

# Programmable Safety Controller PSC1-C-10



## Features

Integrated Safe Speed Monitoring

Standard DIN Rail mounting with 45mm and 67.5 housing width

Removable coded terminal blocks

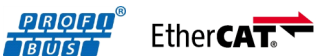
Can monitor various encoder types:

- SIN/COS
- TTL
- SSI absolute
- HTL

Safe Master to Master Communicate (SMMC) up to 4 PSC1-C10-FBx modules

Support of common fieldbus systems (adjustable via software)

Support of secure fieldbus protocols (-PNPS, -ECFS, -PBPS)



## Overview

The PSC1-C-10 is a modular and freely programmable compact safety controller for safe signal processing of safety sensors and switches.

Options include integrated safe speeds and/or universal communications interface for safe and auxiliary data exchange over various network protocols including:

- EthernetIP
- EtherCAT
- ProfiNet
- Profibus
- Profisafe/Net
- Safety Over EtherCAT

The main PSC1 module can expand with up to 2 expansion modules to offer 64 I/O. Safe Master to Master communication (SMMC) is possible between 4 master modules while maintaining PLe to ISO 13849 and SIL3 to IEC 61508.

Optional main modules also include safe drive monitoring (SDM) for 1 or 2 axis. SMMC capability would allow safe monitoring for a maximum of 8 axis in a system. Monitoring functions include options such as safe torque off (STO), safe stop 1 (SS1) for Stop Category 1, safe stop 2 (SS2) for Stop Category 2, safe limited speed (SLS), safe direction (SDI), safe speed monitoring (SSM) and Safely-Limited Increment (SLI). Encoders for monitoring may operate using TTL, SIN/COS, SSI (Gray code / binary code), or HTL.

In addition to freely programming the safety functions, safe outputs can easily be reprogrammed to serve as safe inputs on the expansion modules to easily adapt to specific application requirements. The 2A semiconductor safety outputs on the main module can also be programmed to be either p-switching or p-/n-switching.

Written program can be downloaded to the PSC1 either by computer interface or through a memory card on selected modules. Memory card options allow for quick programming of identical systems.

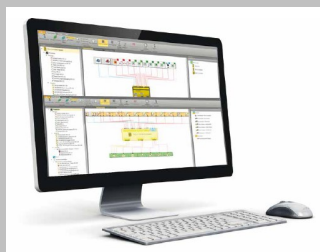
## Available Literature



PSC1 Brochure, 16 pages

## SafePLC2 Software

Development of the safety functions for the system is achieved by using the intuitive and user-friendly graphical SafePLC2 programming environment. Inputs and outputs are dragged from function libraries and dropped into the terminal scheme for easy parameterizing. Wiring schematics are automatically generated as I/O devices are added in. Online diagnostics is also available to view the operations of a system in real time. Access to the free software is secured by the use of a licensed dongle.



## Ordering Codes

### PSC1-C-10

- 14 safe inputs
- 4 safe semiconductors (2A)
- 2 safe relay outputs
- 2 auxiliary outputs (250mA)
- 2 test pulses

### PSC1-C-10-①-②

- ① <Blank> Without drive monitor
- SDM1** Safe Drive Monitor, 1 axis
- SDM2** Safe Drive Monitor, 2 axes

- ② <Blank> Without connectivity
- FB1** Master-to-Master communication Profinet, EtherCAT, EthernetIP fieldbus
- FB2** Master-to-Master communication Profibus fieldbus
- MC** Memory Card (SDHC)

## Expansion modules

### PSC1-E-31-12DI-10DIO

I/O expansion module offering:  
 12 safe inputs  
 10 safe configurable input/output  
 2 auxiliary semiconductors

### PSC1-E-33-12DI-6DIO-4RO

I/O expansion module offering:  
 12 safe inputs  
 6 safe configurable input/output  
 4 safe relay outputs  
 2 auxiliary semiconductors

## Accessories

### PSC1-A-91-SAFEPLC2

SafePLC2 programming software, with dongle

### PSC1-A-90-PROG-CABLE

SafePLC2 programming cable

### PSC1-A-99-SD-MEMORY-CARD

SDHC memory card - Capacity: 16 GB

## Contact

### Schmersal USA

15 Skyline Drive  
 Hawthorne, NY 10532  
 Tel: 914-347-4775  
 Fax: 914-347-1567  
 E-mail: salesusa@schmersal.com

### Schmersal Canada

15 Regan Road, Unit # 3  
 Brampton, ON L7A 1E3  
 Tel: 905-495-7540  
 Fax: 905-495-7543  
 E-Mail: salescanada@schmersal.com