Minebea Intec 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.

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

APPROVALS

Specifications (cont.)

Ethernet Interface for Optional IP Card:
Ethernet TCP/IP and Modbus® TCP
Definition of an IP adress: – AutoIP; – DHCP Server classification; – manual entering of an IP address
Automatic detection of signal transmission and corresponding change over (cross-over or patch cable)
Webservice 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):
Ø-1Ø VDC or 4 -2Ø mA, internal resolution 16 bit, usable stepwidth: 0.5 µA max. load 500 O, 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 of using a cable junction box)

Environmental Conditions Temperature:
WandM: –10° C to 40° C
Operation: –10° C to 50° C
Storage: –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	$2,220.00

Options/Accessories

Part #	Type	Minebea Part #	Description	Price
158863	PR1721/47	9405 317 21471	EtherNet IP interface module	$1,020.00
158864	PR1721/44	9405 317 21441	DeviceNet interface module	$895.00
160431	PR5230/06	9405 352 30061	0 to 4-20 mA interface module	$163.00

Specifications

Housing:
Housing IP66 material: stainless steel electro-polished
RoHS conform

Dimensions:
(W x D x H): 13.78 x 9.84 x 5.91 in
(350 x 250 x 150 mm)

Weight:
Net: 1.45 kg (3.2 lb)

Display and Status:
LCD, transflective, back-lit
Weight: six-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: three opto-isolated input, passive,
Functions: zero setting, taring
Voltage: max. 30 VDC
Current: max. 10 mA

Remote I/O:
The I/O can be set internally via a function and remotely via fieldbus or PC

In/Output:
All I/O circuits fully galvanically
isolated from sensor input and supply
Three inputs/three 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 Ω
(e.g. 6 load cells with 600 O 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