



Safe communication expansion modules

Safe communication expansion modules

The safe communication expansion modules enable the connection of safety controller CPU (XPSMCMCP0802● or XPSMCMC10804●) with the expansion modules placed remotely (≤ 50 m (≤ 164 ft)).

Using RS 485 shielded cable, the two modules (XPSMCMCO0000S1 and XPSMCMCO0000S2) placed at the desired distance can be linked together thus joining the expansion modules to the safety controller CPU.

- > **XPSMCMCO0000S2** safe communication expansion module has two independent connection channels; typically used in between two **XPSMCMCO0000S1** modules.
- > **XPSMCMCO0000S1** safe communication expansion module has one channel connection for transmitting/receiving data and must be connected as the first or last module.
- > Up to five islands can be created using the safe communication modules with a total length of 250 meters (820.2 ft) and a maximum of 50 meters (164 ft) between two safe communication modules. The system response time does not change with the use of the safety communication modules.

Safe communication expansion module reference (1)

1	XPSMCMCO0000S1 XPSMCMCO0000S1G	> 1 connection interface: single channel transmitter/receiver (2)
2	XPSMCMCO0000S2 XPSMCMCO0000S2G	> 2 connections interface: dual channel transmitter/receiver

Non-safe fieldbus communication modules

The non-safe communication modules are designed for diagnostics connection and data communication purposes to machine field bus or network systems.



Non-safe communication modules

Non-safe communication module reference (1)	Machine bus/network interface	Connector type	Number of connectors
1 XPSMCMCO0000CO XPSMCMCO0000COG	> CANopen	SUB-D 9 contacts (female)	1
2 XPSMCMCO0000EC (3) XPSMCMCO0000ECG	> EtherCAT	RJ45 (in/out)	2
3 XPSMCMCO0002EC (3) (4) XPSMCMCO0002ECG	> EtherCAT	RJ45 (in/out)	2
4 XPSMCMCO0000EI (3) XPSMCMCO0000EIG	> Ethernet/IP	RJ45 (in/out)	1
5 XPSMCMCO0002EI (3) (4) XPSMCMCO0002EIG	> Ethernet/IP	RJ45 (in/out)	2
6 XPSMCMCO0000EM (3) XPSMCMCO0000EMG	> Modbus/TCP	RJ45 (in/out)	1
7 XPSMCMCO0002EM (3) XPSMCMCO0002EMG	> Modbus/TCP	RJ45 (in/out)	2
8 XPSMCMCO0000MB XPSMCMCO0000MBG	> Modbus Serial (RTU)	RJ45	1
9 XPSMCMCO0000PB XPSMCMCO0000PBG	> Profibus DP	SUB-D 9 contacts (male)	1

- > The non-safe communication modules are connected to the safety controller via the backplane expansion connector. Each of them have a mini USB 2.0 connector for configuration
- > Only one non-safe communication module type can be connected on a safety controller.

(1) Safe communication expansion module and non-safe communication module can be equipped with a spring clamp terminal block. The reference ends with a G.

(2) End of the network or Start of the network if connected to a single RS 485 cable.

(3) The modules XPSMCMCO0000E● have the process image mapping of the FW V 2.1.3.

The modules XPSMCMCO0002E● have the process image mapping of the FW V 2.1.4 and onwards.

(4) Available in the second quarter of 2022.



XPSMCM●●●●●G: equipped with a spring clamp terminal block.

Modicon MCM

Modular safety controller

Non-safe communication modules

Accessories



XPSMCMCO0000CO



XPSMCMCO0000EC



XPSMCMCO0002EC



XPSMCMCO0000EI



XPSMCMCO0002EI



XPSMCMCO0000EM



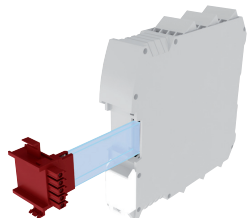
XPSMCMCO0002EM



XPSMCMCO0000MB



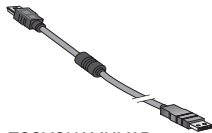
XPSMCMCO0000PB



XPSMCMCN0000SG



XPSMCMME0000



TCSXCNAMUM3P



TSXS CMCN0000



TSXESPPM0000



TSXESPP3000

Non-safe communication modules

Description	Fieldbus / network type	Connector type	Number	Terminal block type	Reference	Weight kg/lb
Non-safe communication modules	CANopen	SUB-D 9 contacts (female)	1	Screw	XPSMCMCO0000CO	0.300
				Spring clamp	XPSMCMCO0000COG	0.66
	EtherCAT	RJ45 (in/out)	2	Screw	XPSMCMCO0000EC (2)	0.300
				Spring clamp	XPSMCMCO0000ECG (2)	0.66
		RJ45 (in/out)	2	Screw	XPSMCMCO0002EC (2) (3)	0.300
				Spring clamp	XPSMCMCO0002ECG (2) (3)	0.66
	Ethernet/IP	RJ45 (in/out)	1	Screw	XPSMCMCO0000EI (2)	0.300
				Spring clamp	XPSMCMCO0000EIG (2)	0.66
		RJ45 (in/out)	2	Screw	XPSMCMCO0002EI (2) (3)	0.300
				Spring clamp	XPSMCMCO0002EIG (2) (3)	0.66
	Modbus/TCP	RJ45 (in/out)	1	Screw	XPSMCMCO0000EM (2)	0.300
				Spring clamp	XPSMCMCO0000EMG (2)	0.66
		RJ45 (in/out)	2	Screw	XPSMCMCO0002EM (2)	0.300
				Spring clamp	XPSMCMCO0002EMG (2)	0.66
	Modbus Serial (RTU)	RJ45	1	Screw	XPSMCMCO0000MB	0.300
				Spring clamp	XPSMCMCO0000MBG	0.66
	Profibus DP	SUB-D 9 contacts (male)	1	Screw	XPSMCMCO0000PB	0.300
				Spring clamp	XPSMCMCO0000PBG	0.66

Accessories

Description	Application		Reference	Weight kg/lb
Backplane expansion connector (1)	To connect the various expansion modules to the safety controller		XPSMCMCN0000SG	0.001 0.002
Memory card	For saving configuration data for subsequent transfer to a new device without using a PC		XPSMCMME0000	0.004 0.009
Description	Use	Length	Reference	Weight kg/lb
Configuration cable	For software configuration, between a PC, the safety controller, and to the fieldbus communication modules Equipped with 2x USB connectors: USB A and USB mini B	3 m / 9.84 ft	TCSXCNAMUM3P	0.065 0.143
RS 485 shielded cables	Between two safe communication expansion modules	10 m / 32.81 ft	TSXS CMCN010	0.920 2.03
		25 m / 82.02 ft	TSXS CMCN025	2.300 5.07
		50 m / 164.04 ft	TSXS CMCN050	4.600 10.14
Encoder splitter cables	Between SIN/COS safe speed monitoring module and MC-4 servo drives and the associated servo motors	1 m / 3.3 ft	TSXESPPM001	0.110 0.24
		5 m / 16.40 ft	TSXESPPM005	0.510 1.12
	Between SIN/COS safe speed monitoring modules and Lexium 32, 52 and 62 servo drives and the associated servo motors	1 m / 3.3 ft	TSXESPP3001	0.150 0.33
		3 m / 9.84 ft	TSXESPP3003	0.450 0.99
		5 m / 16.40 ft	TSXESPP3005	0.750 1.65

(1) This reference needs to be ordered for the XPSMCMCP0802 reference only when it is connected to expansion modules.

(2) The modules XPSMCMCO0000E● have the process image mapping of the FW V 2.1.3.

The modules XPSMCMCO0002E● have the process image mapping of the FW V 2.1.4 and onwards.

(3) Available in the second quarter of 2022.