



1
Safe analog I/O expansion modules



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Safe digital I/O expansion modules



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Safe mixed I/O expansion modules



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

Safe I/O expansion modules

The Safe expansion modules are designed for safety inputs and outputs. The safety inputs/outputs are configurable individually or in pairs, with several possibilities:

- > Monitoring using line control via dedicated test outputs
- > Configurable filters and delays for each single input
- > Configurable output activation and de-activation delays
- > Independent control of pairs of outputs
- > Configurable diagnostic output signals
- > Simple diagnostics via front led signalling, configuration software, communication expansion modules

Safe analog I/O expansion module reference (1)	Description
1 XPSMCMAI0400 XPSMCMAI0400G	> 4 configurable analog inputs 0...20 mA / 0...10 V (selectable via SoSafe configurable software) <i>The XPSMCMAI0400● modules can only be configured with the XPSMCMC10804● safety controller CPU.</i>
Safe digital I/O expansion module reference (1)	Description
2 XPSMCMDOI0800 XPSMCMDOI0800G	> 8 digital inputs > 4 test outputs for line control monitoring of input circuits
3 XPSMCMDOI1200MT XPSMCMDOI1200MTG	> 12 digital inputs > 8 test outputs for line control monitoring: dedicated to monitor up to four 4-wire safety mats
4 XPSMCMDOI1600 XPSMCMDOI1600G	> 16 digital inputs > 4 test outputs for line control monitoring of input circuits
5 XPSMCMDO0002 XPSMCMDO0002G	> 2 OSSD pairs with 400mA output current > 2 inputs for Start/Restart interlock and external device monitoring (EDM) > 2 configurable status outputs
6 XPSMCMDO0004 XPSMCMDO0004G	> 4 inputs for Start/Restart interlock and external device monitoring (EDM) > 4 OSSD pairs with 400mA output current > 4 configurable status outputs
7 XPSMCMDO00042A XPSMCMDO00042AG	> 4 single channel solid state OSSD high current (2 A), which can be used as 4 single or 2 dual OSSD + 8 status outputs SIL 1/ PL c
8 XPSMCMDO0004S XPSMCMDO0004SG	> 4 single channel OSSD with 400mA output current > 4 status outputs SIL 1/PL c <i>The XPSMCMDO0004S● modules can only be configured with the XPSMCMC10804● safety controller CPU.</i>
9 XPSMCMDO0008C1 XPSMCMDO0008C1G	> 8 digital outputs SIL 1/PL c
10 XPSMCMDO0016C1 XPSMCMDO0016C1G	> 16 digital outputs SIL 1/PL c
Safe mixed I/O expansion modules reference (1)	Description
11 XPSMCMMX0802 XPSMCMMX0802G	> 8 digital inputs > 2 OSSD pairs with 400mA output current > 4 test outputs for line control monitoring of input circuits > 2 configurable status outputs > 2 inputs for Start/Restart interlock and external device monitoring (EDM)
12 XPSMCMMX0804 XPSMCMMX0804G	> 8 digital inputs > 4 single channel OSSD with 400 mA output current > 4 test outputs for line control monitoring of input circuits > 4 configurable status outputs > 4 inputs for Start/Restart interlock and external device monitoring (EDM) <i>The XPSMCMMX0804● modules can only be configured with the XPSMCMC10804● safety controller CPU.</i>

- > The Safe expansion modules are connected to the safety controller via the backplane expansion connectors.

(1) Safety I/O expansion module can be equipped with a spring clamp terminal block. The reference ends with a G.

Modicon MCM

Modular safety controller

Safety controllers CPU

Safe I/O expansion modules



XPSMCMCP0802BC



XPSMCMC10804



XPSMCMMX0802



XPSMCMMX0804



XPSMCMAI0400



XPSMCMDI0800



XPSMCMDI1600



XPSMCMDI1200MT



XPSMCMDO0002



XPSMCMDO0004



XPSMCMDO0004A



XPSMCMDO0004S



XPSMCMDO0008C1



XPSMCMDO0016C1

Safety controllers CPU

Description	Inputs	Outputs	Terminal block type	Reference	Weight kg/lb
Safety controllers CPU	8 safety-related digital inputs + 2 for Start/Restart interlock	2 OSSD pairs + 4 test outputs + 2 status outputs	Screw	XPSMCMCP0802	0.250
			Spring clamp	XPSMCMCP0802G	0.55
	8 safety digital inputs + 4 for Start/Restart interlock	4 single channel OSSD with 400 mA output current + 4 configurable status outputs	Screw	XPSMCMC10804	
			Spring clamp	XPSMCMC10804G	

Description	Composition	Terminal block type	Reference	Weight kg/lb
Safety controllers CPU combined with backplane expansion connector	XPSMCMCP0802 + XPSMCMCN0000SG	Screw	XPSMCMCP0802BC	0.260
	XPSMCMC10804 + XPSMCMCN0000SG		XPSMCMC10804B	0.57
	XPSMCMCP0802G + XPSMCMCN0000SG	Spring clamp	XPSMCMCP0802BCG	
	XPSMCMC10804G + XPSMCMCN0000SG		XPSMCMC10804BG	

Safe I/O expansion modules

Description	Inputs	Outputs	Terminal block type	Reference	Weight kg/lb
Safe analog I/O expansion modules	4 configurable analog inputs 0...20 mA / 0...10 V (selectable via SoSafe configurable software)	–	Screw	XPSMCMAI0400 (1)	0.164
			Spring clamp	XPSMCMAI0400G (1)	0.36

Safe digital I/O expansion modules

Safe digital I/O expansion modules	8 digital inputs	4 test outputs	Screw	XPSMCMDI0800	0.230
			Spring clamp	XPSMCMDI0800G	0.51
	12 digital inputs	8 test outputs for 4 wires safety Mats	Screw	XPSMCMDI1200MT	0.250
			Spring clamp	XPSMCMDI1200MTG	0.55
	16 digital inputs	4 test outputs	Screw	XPSMCMDI1600	0.250
			Spring clamp	XPSMCMDI1600G	0.55
	2 for Start/Restart interlock	2 OSSD pairs + 2 configurable status outputs	Screw	XPSMCMDO0002	0.230
			Spring clamp	XPSMCMDO0002G	0.51
	4 for Start/Restart interlock	4 OSSD pairs + 4 configurable status outputs	Screw	XPSMCMDO0004	0.250
			Spring clamp	XPSMCMDO0004G	0.55
	–	4 single channel solid state OSSD high current (2 A), which can be used as 4 single or 2 dual OSSD + 8 status outputs SIL 1/ PL c	Screw	XPSMCMDO00042A	0.150
			Spring clamp	XPSMCMDO00042AG	0.33
		4 single channel OSSD with 400mA output current 4 status outputs SIL 1/PL c	Screw	XPSMCMDO0004S (1)	0.138
			Spring clamp	XPSMCMDO0004SG (1)	0.30
		8 digital outputs SIL 1/PL c	Screw	XPSMCMDO0008C1	0.130
			Spring clamp	XPSMCMDO0008C1G	0.28
		16 digital outputs SIL 1/ PL c	Screw	XPSMCMDO0016C1	0.145
			Spring clamp	XPSMCMDO0016C1G	0.31

Safe mixed I/O expansion modules

Safe mixed I/O expansion modules	8 digital inputs + 2 for Start/Restart interlock	2 OSSD pairs + 4 test outputs + 2 status outputs	Screw	XPSMCMMX0802	0.250
			Spring clamp	XPSMCMMX0802G	0.55
	8 digital inputs + 4 for Start/Restart interlock	4 single channel OSSD with 400 mA output current + 4 test outputs for line control monitoring of input circuits + 4 configurable status outputs	Screw	XPSMCMMX0804 (1)	0.150
			Spring clamp	XPSMCMMX0804G (1)	0.33

(1) XPSMCMAI0400●, XPSMCMDO0004S● and XPSMCMMX0804● modules can only be configured with XPSMCMC10804● safety controller CPU.