



sartorius

## Ethernet Transmitter Series PR 5220



- Ethernet TCP/IP Connection for Remote Control
  - Configuration via VNC
  - OPC Server
- high accurate signal conversion with an internal resolution of 4,8 Mio. counts
- W&M approval with remote display for 10.000e acc. to EN 45501 / OIML R 76
- Calibration without weights (Smart Calibration)
- high accurate analogue output 0/4 -20mA
- Serial Interface RS485/422
- Supply voltage 24V DC
- Protection class IP 20, DIN Rail-mounting

### Product profile

The new Ethernet Transmitter PR5220 provides an easy and reliable solution for weighing of process hopper scales with strain gauge load cells in process automation applications.

The PR5220 Transmitter sets new standards in Process automation. The standard Ethernet TCP/IP interface allows an easy integration into existing PC networks. Information can be transferred into supervisory systems with the integrated OPC-Server technology.

The IP address can be assigned via the 3 following possibilities:

1. Manual input of the IP address by the user
2. Automatic assignment from network server (DHCP)
3. Auto IP, self-assign by the instrument

If the IP Address is not known by the user, a small tool is scanning the complete network and displays IP address and name of all Sartorius instruments that are connected to the network.

With this function all instruments / scales can be clearly identified. The tool will be delivered with the Process Transmitter and can be used without installation.

For the configuration of the VNC Technology is used. This function enable the user to start the homepage of the instrument in the Microsoft Internet Explorer and do the configuration online.

Additionally to this the tool ConfigureIt Professional is available. With this tool all configurations can be done online or offline and saved on the PC. This makes the administration of different systems very easy and well arranged.

All instruments provide a built-in RS422/485 serial interface using the very simple and versatile SMA-Standard protocol and the protocol for a remote display. Additionally to this a high-performance 16 bit analogue output is available.

Three freely configurable digital In- and Outputs can control simple process functions, like limits.

The Transmitter is equipped with pluggable COMBICON screw terminals. This Terminals allow an easy installation and exchange of instruments.

The Ethernet 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.

Take control direct on the display or via PC. Do you think about Wireless LAN? Use the possibilities of the Ethernet TCP/IP. Remote Service via the Internet, allows support from every point of the world.

The high-quality Sense-amplifier supports 4 and also 6 wire Load Cells. This allows connections over long distances without losing accuracy.

Additional security guarantees the fully galvanically isolated sensor input circuit and supply from supply voltage and all in-/out-put circuits.

## Technical Data

### Housing

Housing IP20  
according to DIN 40050  
Mounting on DIN Rail 35 mm  
according to DIN 46277  
material: polyamide

RoHS conform

### Dimensions

Version /00:  
99 x 116 x 45 mm  
Versionen /01 and /04\_  
99 x 116 x 68 mm

### Supply Voltage

24 V<sub>DC</sub>, +/-20 %

### Power Consumption

6W / 8W (Versionen /01 und /04)

### Control outputs

Quantity: 3  
opto-isolated output, passive,  
Voltage: max. 30V<sub>DC</sub>  
Current: max. 30mA

### Control Inputs

Quantity: 3,  
opto-isolated input, passiv, Functions:  
zero setting, taring...  
Voltage: max. 30V<sub>DC</sub>  
Current: max. 10mA

### In-/ Output

All I/O circuits fully galvanically isolated  
from sensor input and supply.

### Load cell connection

All strain gauge load cells;  
6- or 4-wire connection

### Load cell supply

12V, short-circuit proof.  
External load cell supply possible.

### Minimum load impedance

min. 75 Ohm  
e.g. 6 load cells with 600 Ohm  
or 4 load cells with 350 Ohm

### Measuring principle

Measuring amplifier:  
Delta-Sigma converter  
Measuring time:  
min 5 ms - max. 1600 ms

### Accuracy

10.000e class III acc. to EN 45501;  
according to. OIML R 76,  
min. verification interval: 0.5µV/e

### Input range

7,5 nV (appr. 4,8 Mio. div.)  
Usable resolution: 200nV

### Input signal

Measuring signal: 0 bis 36mV  
(for 100% nominal load)

### Linearity

< 0,002%

### Temperature effects

Zero: TK0 m < 0.02 µV/K RTI  
Span: TKspan < +/- 2 ppm/K

### Digital filter for load cell

4th order (low pass), Bessel, aperiodic  
or Butterworth

### Ethernet interface

Ethernet TCP/IP  
definition of an IP address:  
- AutoIP  
- DHCP Server classification  
- manual entering of an IP address

Automatic detection of signal transmission  
and corresponding change over (cross-over  
or patch cable)

### Status Indicator

Status LEDs to signal operation  
and error conditions.

### Analogue output

0/4... 20 mA,  
internal resolution 16 bit,  
usable stepwidth: 0.5 µA  
max. load 500 Ohm  
user configurable

### Serial Interfaces

RS 422/485 via screw terminals  
Protocol: Remote Display, SMA

### Electrical connections

All electrical connections  
via modular screw terminals for 2.5 mm  
max. System Phoenix/COMBICON

### Environmental conditions

#### Temperature

W&M: -10°C bis +40°C  
Operation: -10°C bis +50°C  
Storage: -40°C bis +70°C

#### Electrostatic discharge

6/8kV according EN 61000-4-2

#### Electromagnetic compatibility

according EN 61000-4-3  
by 80MHz bis 1GHz, 10V/m

#### Peak voltages (surge)

1/2kV gemäß EN 61000-4-4

#### Electromagnetiv emissions

According EN 61326,  
limed value class A

#### Weight

Version /00:  
Net: 0,29 kg  
Versionen /01 und /04\_  
Net: 0,35 kg



PR 5220/00  
Ethernet Transmitter



PR 5220/01  
with Profibus- DP



PR 5220/04  
with DeviceNet

## Order information

Type	Description	Order code
PR 5220/00	PR5220/00 Ethernet Transmitter, 24 VDC	9405 152 20001
PR 5220/01	PR5220/00 Ethernet Transmitter with Profibus-DP, 24 VDC	9405 152 20011
PR 5220/04	PR5220/00 Ethernet Transmitter with DeviceNet, 24 VDC	9405 152 20041

Delivery: incl. CD containing Manual, Configuration Tool,

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