PR 5210
Process Transmitter

- – Full Digital Signal Processing with up to 4.8 Mio Divisions Internal Resolution
- – High Performance Sense Amplifier Circuit for Maximum Accuracy
- – SmartCalibration feature for fast calibration even without weights
- – Direct calibration and configuration via Windows-PC
- – W&M approval for 6000 e, class III (EN 45501 | OIML R 76)
- – Supply voltage 24 V_{DC}
- – Protection class IP20, DIN-Rail mounting

Product profile
The PR 5210 series of Digital Process Transmitters combine reliable and accurate weight acquisition with extremely easy operation and setup.

Three versions are available:
- – PR 5210/10 with a high-performance 16 bit analogue output
- – PR 5210/11 with high-speed 12 Mbit Profibus-DP interface
- – PR 5210/00 providing both

Users can access directly all configuration and operation levels via the front serial interface. A Windows Engineering Tool allows convenientconfiguration from a Windows PC or Laptop. All instrument feature a built-in RS422 | 485 serial interface using the very simple and versatile SMA-Standard protocol.

Description
The transmitter is specifically designed for use in typical control cabinets. It combines convenient DIN rail mounting with fast setup and straight forward configuration in a very simple way.

Multiple instruments can be easily lined up in the control cabinet and the full galvanical isolation of all input and output circuits from supply makes the instrument especially easy and safe to integrate.

The direct-access Windows Engineering Tool makes the instrument ideal for all applications where ease of use and a simple but effective data acquisition of weight values is required.

A set of typical built-in weighing functions support adaptation to individual process requirements without programming. The configurable digital Inputs and Outputs and the limit | alarm function with user-configurable hysteresis can be combined to provide simple but reliable direct process control.

Profibus–DP, 12 Mbit (PR 5210/00 + /11)
High-speed Profibus-Interface to connect to PLCs and SCADA systems. Provides weight values at maximum accuracy and speed.

Smart Calibration
The easiest and fastest way to a reliable calibration even without weights due to high precision input amplifier and reference circuit.

Input signal filter
Powerful digital low pass filter to suppress unwanted signal variation caused by external disturbances. Variable cut-off frequency and selectable filter style.

Password protection
User definable pass code to prevent unauthorised access to parameters or calibration data.

Sensor Input
Sensor input circuit and supply fully
galvanically isolated from supply voltage
and all in-|output circuits.

Sensor supply
12 V$_{DC}$, max. 160 mA (= 75 Ω)
4- or 6-wire-circuit

Input range
0…36 mV, internal Res.: 7.5 nV
(appr. 4.8 Mio div.)
usable stepwidth: 200 nV
Linearity <0.002 % (typ.)

Dead load suppression 0…100 %

Sample interval
10, 20, 40, 80,160 ms
user selectable

Accuracy
6000 e, Class III
0.5 µV/e @ 6 samples/sec

Status LEDs
Status LEDs to signal operation
and error conditions.

In-|Outputs
All I|O circuits fully galvanically isolated
from sensor input and supply.

Profibus-DP (PR 5210/00 + /11)
12 Mbit, DP-V0
IEC 61158 Type 3 and IEC 61784

Analogue Output (PR 5210/00 + /10)
0|4…20 mA, internal resolution 16 bit,
usable stepwidth: 0.5 µA
max. load 500 Ω
user configurable

Digital I|Os
Function user configurable
3× IN, 30 V, 10 mA
3× OUT, 30 V, 30 mA

Serial Interfaces
RS232C via RJ-12 for configuration only
RS422|485 via screw terminals
Protocol: Remote Display

Environmental conditions
Operation: -10…+55 °C
Storage: -20…+70 °C
Humidity: 90 % RH, non-condensing
Vibration acc. to DIN EN 680068-2-6 /Fc

Supply
24 V$_{DC}$, +10/-15 %, 8.2 W max.

Conformity
EN 61000-6-2 and 61000-6-4
NAMUR, CE

Protection
Housing|terminals IP20
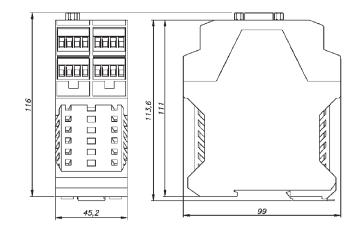Mounting on 35 mm DIN rail
according DIN 46277

Electrical connections
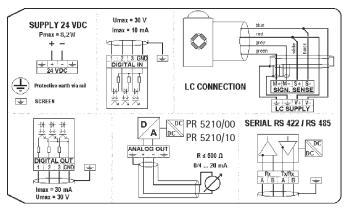Removable screw terminals for max. 2.5 mm^2
System Phoenix|COMBICON

Dimensions
99 × 116 × 45.2 mm

Weight
Net 0.29 kg

Order information

Type	Description	Order number
PR 5210/00	Profibus-DP, Analogue Output, Digital I|O, Serial Interface	9405 152 10001
PR 5210/10	Analogue Output, Digital I|O, Serial Interface	9405 152 10101
PR 5210/11	Profibus-DP, Digital I|O, Serial Interface	9405 152 10111

Delivery: incl. CD containing Manual, Engineering Tool, GSD file, serial cable for PC connection (Sub-D to RJ-12)