

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)

Environmental Conditions 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	0-10 or 4-20 mA interface module	Consult