Product data sheet

Specifications

Preventa safety PLC compact - Safe Ethernet

XPSMF4000

Discontinued on: Dec 31, 2019

To be end-of-service on: Dec 31, 2027

Discontinued - Service only

Main

Range Of Product	Preventa Safety automation
Product Or Component Type	Preventa safety PLC compact
Safety Module Name	XPSMF40
Safety Module Application	F use with numerous machine safety functions and for the protection of personel
Safety Use Category	Category 4 maximum conforming to EN 954-1 Performance level e conforming to EN/ISO 13849-1 SIL 3 conforming to EN/IEC 61508
Structure Type	10BASE-T/100BASE-TX, safe Ethernet

Complementary

Function Of Module	Monitoring safety actuators for discrete output Monitoring safety detection for discrete input Monitoring safety dialogue for discrete input Monitoring safety dialogue for discrete output Monitoring short-circuit and line break for line control outputs
[Us] Rated Supply Voltage	24 V DC - 15...20 %
Supply	SELV or PELV conforming to EN/IEC 60950
No Load Current	0.5 A
Protection Type	10 A internal fuse
Clock	With, supplied by backup capacitor for 1 week following loss of supply
Response Time	Depending on size of application
Memory Description	User logic 250 kB application User logic 250 kB data
Group Of Channels	2 groups of 4 line control outputs
Discrete I/O Number	24 configurable
Maximum Discrete Input Number	24 not isolated discrete input(s)
Voltage State 0 Guaranteed	<= 24 V for discrete input
Voltage State 1 Guaranteed	24...30 V for discrete input
Current State 0 Guaranteed	<= 1.5 mA (discrete input)
Current State 1 Guaranteed	3.5...4.5 mA (discrete input)
Discrete Input Voltage	20 V
Discrete Input Current	100 mA
Maximum Input Resistance	7 kOhm
Input Overvoltage Protection	-10…35 V for discrete input

Maximum Discrete Output Number	24 for not isolated
Discrete Output Voltage	24 V DC
Output Voltage Tolerance	+/- 2 %
Discrete Output Current	1 A at 60 °C (channels 4, 8, 12, 16, 20 and 24) 2 A at 50 °C (channels 4, 8, 12, 16, 20 and 24) 0.5 A at 60 °C (channels 1 to 3, 5 to 7, 9 to 11,13 to 15, 17 to 19, 21 to 23) <= 7 A (all channels)
Minimum Load	2 mA per discrete output
Maximum Leakage Current	1 mA 2 V at state 0 discrete output
Overload Protection	Shutdown of outputs concerned with cyclic reconnection
Output Voltage	20 V line control outputs
Nominal Output Current	60 mA for line control outputs
Output Protection Type	Against short-circuits
Communication Port Protocol	Safe Ethernet with 2 RJ45 port(s), transmission rate: 100 Mbps, 10 Mbps, medium: dual twisted pair cable, category 5D or better
Exchange Mode	Half duplex, full duplex, autonegotiation safe Ethernet
Operating Distance	<= 300 m between station for discrete input <= 300 m between station for discrete output
Number Of Terminal Blocks	1 for power supply 2 for line control outputs 6 for discrete input/output circuit

Connections - Terminals	Discrete input/output circuit: captive spring terminals, 1 x 0.5 mm² (AWG 20) flexible with cable end Line control outputs: captive spring terminals, 1 x 0.5 mm² (AWG 20) flexible with cable end Discrete input/output circuit: captive screw clamp terminals, 1 x 0.14...1 x 1.5 mm² (AWG 25...AWG 15) solid without cable end Line control outputs: captive screw clamp terminals, 1 x 0.14...1 x 1.5 mm² (AWG 25...AWG 15) solid without cable end Discrete input/output circuit: captive screw clamp terminals, 1 x 0.14...1 x 1.5 mm² (AWG 28...AWG 16) flexible without cable end Line control outputs: captive screw clamp terminals, 1 x 0.14...1 x 1.5 mm² (AWG 28...AWG 16) flexible without cable end Power supply: captive screw clamp terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible without cable end Power supply: captive screw clamp terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) solid without cable end Discrete input/output circuit: captive screw clamp terminals, 1 x 0.25...1 x 0.5 mm² (AWG 23...AWG 20) flexible with cable end Line control outputs: captive screw clamp terminals, 1 x 0.25...1 x 0.5 mm² (AWG 23...AWG 20) flexible with cable end Discrete input/output circuit: captive screw clamp terminals, 1 x 0.25...1 x 1.5 mm² (AWG 23...AWG 15) flexible without cable end Line control outputs: captive screw clamp terminals, 1 x 0.25...1 x 1.5 mm² (AWG 23...AWG 15) flexible without cable end Power supply: captive screw clamp terminals, 1 x 0.25...1 x 2.5 mm² (AWG 23...AWG 14) flexible with cable end Power supply: captive screw clamp terminals, 1 x 0.25...1 x 2.5 mm² (AWG 23...AWG 14) flexible without cable end Discrete input/output circuit: captive spring terminals, 1 x 0.14...1 x 1.5 mm² (AWG 26...AWG 16) solid without cable end Line control outputs: captive spring terminals, 1 x 0.14...1 x 1.5 mm² (AWG 26...AWG 16) solid without cable end Discrete input/output circuit: captive spring terminals, 1 x 0.14...1 x 1.5 mm² (AWG 26...AWG 17) flexible without cable end Line control outputs: captive spring terminals, 1 x 0.14...1 x 1.5 mm² (AWG 26...AWG 17) flexible without cable end Power supply: captive spring terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible without cable end Power supply: captive spring terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) solid without cable end Discrete input/output circuit: captive spring terminals, 1 x 0.25...1 x 0.34 mm² (AWG 22) flexible without cable end Line control outputs: captive spring terminals, 1 x 0.25...1 x 0.34 mm² (AWG 22) flexible without cable end Power supply: captive spring terminals, 1 x 0.25...1 x 2.5 mm² (AWG 23...AWG 12) flexible with cable end Power supply: captive spring terminals, 1 x 0.25...1 x 2.5 mm² (AWG 23...AWG 12) flexible without cable end
Tightening Torque	Discrete input/output circuit: 0.22…0.25 N.m - on captive screw clamp terminals Line control outputs: 0.22…0.25 N.m - on captive screw clamp terminals Power supply: 0.5 N.m - on captive screw clamp terminals
Wire Stripping Length	10 mm for power supply captive screw clamp terminals 9 mm for discrete input/output circuit captive screw clamp terminals 9 mm for discrete input/output circuit captive spring terminals 9 mm for line control outputs captive screw clamp terminals 9 mm for line control outputs captive spring terminals 9 mm for power supply captive spring terminals
Current Consumption	8 A at 24 V DC on power supply
Mounting Support	35 mm symmetrical DIN rail
Depth	153 mm
Height	151.5 mm
Width	74 mm
Net Weight	1 kg

Environment

Standards	EN 298 : 2003 EN/IEC 61131-2 : 2003 EN 50156-1 : 2004 DIN VDE 0116 : 1989 EN 12067-2 : 2004 IEC 61511 part 1-3 : 2004 NFPA 85 : 2001 EN 230 : 1990 EN 61000-6-2 : 2001 EN 61000-6-4 : 2001
Immunity To Microbreaks	10 ms
Ip Degree Of Protection	IP20 (enclosure)
Ambient Air Temperature For Operation	0…60 °C
Ambient Air Temperature For Storage	-40…85 °C conforming to EN/IEC 61131-2
Relative Humidity	95 % supply not connected
Operating Altitude	< 2000 m
Pollution Degree	2
Electrical Shock Protection Class	Class II conforming to IEC 61131-2
Electromagnetic Compatibility	EN/IEC 61131-2
Vibration Resistance	1 gn conforming to EN 61131-2 (f = 9…150 Hz)
Shock Resistance	15 gn for 11 ms conforming to EN 61131-2
Resistance To Electrostatic Discharge	4 kV contact conforming to EN/IEC 61000-4-2 8 kV on air conforming to EN/IEC 61000-4-2
Resistance To Electromagnetic Fields	10 V/m (80…2000 MHz), amplitude modulation 80 % conforming to EN/IEC 61000-4-3

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	9.5 cm
Package 1 Width	18.0 cm
Package 1 Length	26.0 cm
Package 1 Weight	1.373 kg
Unit Type Of Package 2	S03
Number Of Units In Package 2	6
Package 2 Height	30.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	8.884 kg

Contractual warranty

Warranty	18 months

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Well-being performance

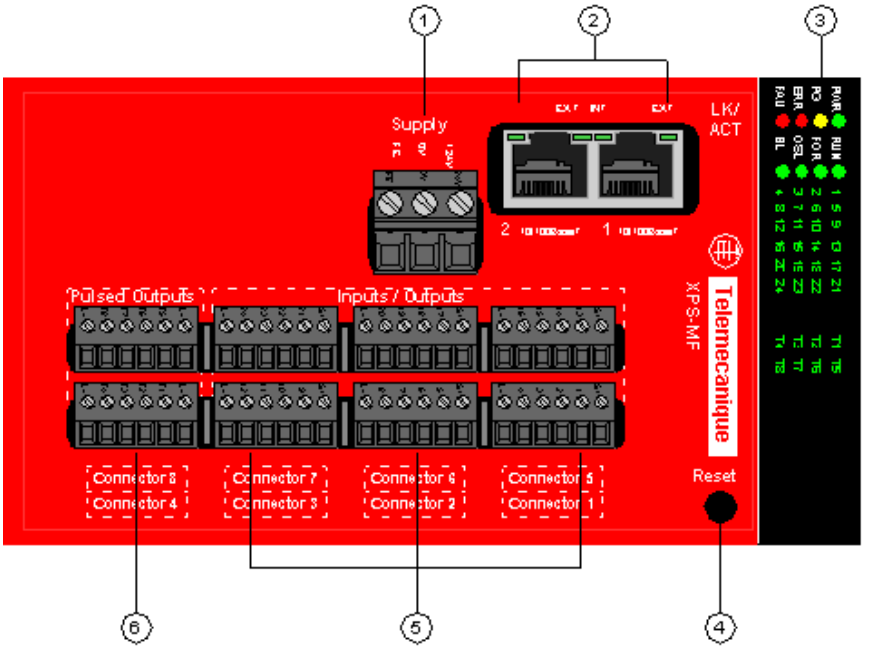
Mercury Free	
Rohs Exemption Information	Yes

Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
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 Carcinogen & Reproductive harm. For more information go to www.p65warnings.ca.gov

Presentation

Housing Elements

Front View

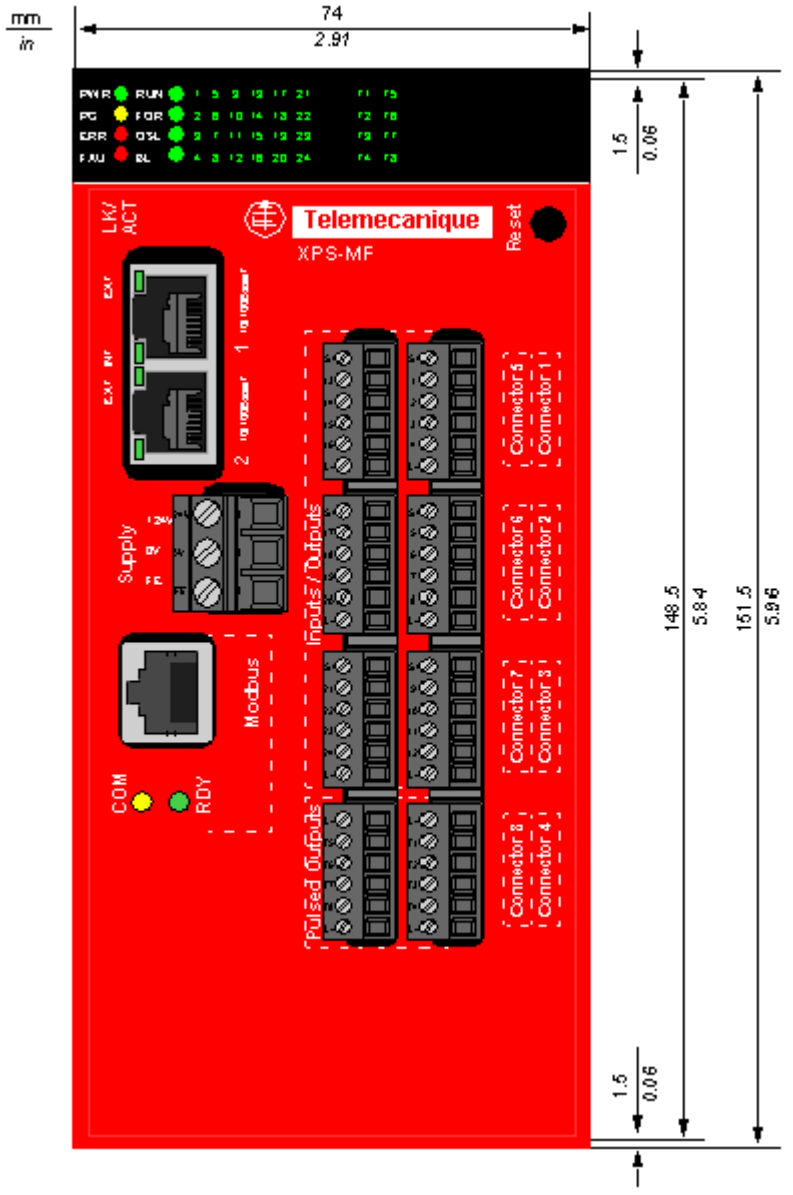


No.	Description
1	24 V DC power supply input • 24 V is the + pole (24 VDC) • 0 V is the – pole (GND) • PE is the functional earth
2	Ethernet 10/100BaseT RJ-45 connectors
3	status LEDs
4	reset button
5	digital inputs / outputs
6	pulsed outputs (only use with line control)

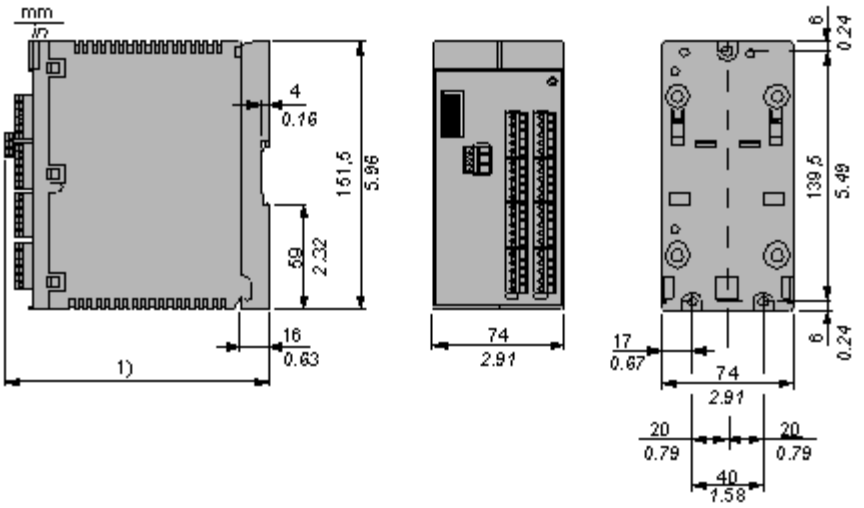
Dimensions Drawings

Dimensions

Front View



Side, Front and Back Views



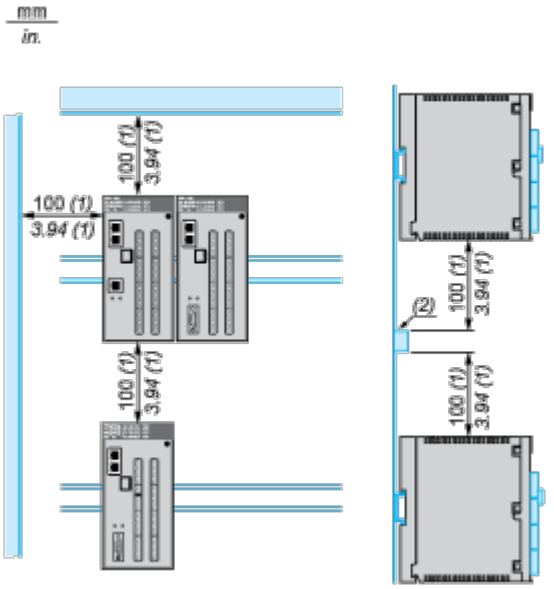
(1) 153 mm (6.02 in) with XPSMCTS•

151.4 mm (5.96 in) with XPSMCTC•

Mounting and Clearance

Mounting

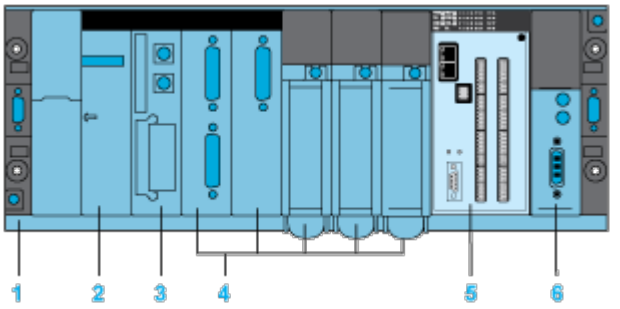
Mounting in Panel or Enclosure



(1) Minimum recommended value.

(2) Prefabricated electrical ducting for passage of cables.

Mounting on Premium Rack



1 Premium rack

2 Premium supply

3 Premium CPU

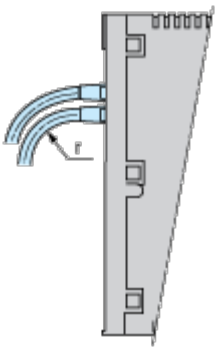
4 Premium I/O module

5 Safety PLC **XPSMF40••** (occupies 2 slots)

6 Premium As-interface master

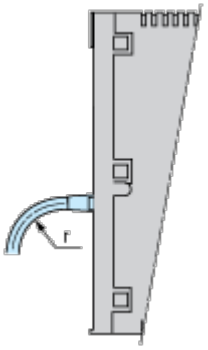
Mounting Precautions Relating to Connectors

Access to Ethernet network



r 22.5 mm/0.89 in. min.

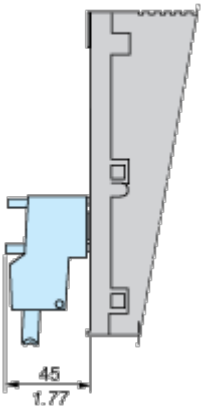
Access to Modbus serial link (RTU)



r 22.5 mm/0.89 in. min.

Access to Profibus DP bus

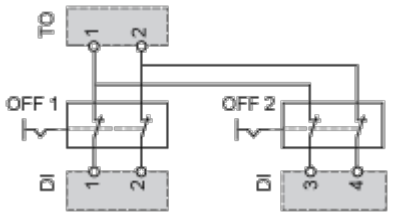
mm
in.



Connections and Schema

Wiring Diagrams

Emergency Stop Connections (Line Control)



Actuator Connections to the Outputs