum output current	10 mA relay output
Minimum output voltage	17 V relay output
Response time	Configurable : 20 ms or 30 ms with software XPSMCWIN
[Ui] rated insulation voltage	300 V 2)IEC 60647-5-1, DIN VDE 0110 part 1
[Uimp] rated impulse withstand voltage	4 kV III IEC 60647-5-1, DIN VDE 0110 part 1
Method of access	Slave
Exchange size	14 words
Number of addresses	1...125 Profibus 1...247 Modbus
Parity	Even Modbus No Modbus Odd Modbus
Data format	1 start bit/8 data bits 1 stop bit even or odd 2 stop bits without parity RTU (Remote Terminal Unit) mode
Supported modbus function	01 8-bit output data/32-bit input data 02 32-bit input data/8-bit output data 03 information and errors
Local signalling	32 LEDs
Mounting support	Mounting plate
Depth	6.02 in (153 mm)
Height	6.0 in (151.5 mm)
Width	2.9 in (74 mm)
Net weight	1.81 lb(US) (0.82 kg)

Environment

IP degree of protection	IP20 conforming to IEC 60529
Ambient air temperature for operation	14...131 °F (-10...55 °C)
Ambient air temperature for storage	-13...185 °F (-25...85 °C)

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.543 in (9.000 cm)

Package 1 Width	7.087 in (18.000 cm)
Package 1 Length	10.236 in (26.000 cm)
Package 1 Weight	2.800 lb(US) (1.270 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	6
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	15.748 in (40.000 cm)
Package 2 Length	23.622 in (60.000 cm)
Package 2 Weight	18.585 lb(US) (8.430 kg)

Contractual warranty

Warranty (in months)	18
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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	541 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Carbon footprint of the manufacturing phase [A1 to A3]	25 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	515 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.7 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
REACH Regulation	REACH Declaration
PVC free	Yes

Use Longer



Lifetime extension

Repair	No
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Use Again

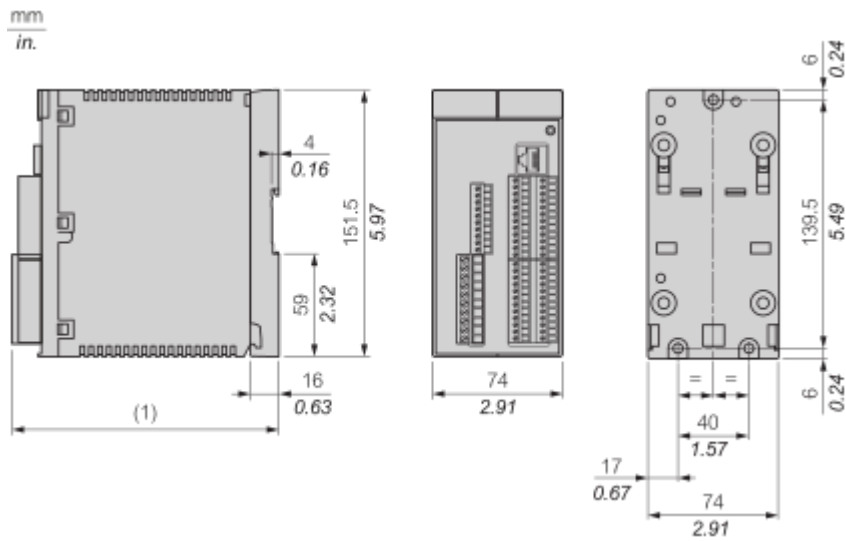


Repack and remanufacture

Circularity Profile	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

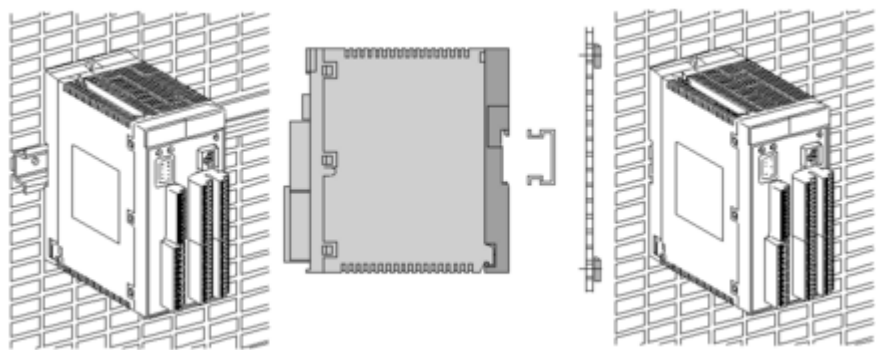
Dimensions



(1)
When using XPSMCTS• connectors, this dimension is 153 mm (6.02 in)
When using XPSMCTC• connectors, this dimension is 151.5 mm (5.96 in)

Mounting and Clearance

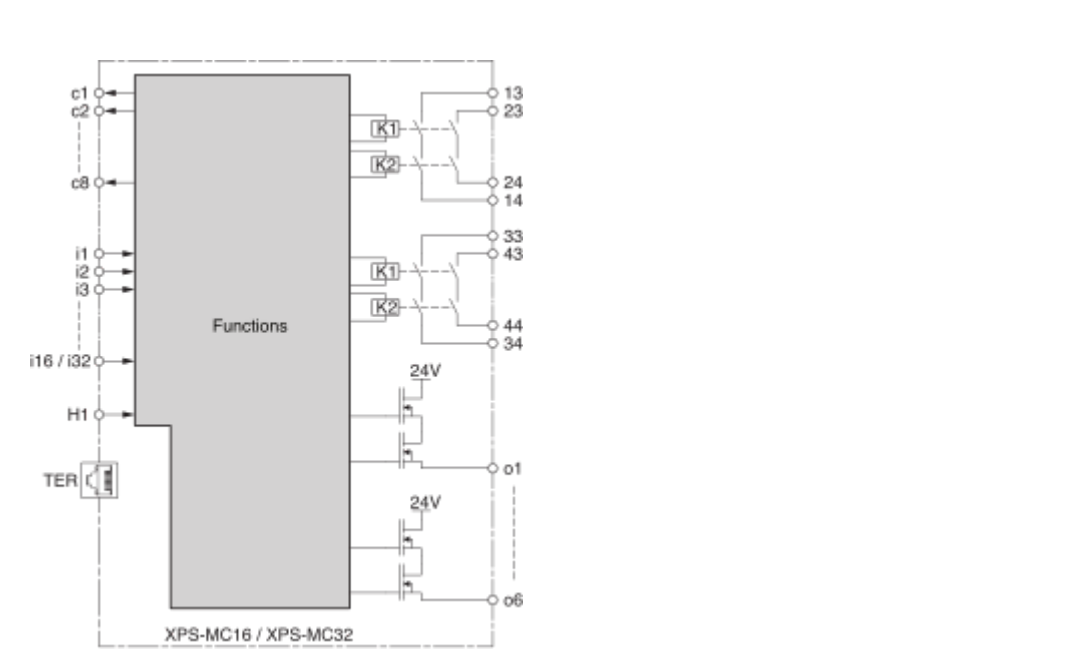
Installation



Metal adaptor for fixing on metal: DIN rail 35 mm/1.38 in.

Connections and Schema

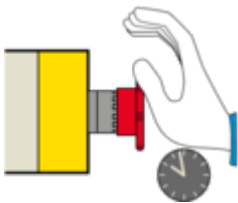
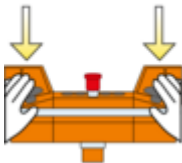
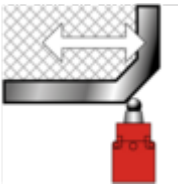
Function Diagram

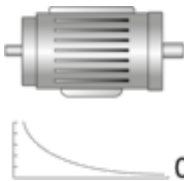
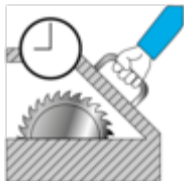


Note: Refer to the instruction sheet available in the documents section for a detailed connection diagram.

Technical Description

Safety Functions

	• Emergency stop monitoring with time delay: ◦ 1 channel wiring, with automatic start. ◦ 2 channel wiring, with start button.
	• Emergency stop monitoring without time delay: ◦ 1 channel wiring, with automatic start. ◦ 2 channel wiring, with start button.
	• Two-hand control.
	• Guard monitoring: ◦ with 1 limit switch. ◦ with 2 limit switches. ◦ with 2 limit switches, with guard locking.
	• Magnetic switch monitoring.

	• Sensing mat monitoring.
	• Light curtains monitoring: ◦ Relay output type. ◦ Solid-state output type. • “Muting” function for light curtains.
	• Zero speed detection.
	• Safety time delays.
	• Enabling switching monitoring: ◦ 2 contact type. ◦ 3 contact type.

Other functions:

- Foot switch monitoring
- Position selector