

# PR5230 Fieldbus Transmitter



The fieldbus transmitter PR5230 is a product for readout and transmit weight values to installed networks and control systems. LCD display is configurable and displays up to 10 items, and can be installed at the process. Through the different interface upgrade possibilities and the robust stainless steel housing, the PR5230 is an innovative and flexible process unit.

## Load Cell Certifications



## Standard Features

- IP66, stainless steel, electro-polished construction
- Display for weight and status information
- OIML approval for 10,000e, and an internal resolution of 4 and 8 Mio. counts
- SmartCalibration feature for fast calibration even without weights
- Serial Interface RS-485/422 and RS-232
- Option cards: Analog output 0 to 10 or 4-20 mA, DeviceNet and Ethernet/IP
- Load cell connection board for up to four load cells

## Specifications

### Housing:

Stainless steel electro-polished  
IP66, RoHS compliant

### Dimensions:

(L × W × H)  
13.78 × 9.84 × 5.91 in  
(350 × 250 × 150 mm)

### Weight:

Net: 1.45 kg (3.2 lb)

## Specifications (cont.)

### Display and Status:

LCD, transfective, back-lit  
Weight: 6-digits  
Size: 128 × 64-pixel, graphic  
Information can be configured  
Status LEDs to signal operation and error conditions

### Internal Keys:

In the housing: 3 keys for Zero, Tare, Test

### Supply Voltage:

230 VAC, (+10/-15%): 24 VDC, (± 20%)

### Power Consumption:

11 W

### Control Outputs:

Quantity: 3  
Relay output, passive  
Functions: Limits, weight status  
Voltage: max. 30 VDC  
Current: max. 30 mA

### Control Inputs:

Quantity: 3 opto-isolated input, passive  
Functions: zero setting, taring  
Voltage: max. 30 VDC  
Current: max. 10 mA

## Specifications (cont.)

### Remote I/O:

The I/O can be set internally via a function and remote via fieldbus or PC

### In/Output:

All I/O circuits fully galvanically isolated from sensor input and supply 3 inputs/3 outputs (relays)

### Load Cell Connection:

All strain gauge load cells; 6 or 4 wire connection

### Load Cell Supply:

12 V, 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:

7.5 nV (appr. 4.8 Mio. div.)

### Usable Resolution:

0.2 μV/d

### LC Input Signal:

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

### WandM Approval (in preparation):

10,000 e class III acc. to EN 45501; according to OIML R76, min. verification interval: 0.5 μV/e at 160 ms

### Linearity:

< 0.003 %

### Temperature Effects:

Zero: TK0 m < 0.05 μV/K  
RTI

Span: TKspan < ±2.5 ppm/K

### Digital Filter for Load Cell:

4th order (low pass), Bessel, aperiodic or Butterworth Ethernet Interface for Optional IP Card: Ethernet TCP/IP and Modbus® TCP  
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)  
Web service via SOAP/UPnP (Simple Object Access Protocol) Synchronal Modbus UDP

### Serial Interfaces:

RS 422/485 and RS232 Protocols: Remote Display, SMA, Modbus RTU, printer and Minebea digital scales (XBPI – protocol)

### Options Analogue Output PR 5230/06 (C11):

0-10 VDC or 4 -20 mA, internal resolution 16 bit, usable stepwidth: 0.5 μA max. load 500 Ω, user configurable

### Fieldbus PR 1721/4x (C2x):

Profibus®-DP, Interbus-S, DeviceNet®, CC-Link, Profinet® and EtherNet/IP®

### Load Cell Connection Board

#### PR 5230/22 (C31):

For the internal connection of up to 4 load cells (instead using a cable junction box)

### Temperature:

WandM: 14 °F to 104 °F (-10 °C to 40 °C)  
Operation: 14 °F to 122 °F (-10 °C to 50 °C)  
Storage: -4 °F to 158 °F (-20 °C to 70 °C)

### ATEX Approvals PR 5230:

II 3G Ex nA nC IIC T4  
II 3D Ex tD A22 IP6X T80° C  
SAG 09ATEX004X  
II (2)G [Ex ib IIC  
II (2)D [Ex ibD  
KEMA 10 ATEX 0065 X

## Part Number/Price

| Part # | Type      | Minebea Part # | Description                         | Price   |
|--------|-----------|----------------|-------------------------------------|---------|
| 158861 | PR5230/00 | 9405 152 30000 | PR5230 transmitter in field housing | Consult |

## Options/Accessories

| Part # | Type      | Minebea Part # | Description                            | Price   |
|--------|-----------|----------------|--|---------|
| 158863 | PR1721/57 | 9405 317 21571 | EtherNet IP interface module           | Consult |
| 158864 | PR1721/44 | 9405 317 21441 | DeviceNet interface module             | Consult |
| 160431 | PR5230/06 | 9405 352 30061 | 0 to 10 or 4 to 20 mA interface module | Consult |