



samos® PRO COMPACT

SAFE + ANALOG

Monitoring analog signals safely, easily and decentralized.



INTUITIVE + DECENTRALIZED THAT'S HOW SIMPLE SAFETY IS.

Safety regulations for industrial applications are constantly changing and are a challenge for every plant manufacturer as well as machine builder. Processing analog signals safely is a highly complex matter which costs time to understand and execute. Therefore, we developed solutions with an intuitive software, comprehensive service and safe hardware.

The new generation of analog input modules intelligently expand the samos® PRO safety controller module series with the usual simplicity. Likewise, safety-oriented basics are provided in function blocks under the new licensefree software version from samos® PLAN 6. General limit value calculations, ratios, differences and range monitoring functions can be created without a problem. No matter whether you want to evaluate, monitor or visualize analog sensors for fill level monitoring, minimum/maximum pressure, flow rates and quantities of all types of media, temperature monitors or simple external universal transmitters. You can now use samos® PRO COMPACT to achieve all this for your project without license costs and with up to three parallel field buses.



SAVE TIME

Input/output signal can be placed on the gateway by just one click.



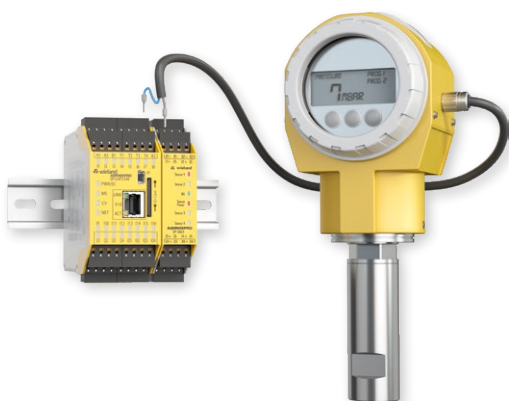
FLEXIBLE CONNECTIONS

3 modules – current; RTD; combined current/RTD.



SAFE OPERATION

TÜV and UL/UL-FS certificates for the process and machine building industry.



YOUR BENEFITS:

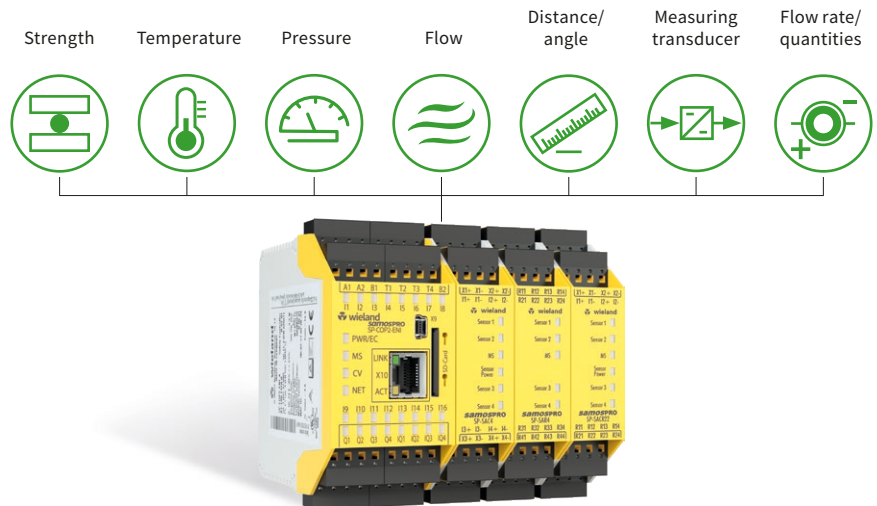
- + Transmission of analog sensors to HMIs or other controllers
- + Dimensioning and scaling of all analog sensors
- + Displaying live values alongside with the programmed logic to view plant status easily
- + Safety functions up to SIL3/PLe
- + Complying to EN 746-2, ISO 13577-2 and EN 50156-1
- + Sensors in 2/3/4-wire technology
- + 48 analog sensors possible

SAMOS® PRO COMPACT

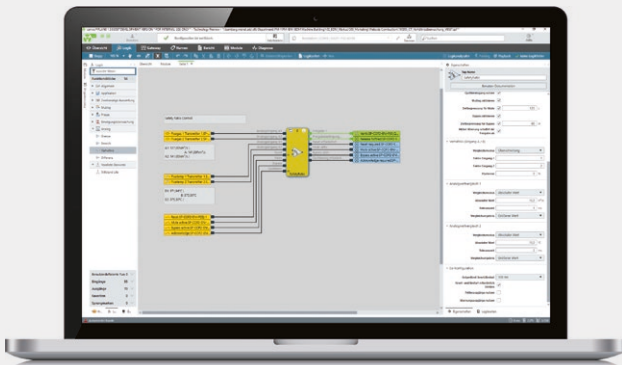
Processing all types of analog sensors with samos® PRO COMPACT.

FEATURES

- 4 safe analog inputs
- RTD-Modules (PT100, ...)
- Current modules (0/4...20 mA)
- Power and RTD modules
- 16/32 Bit resolution
- Galvanic isolation
- TÜV and UL/UL-FS approvals



INTUITIVE + LICENSE-FREE SOFTWARE SAMOS® PLAN 6



The new combustion technology library is available for industrial thermoprocessing plants and steam boiler applications in samos® PLAN 6. Safety-oriented function blocks according to EN 746-2, ISO 13577-2 or EN 50156 make the software extremely easy to use.

- Ready to use library for safe LIMIT, RELATION, DIFFERENCE, RANGE
- Easy offline troubleshooting on the PC with simulation functionality
- Validate and verify after successful simulation
- Complete documentation with one click

SAFETY PACKAGE WITH CONVERTERS

The range of application significantly expands in combination with PR electronics' converter, thermocouples, signal doublers and communication units.

- Converters with full assessment
- SIL-mode and simulation mode selectable
- Advanced relay configuration
- Accessing data through a cloud
- Complying to ATEX 2014/34/EU, FM, IECEx, INMETRO, UL



YOUR **BENEFIT** WITH OUR **PACKAGE**. SAFE **CONVERTER + CONTROLLER**.

We collaborate together with PR electronics in order to provide one harmonized safety solution that meets the standards and regulations. In this way, the solution is easy to integrate and ready to use in any existing system.

SENSORS

UNIVERSAL SAFE CONVERTER

Every signal - safe and unsafe - can be monitored

1 - 2 Sensors



UNIVERSAL SAFE SPLITTER

Reduce expensive field sensors

2 instead of 4 Sensors



SAFE TEMPERATURE CONVERTER

Only one temperature converter incl. substitute value programming

1 - 2 Thermocouples



CONVERTER

1 Safe Converter



2 Safe Splitters



1 Safe Converter

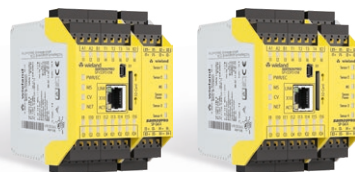


SAFETY PLC

1 Safety Controller
samos® PRO COMPACT



2 independent
Safety Controller!



1 Safety Controller
samos® PRO COMPACT



SYSTEM COMPONENTS FROM A-Z.

CONTROL LEVEL



PLANT INTERFACE



DECENTRALIZED LEVEL



SAMOS® PRO

The safety controller with maximum performance in the smallest space integrates various protocols and offers motion monitoring, press and muting functions in 45 mm width.



I/O MODULES + GATEWAYS

Extend the controller up to 172 safe inputs and outputs and integrate the needed protocols easily.

FIELD LEVEL SENSORS/ACTUATORS



HMI ECO TOUCH PANELS

With the HMI panels for simple human-machine communication, you will never lose sight of your process and can intervene to control it via the touch user interface.

WIENET

Access machine and plant data with secure and flexible network communication. Benefit from a ready-to-use solution with switches IIoT gateways, Cloud and/or VPN Access, WLAN access points and industrial mobile routers. They create the foundations for Industry 4.0 and increase availability thanks to predictive maintenance or live support for personnel on machines.



SAFE ANALOG

The extension modules process analog values safely and include the monitoring of limits, relations, differences and ranges.



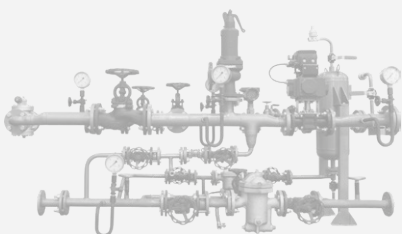
SAFE FULL ASSESSMENT CONVERTER

The Safe Full Assessment Converter and Splitters from PR are giving our portfolio endless usability for Safe Analog Processing.



SAFE RELAY

Universal safety relays in a compact form with safe internal logic for monitoring valves and limit switches. Can be used up to PLe/ category 4 or SIL3.



SAMOS® PRO COMPACT · ORDERING OVERVIEW

BASIC MODULES



SP-COP1-x



SP-COP2-x

Name/type	Description	Art. No.	PU
samos® PRO COMPACT (PLUS + MOTION)			
SP-COP1-A	USB connection, 20 inputs / 4 outputs, screw terminals, plug-in	R1.190.1110.0	1
SP-COP1-P-A	PLUS with press and analog libraries	R1.190.1130.0	1
SP-COP1-M-A	MOTION with press, analog and motion libraries	R1.190.1150.0	1
SP-COP2-EN-A	USB and Ethernet connection, 16 inputs / 4 outputs, 4 configurable I/O, screw terminals, plug-in	R1.190.1210.0	1
SP-COP2-EN-P-A	PLUS with press and analog libraries	R1.190.1230.0	1
SP-COP2-EN-M-A	MOTION with press, analog and motion libraries	R1.190.1250.0	1
SP-COP2-ENI-A	USB and industrial Ethernet connection, 16 inputs / 4 outputs, 4 configurable I/O, screw terminal, plug-in	R1.190.1310.0	1
SP-COP2-ENI-P-A	PLUS with press and analog libraries	R1.190.1330.0	1
SP-COP2-ENI-M-A	MOTION with press, analog and motion libraries	R1.190.1350.0	1
SP-COP1-C	USB connection, 20 inputs / 4 outputs, push-in terminals, plug-in	R1.190.1120.0	1
SP-COP1-P-C	PLUS with press and analog libraries	R1.190.1140.0	1
SP-COP1-M-C	MOTION with press, analog and motion libraries	R1.190.1160.0	1
SP-COP2-EN-C	USB and Ethernet connection, 16 inputs / 4 outputs, 4 configurable I/O, push-in terminals, plug-in	R1.190.1220.0	1
SP-COP2-EN-P-C	PLUS with press and analog libraries	R1.190.1240.0	1
SP-COP2-EN-M-C	MOTION with press, analog and motion libraries	R1.190.1260.0	1
SP-COP2-ENI-C	USB and industrial Ethernet connection, 16 inputs / 4 outputs, 4 configurable I/O, push-in terminals, plug-in	R1.190.1320.0	1
SP-COP2-ENI-P-C	PLUS with press and analog libraries	R1.190.1340.0	1
SP-COP2-ENI-M-C	MOTION with press, analog and motion libraries	R1.190.1360.0	1

I/O MODULES



SP-SDIO84-x | SP-SDI8-x | SP-DIO84-x

Name/type	Description	Art. No.	PU
I/O modules			
SP-SDIO84-P1-K-A	Input/output extension with output test pulses, 8 inputs / 4 outputs, screw terminals, plug-in	R1.190.0030.0	1
SP-SDIO84-P1-K-C	Input/output extension with output test pulses, 8 inputs / 4 outputs, push-in terminals, plug-in	R1.190.0040.0	1
SP-SDI8-P1-K-A	Input extension, 8 inputs, screw terminals, plug-in	R1.190.0050.0	1
SP-SDI8-P1-K-C	Input extension, 8 inputs, push-in terminals, plug-in	R1.190.0060.0	1
SP-DIO84-K-A	Standard I/O module, 4 inputs / 4 outputs, screw terminals, plug-in	R1.190.1050.0	1
SP-DIO84-K-C	Standard I/O module, 4 inputs / 4 outputs, push-in terminals, plug-in	R1.190.1060.0	1

ANALOG MODULES



SP-SAR4-x | SP-SAC4-x | SP-SACR22-x

Name/type	Description	Art. No.	PU
Analog modules			
SP-SAR4-A	Screw terminals, pluggable, 4 safe inputs RTD	R1.190.1610.0	1
SP-SAR4-C	Push-in terminals, pluggable, 4 safe inputs RTD	R1.190.1620.0	1
SP-SAC4-A	Screw terminals, pluggable, 4 safe inputs 0-20 mA	R1.190.1630.0	1
SP-SAC4-C	Push-in terminals, pluggable, 4 safe inputs 0-20 mA	R1.190.1640.0	1
SP-SACR22-A	Screw terminals, pluggable, 2 safe inputs RTD, 2 safe inputs 0-20 mA	R1.190.1650.0	1
SP-SACR22-C	Push-in terminals, pluggable, 2 safe inputs RTD, 2 safe inputs 0-20 mA	R1.190.1660.0	1

GATEWAYS



SP-CANopen | SP-PROFIBUS-DP | SP-EN-ETC

Name/type	Description	Art. No.	PU
Gateways			
SP-CANopen	CANopen gateway	R1.190.0210.0	1
SP-CANopen	CANopen gateway with diagnosis function	R1.190.0210.1	1
SP-PROFIBUS-DP	PROFIBUS-DP gateway	R1.190.0190.0	1
SP-PROFIBUS-DP	PROFIBUS-DP gateway with diagnosis function	R1.190.0190.1	1
SP-EN-ETC	EtherCAT gateway	R1.190.0160.0	1

ACCESSORIES



SP-COP-STARTER-SET

Name/type	Description	Art. No.	PU
SP-COP-CARD1	Memory card 512 MB for SP-COP modules	R1.190.1000.0	1
SP-CABLE-USB1	USB connection cable for SP-COP, 1.8 m	R1.190.1010.0	1
SP-CABLE-ETH1	Ethernet connection cable for SP-COP, 2 m	R1.190.1020.0	1
SP-COP-STARTER-SET	Contents: SP-COP2-EN-A, SP-COP-CARD1, SP-PLAN6, SP-CABLE-USB1, SP-CABLE-ETH1	R1.190.1100.0	1

PR ELECTRONICS · ORDERING OVERVIEW

SAFE CONVERTERS



PR-9116A1



PR-9116B1

Name/type	Description	Art. No.	PU
PR-9116A1	Universal Converters	F0.000.0051.0	1
PR-9116B1	Universal Converters - Ex	F0.000.0051.1	1

SIGNAL SPLITTER



PR-9106A1B



PR-9106B1B

Name/type	Description	Art. No.	PU
PR-9106A1B	Signal Splitter	F0.000.0051.2	1
PR-9106B1B	Signal Splitter - Ex	F0.000.0051.3	1

DISP - ACC



PR-4501 / PR-4511

Name/type	Description	Art. No.	PU
PR-4501	Disp - Acc	F0.000.0051.4	1
PR-4511	Disp-Rtu - Acc	F0.000.0051.5	1

SAFETY SERVICES + TRAININGS.

Basics for functional safety In Thermoprocess plants and Machines.

This seminar provides an overview of applications with safe and non-safe analog signals. Get to know how to process analog values safely and how to integrate them in safety functions.

- Why functional safety?
- Analog safety functions vs. binary safety functions
- Using analog input values simultaneously with operational and safety functions
- Safety functions in ATEX areas
- Implementing safety functions in a thermoprocess plant in practice



FURTHER INFORMATION

on Safety Service + Training is available here:
<http://wie.li/trainingen>



MARKUS KICK

Business Development Manager
for Safe Analog Processing and
Combustion Technology

CONSULTING DAY FOR COMBUSTION TECHNOLOGY.

To be found all over the world - our international, dedicated team is always there for you. Increasing the productivity and availability of your thermoprocessing plant is our objective.

SCOPE OF SERVICES:

- Drafting and designing thermoprocessing plants
- Optimizing safety-relevant automation
- Implementating safety functions
- Support for testing safety functions (SIL, PL, ATEX)
- Independent commissioning support





INFO TO GO.



OUR WIELAND BROCHURE SERVICE

To make your workflow easier, we provide all of our product catalogs and industry brochures for you in the download area of our website.

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Further information and a product overview is available here:



SAFETY CATALOG

Safe system solutions for automation.

Art. No. 0860.1



HELLO COMBUSTION

Solutions for safe, decentralized control of industrial furnaces.

Art. No. 0434.1



SAMOS® PRO COMPACT

Compact safety.

Art. No. 0881.1



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Phone: +49 951 9324-329

E-mail: markus.kick@wieland-electric.com



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wieland

HEADQUARTERS

Wieland Electric GmbH
Brennerstraße 10 – 14
96052 Bamberg · Germany

Phone +49 951 9324-0
Fax +49 951 9324-198
info@wieland-electric.com

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Represented in over 70 countries worldwide:

www.wieland-electric.com