

# SP-SCON/SP-SCON-NET – Controller module SP-MEMORY – Program memory



## Applications

- Machine building industry
- Combustion plants
- Elevator systems
- SIL<sub>CL</sub> 3 (EN 62061-1)
- PL e/Category 4 (EN ISO 13849-1)

## Features

- Plug for removable program memory (to be ordered separately)
- Serial interface RS-232

## Overview of devices | part numbers

Type	Rated voltage	Remarks	Part no.	Std. pack
SP-SCON-P1-K	24 V DC	Controller modules (without prog. memory)	R1.190.0010.0	1
SP-SCON-NET-P1-K	24 V DC	Controller modules, interconnectable (without prog. memory)	R1.190.0020.0	1
SP-MEMORY		Program memory	R1.190.0080.0	1

## Technical data

Function display	2 LEDs, green/red
<b>Power supply circuit</b>	
Operating voltage range	16.8 V DC to 30 V DC
Rated consumption	3 W
Electrical isolation power supply circuit - control circuit	no
<b>Input circuits</b>	
Quantity / type	-
<b>Output circuits</b>	
SP-SCON	-
SP-SCON-NET	EFI interface
<b>General data</b>	
Protection degree according to DIN 60529 (housing / terminals)	IP40 / IP20
Creepage distances and clearances	EN 60664-1
Ambient temperature / storage temperature	-25°C – +65°C / -25°C – +75°C
Standards	EN 61508, EN 62061, EN ISO 13849-1, EN 50156-1, EN 81-1
Approvals	TÜV, cULus

# SP-SDIO – Input-/ output module



## Applications

- Machine building industry
- Combustion plants
- Elevator systems
- SIL<sub>CL</sub> 3 (EN 62061-1)
- PL e/Category 4 (EN ISO 13849-1)

## Features

- 8 safe inputs
- 4 safe outputs (with/without output test-pulses)
- 2 outputs (e.g., test signals)

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## Overview of devices | part numbers

Type	Rated voltage	Terminals	Remarks	Part no.	Std. Pack
SP-SDIO84-P1-K-A	24 V DC	Screw terminals, pluggable	with/without output test-pulses	R1.190.0030.0	1
SP-SDIO84-P1-K-C	24 V DC	Cage clamp, pluggable	with/without output test-pulses	R1.190.0040.0	1

## Technical data

Function display	13 LEDs, green/red
<b>Power supply circuit</b>	
Operating voltage range	16.8 V DC to 30 V DC
Rated consumption	1.8 W
Electrical isolation power supply circuit - control circuit	no
<b>Safe input circuit I1 – I8</b>	
Quantity / type	8 / digital
Input voltage range	15 V DC to 30 V DC
Rated current	3 mA
<b>Safe output circuits Q1 – Q4</b>	
Quantity / type	4 / digital
Output voltage	24 V DC
Output current I <sub>n</sub> per exit	4 A
<b>Output circuits X1, X2</b>	
Quantity / type	2 / digital
Output voltage	24 V DC
Output current I <sub>n</sub> per exit	0.5 A
<b>General data</b>	
Protection degree according to DIN 60529 (housing / terminals)	IP40 / IP20
Creepage distances and clearances	EN 60664-1
Ambient temperature / storage temperature	-25°C – +65°C / -25°C – +75°C
Standards	EN 61508, EN 62061, EN ISO 13849-1, EN 50156-1, EN 81-1
Approvals	TÜV, cULus

# SP-SDI – Input module



## Applications

- Machine building industry
- Combustion plants
- Elevator systems
- SIL<sub>CL</sub> 3 (EN 62061-1)
- PL e/Category 4 (EN ISO 13849-1)

## Features

- 8 safe inputs
- 8 outputs (e.g., test signals)

## Overview of devices | part numbers

Type	Rated voltage	Terminals	Part no.	Std. pack
SP-SDI8-P1-K-A	24 V DC	Screw terminals, pluggable	R1.190.0050.0	1
SP-SDI8-P1-K-C	24 V DC	Cage clamp, pluggable	R1.190.0060.0	1

## Technical data

Function display	13 LEDs, green/red
<b>Power supply circuit</b>	
Operating voltage range	16.8 V DC to 30 V DC
Rated consumption	1.8 W
Electrical isolation power supply circuit - control circuit	no
<b>Safe input circuit I1 – I8</b>	
Quantity / type	8 / digital
Input voltage range	15 V DC to 30 V DC
Rated current	3 mA
<b>Output circuits X1, X2</b>	
Quantity / type	2 / digital
Output voltage	24 V DC
Output current I <sub>n</sub> per exit	0.5 A
<b>General data</b>	
Protection degree according to DIN 60529 (housing / terminals)	IP40 / IP20
Creepage distances and clearances	EN 60664-1
Ambient temperature / storage temperature	-25°C – +65°C / -25°C – +75°C
Standards	EN 61508, EN 62061, EN ISO 13849-1, EN 50156-1, EN 81-1
Approvals	TÜV, cULus

### Note:

Safe relay contacts are expanded using the series SNE contact expansion relay (from Page 64). Types **SNE 4024K** and **SNE 4012K** in particular are ideal for contact expansion.

## Starter set & accessories



### samos® PRO starter set

- A safe way to get started
- Contains all required components
- With programming tool **samos® PLAN**
- With USB-RS232 converter

You can get the free programming tool **samos® PLAN** at [www.wieland-electric.com](http://www.wieland-electric.com) Service / Software



### samos® PRO accessories

- SP-CABLE1 PC connection cable
- SP-CABLE3 CAN cable
- SP-CONVERTER USB-RS232 converter
- WKFN 2,5 E/35 GO-URL **fasis**-multi-tier block with diodes
- SP-FILTER1 output filter, 24 V DC, 680 nF
- SP-FILTER2 output filter, 24 V DC, 2,2 µF
- Visualization set (touch panel 3.5" color, SP-CABLE4, software driver)

## Overview of devices | part numbers

Type	Description	Part no.	Std. pack
SP-CABLE1	Connecting cable, M8	R1.190.0090.0	1
SP-CABLE3	CAN cable 2 x 2 x 0.34 mm <sup>2</sup> , shielded	00.102.5202.0	1
SP-PRO-STARTER-SET	Content: SP-SCON, SP-SDIO, SP-PLAN, SP-MEMORY, SP-CABLE1, SP-CONVERTER	R1.190.0100.0	1
SP-CONVERTER	USB-RS232-converter	R1.190.0250.0	1
WKFN 2,5 E/35 GO-URL	<b>fasis</b> - Multi-tier block with diodes	56.703.8755.9	100
APFN 2,5 E/35	End plate	07.312.7355.0	10
SP-FILTER1	Output filter, 24 V DC, 680 nF	R1.190.0260.0	1
SP-FILTER2	Output filter, 24 V DC, 2,2 µF	R1.190.0270.0	1
SP-VISUAL-SET	Visualization set (touch panel 3.5" color, SP-CABLE4, software driver)	R1.190.0280.0	1

## Gateway

With the **samos**® PRO gateways, system information can be transferred between the **samos**® PRO safe control and an industrial control, a visualization system or a PC.



### Application examples:

- Direct HMI connection
- Remote diagnosis and programming
- Read and write 50 byte
- Input and output states
- Configuration data
- Process data from the PLC
- Fault data (e.g. fault data of the connected sensor technology)

### SP-CANopen

#### Features

- Fieldbus protocol CANopen
- Bidirectional communication with PLC
- Transfer rate up to 1 MBit/s
- Transfer of at least 50 bytes of data
- Simple configuration with **samos** PLAN

### SP-PROFIBUS-DP

#### Features

- Fieldbus protocol PROFIBUS-DP
- Bidirectional communication with PLC
- Transfer rate 12 MBaud
- Transfer of at least 50 bytes of data
- Simple configuration with **samos** PLAN

### Overview of devices | part numbers

Type	Rated voltage	Remark	Part no.	Std. pack
SP-CANopen	24 V DC	CANopen	R1.190.0210.0	1
SP-PROFIBUS-DP	24 V DC	PROFIBUS-DP	R1.190.0190.0	1
SP-EN-PN	24 V DC	PROFINET IO	R1.190.0140.0	1
SP-EN-MOD	24 V DC	MODBUS/TCP	R1.190.0130.0	1
SP-EN-IP	24 V DC	ETHERNET/IP	R1.190.0150.0	1

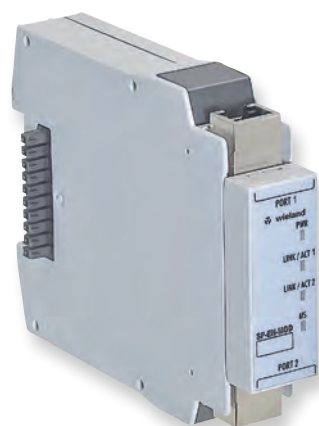
# Gateway



## SP-EN-PN

### Features

- Industrial Ethernet protocol PROFINET IO
- Bidirectional communication with PLC
- Transfer rate 100 Mbit/s (100Base-T)
- Transfer of at least 50 bytes of data
- Simple configuration with **samosPLAN**



## SP-EN-MOD

### Features

- Industrial Ethernet protocol MODBUS/TCP
- Bidirectional communication with PLC
- Transfer rate 100 Mbit/s (100Base-T)
- Transfer of at least 50 bytes of data
- Simple configuration with **samosPLAN**



## SP-EN-IP

### Features

- Industrial Ethernet protocol Ethernet/IP
- Bidirectional communication with PLC
- Transfer rate 100 Mbit/s (100Base-T)
- Transfer of at least 50 bytes of data
- Simple configuration with **samosPLAN**