

Easy to install
*intrinsically safe solutions with
full SIL assessment*

PERFORMANCE
MADE
SMARTER

- comply with the IEC 61511 site standard



TEMPERATURE | I.S. INTERFACES | COMMUNICATION INTERFACES | MULTIFUNCTIONAL | ISOLATION | DISPLAY

PR
electronics

Your partner *for I.S.*

Count on us for product safety and reliability

Since 1974, PR electronics has been the trusted intrinsic safety (I.S.) partner for the process and factory automation industry. Some of the world's biggest brands are among our long-term customers. Our diverse portfolio of I.S. signal conditioning products sets technological, reliability and safety standards. With us as your partner, you will be able to solve even the most complex signal conditioning challenges thanks to PERFORMANCE MADE SMARTER.

At PR electronics our goal is to help you to achieve optimal success by providing:

- The highest signal integrity from your measurement point to control system.
- Maximum uptime based on our Install and Forget® philosophy and day-to-day delivery.
- Easy, cost-effective deployment and monitoring with intuitive communication interfaces.

- Site standard devices, easily programmed to suit your specific application.

Full SIL assessment

We don't take any shortcuts when it comes to safety in hazardous areas. PR pioneered compliance to IEC 61508 standards, and with our comprehensive range of DIN and power rail-mounted analog and digital I.S. interfaces, you can rest assured that you will easily meet IEC 61511 site standards. Our strong expertise in functional safety and agile design processes give us a strategic advantage when designing devices that meet SIL requirements. Many of our intrinsically safe SIL units are multifunctional, allowing a few units to be used in a wide range of applications. Plus, all of our devices can be installed in the safe area or in zone 2/div. 2.



Your partner in *achieving functional safety*

Experience our full range of I.S. devices for industrial signal conditioning and process control

The PR 9000 series offers you the widest range of multifunctional I.S. interfaces with the fewest variants. Each product is easy to use and service and, of course, fully SIL compliant. This makes them ideal in more critical industries such as chemical, oil and gas, pharmaceutical and energy. They are intuitive, easy to configure using the detachable communication interfaces.

- Fully IEC 61508 certified and implementable within SIL 2 and SIL 3 functional safety loops
- Interface and handle AI, AO, DI, and DO signals coming from or going to hazardous I.S. areas
- Multifunctional I.S. barriers, isolators and converters
- I.S. devices for industrial signal conditioning and process control
- Analog, digital and HART® signals
- Three different mounting solutions for easy commissioning - standard DIN rail, power rail, or use our backplane solution
- Supported by highly educated I.S. specialists in all countries where PR electronics is represented

Install & Forget®

All PR devices are individually designed and validated to exceed the most demanding failure rate assessments. In addition we offer a 5-year warranty on all our products. It's all part of our Install & Forget® philosophy.





9106B HART® TRANSPARENT REPEATER

Flexible I/O reduces spare parts inventory.

- 1 or 2-channel isolated signal repeater barrier (2.6 kVAC)
- Input accepts 2 wire SMART transmitters and current sources mounted in the hazardous area
- Fast signal response time of < 5 ms
- Outputs 4-20 mA - sink or source mode
- Performs signal splitter function - 1 in and 2 out

- SIL 2/SIL 3 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Oil & Gas: Drill cabin controls
 Chemical: HART® based temp. measurement
 Marine: HART® based radar tank level systems
 Energy: Biomass storage pressure measurement



9107B HART® TRANSPARENT DRIVER

Fast response and process reaction.

- 1 or 2-channel isolated current driver barrier (2.6 kVAC)
- Operation and drive control of I/P converters, valves and indicators mounted in the hazardous area
- Fast signal response time of < 5 ms
- High current output load of up to 725 ohms
- Output line fault detection via status relay

- SIL 2 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Oil & Gas: Drill cabin controls
 Marine: Discharge valve driving



9113B TEMPERATURE / mA CONVERTER

Easy and fast configuration.

- 1 or 2-channel isolated converter barrier (2.6 kVAC)
- Measures RTD, TC, and mA signals coming from the hazardous area
- Conversion and scaling of temperature (Pt, Ni and TC) and active current signals
- Outputs 4-20 mA - sink or source mode
- SIL 2 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Oil & Gas: Temp. applications requiring zone 2 & SIL 2
 Pharmaceutical: Temp. measurement in sterilization vacuum processes
 Marine: I.S. isolation and local monitoring of gas compressor temp



9116B UNIVERSAL CONVERTER W/ LIMIT SWITCH

Universal solution for nearly all applications.

- 1-channel isolated universal converter barrier (2.6 kVAC)
- Measures RTD, TC, and mA signals coming from the hazardous area
- Conversion and scaling of temperature (Pt, Ni and TC), ohm, potentiometer and active and passive current signals
- Outputs 4-20 mA - sink or source mode - including relay output
- Output relay for set point, window, signal error or power failure action

- SIL 2 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Chemical: Gas leakage measurement
 Gas storage: Storage pressure measurement
 Marine: Valve position control



9202B PULSE ISOLATOR

Fully isolated and independent 2-channel device.

- 1 or 2-channel isolated switch amplifier barrier (2.6 kVAC)
- Measures dry contact or NAMUR sensors mounted in the hazardous area
- Line fault / cable error detection
- Relay or transistor/opto output
- SIL 2 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Energy: Biomass storage
 Oil & Gas: Drill cabin controls
 Cement factories: Explosion duct mill inlet vents position
 Water & Wastewater: I.S. area lift station level indication



9203B SOLENOID/ALARM DRIVER

Unique universal Ex driver for solenoids, acoustic alarms and LEDs.

- Isolated SOLENOID / ALARM DRIVER barrier (2.6 kVAC)
- ON/OFF I.S. driver for solenoids, LEDs and audible alarms
- 1 or 2 channels in a low power version (35 mA)
- 1 channel version in high power version (60 mA)
- Logic signal input - Contact, NPN or PNP

- SIL 2 Full Assessment and certified in accordance with IEC 61508

Examples of application areas:

Chemical: Reactor safety on/off valve
 Marine: Valve Remote Control system



9410 POWER CONTROL UNIT

Reduces wiring costs. Approved for installation in Ex zone 2.

- Distributes 24 VDC supply voltage to the power rail
- Optional redundant supply for the power rail

- Detects errors from devices mounted on a power rail
- Transmits a collective alarm to the control system



9420 POWER SUPPLY

- Input: 85...132 VAC or 187...264 VAC
- Output 24 VDC 180 W / 120 W (zone 2)

Fast, easy commissioning
for major DCS systems
- in a compact design



PR backplane

- a user-friendly and reliable connection between the DCS/PLC system and I.S. interface

The new PR backplane is the latest addition to our I.S. interface range. It greatly simplifies mounting and wiring in large industrial process installations and seamlessly integrates with standard DCS systems.

The unique design offers:

- Robust design - vibration and shock tested according to IEC 61132-2 Approved for zone 2 applications
- Easy snap on/off feature for device replacement
- Choice of 8, 16 and 32 I/O module slot configurations
- Compatibility with all PR 9000 products
- Optimized dimensions for higher channel density in your cabinet

Variety of mounting options

The backplane offers easy, safe module installation and removal (hotswap) and can be installed vertically or horizontally on DIN rail, or a wall/bulkhead. The compact design allows you to optimize and maximize cabinet space.

Standard solution

The new backplane seamlessly integrates with standard DCS systems.

Get more information online

Learn more by visiting prelectronics.com/backplane, where you will also find supporting I/O cards/DCS manufacturers and a selection guide.



COMMUNICATION INTERFACES

Enable your devices with four levels of interconnectivity:

4501 - LOI (Local Operator Interface) connectivity on your new and existing PR I.S. devices to locally monitor process values, device configuration and perform signal simulation

4511 - Modbus RTU communication protocol on your new and existing PR I.S. devices

4801 - Industrial Ethernet and wireless access via the PR gateway

PPS - Remote operator interface (ROI) connectivity via our PPS app for local and remote monitoring of process values, device configuration and signal simulation

BENEFIT TODAY FROM *PERFORMANCE MADE SMARTER*

PR electronics is the leading technology company specialized in making industrial process control safer, more reliable and more efficient. Since 1974, we have been dedicated to perfecting our core competence of innovating high-precision technology with low power consumption. This dedication continues to set new standards for products communicating, monitoring and connecting our customers' process measurement points to their process control systems.

Our innovative, patented technologies are derived from our extensive R&D facilities and from having an in-depth understanding of our customers' needs and processes. We are guided by principles of simplicity, focus, courage and excellence, enabling some of the world's greatest companies to achieve PERFORMANCE MADE SMARTER.



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