

Weight transmitter PR 5230

With display and dosing function EasyFill®



German Quality



! Advantages

- High precision, reliable and fast processing of weight values
- Convenient and efficient calibration of the scale in under one minute
- Global remote servicing with the Remote Service functionality
- Integrated display for status monitoring
- Dosing function EasyFill® reduces programming time



The weight transmitter PR 5230 processes weight values reliably and highly accurately from silo and vessel scales with analogue and digital load cells. The field housing enables direct and safe installation regardless of the ambient conditions.

The versatile weight transmitter for fast, high-precision weight values

- ! **Reliable and fast processing** of weight values with up to 120,000 increments. The integrated **display** enables direct status monitoring.
- ! The EasyFill® software, integrated as standard, for one-component dosing of fluids, powders and granules **reduces programming time** and enables fast and flexible process changes.
- ! **'Smart Calibration'** enables PC-based calibration without weights. This efficiently reduces installation times to a minimum.
- ! The **Remote Service functionality** avoids downtime in your production.

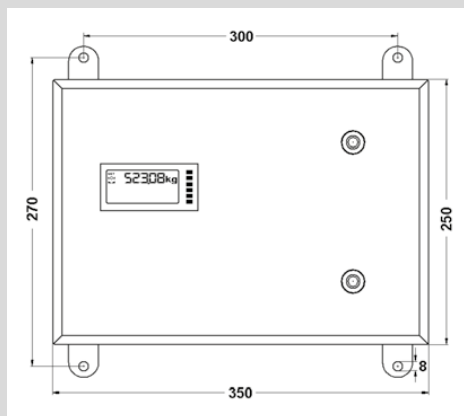
The weight transmitter for simple and versatile weight recording

The weight transmitter PR 5230 comes standard with three freely-configurable digital inputs and outputs. These can be used with an application-specific limit function and associated values to avoid over and under filling. The weight transmitter can be connected without any difficulty with an external WLAN adapter and used with its full range of functions. An intrinsically safe load cell connection for operating load cells in ATEX Zone 1/21 is available optionally without additional electricity-limiting barriers. For documentation and printing of weighing data or defined configuration parameters, a printer can be connected directly to the transmitter.

Product description

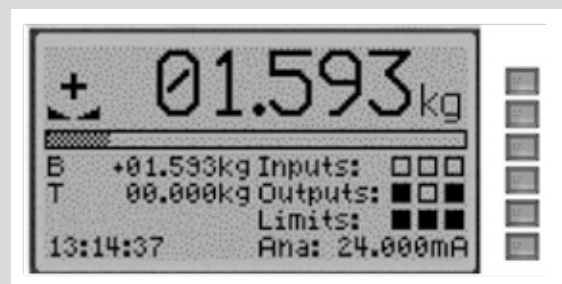
Structure

Housing



Height of housing: 150 mm

Display and status, LEDs



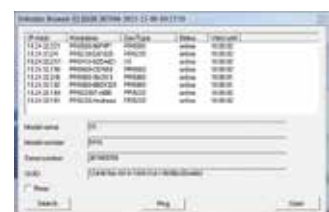
Dimensions in mm

Including EasyFill® application

EasyFill® is a basic software application for one-component dosing of fluids, powders and granules with user-specific configurable target value, tolerance and overshoot value. Processes can be directly controlled using the integrated digital inputs/outputs. Control for implementing simple dosing processes efficiently and easily is guaranteed thanks to numerous options/interfaces for integration into your production network.

Simple online operation of the weight transmitter

- Display the website integrated with the device using the IP address in your browser
- Display and change device configuration
- Calibration of a device using a range of methods
 - with load cell data ('smart calibration')
 - with weights
 - with mV/V
- View and print the overall configuration
- Readout of fault memory
- Store/download a device configuration as PC file



All Minebea Intec devices at a glance

The 'Indicator Browser' enables all Minebea Intec transmitters, indicators and process controllers in your network to be displayed on your PC. The software tool is included with the product.

Assignment via IP address

There are flexible solutions for IP address allocation: either set manually by the operator, defined as an auto IP directly by the weight transmitter PR 5230 or taken from the assigned DHCP server. If the IP address is not known when allocating automatically, the Minebea Intec Indicator Browser included with the product enables you to search for the right transmitters in the network.

Optionally available for use in ATEX Zone 2/22

Technical data

Weight transmitter PR 5230 – precision weight recording for vessels and silos

Housing	Housing, terminals, IP65	
	Material	Stainless steel, electro-polished
	RoHS compliant	
Dimensions	350×250×150 mm	
Weight	Net	1.45 kg
Display	LCD, transfective, back-lit	
	Elements	6 digit
	Resolution	128 x 64 pixels, graphic display can be configured
	Status LEDs give an overview	
Internal keys	Within the housing there are 3 keys for zero, tare and test	
Power supply	100 V AC to 240 V AC +10%/-15% 24 V _{DC} , +/-20%	
Power consumption	11 W	
Control outputs	Quantity	3
	Relay outputs, passive, max. 30 V _{DC} , max. 30 mA	
	Functions	Limits, weight status
Control inputs	Quantity	3
	Optocoupler isolated, passive, max. 30 V _{DC} , max. 10 mA	
	Functions	Zero, tare
Remote controlled I/O	The I/O can be set using internet function or by PC or field bus	
Inputs and outputs	Galvanically isolated from auxiliary power and sensor circuit	
Load cell connection	All strain gauge load cells; 6 or 4 wire connection is possible	
Load cell supply	12 V, short-circuit proof, external load cell supply possible	
Load impedance	Min. 75 Ω	
	e.g. 6 load cells each with 600 Ω	
	or 4 load cells each with 350 Ω	
Measuring principle	Measuring amplifier	Delta-Sigma converter
	Measuring time	min. 5 ms – max. 1600 ms
Sensitivity	7.5 nV (appr. 4.8 million div.)	
	Usable resolution	0.2 μV/d
Input signal	Measuring signal	0 to 36 mV (for 100% nominal load)
Calibration approval (In combination with remote display PR 5110)	10,000 e, Class III in accordance with EN 45501	
	Complies with OIML R 76	
	Smallest signal	0.5 μV/e
Linearity	< 0.003%	
Temperature effect	Zero point	TK ₀ m < 0.05 μV/K RTI
	Measuring range	TK _{span} < +/- 2.5 ppm/K
Digital filter for load cell connection	4th order (low pass), Bessel, aperiodic or Butterworth	
Ethernet interface (Functions)	Ethernet TCP/IP and Modbus TCP - Assignment of an IP address: - AutoIP - DHCP server assignment - fixed input of the IP address - Automatic detection of signal transmission with corresponding change-over (cross-over or patch cable) - Web service via SOAP/UPnP (Simple Object Access Protocol) - Synchronal ModBus UDP	
Serial interface	RS 422/485 and RS232	
	Protocols	Remote displays, SMA, Modbus RTU, printer and Minebea Intec digital scales (XBPI protocol)
Optional: Analogue output PR 5230/06 (C11)	0/4 ... 20 mA	
	Internal resolution	16 bit
	Usable step width	0.5 μA
	Load impedance	500 Ω
	Function freely configurable	
Field bus PR 1721/4x (C2x)	Profibus DP, DeviceNet, CC-Link, Profinet and Ethernet/IP	

Technical data for weight transmitter PR 5230 continued

Load cell connection board PR 5230/22 (C31)	For internal connection options for up to four load cells (instead of cable junction box)	
Ambient temperature	Verifiable	-10°C to +40°C
	Industrial	-10°C to +50°C
	Storage	-20°C to +70°C
ATEX approvals PR 5230	II 3G Ex nA nC IIC T4, SAG 09 ATEX 004 X, II 3D Ex tD A22 IP6X T80 °C	
	II (2)G [Ex ib] IIC, II (2)D [Ex ibD], KEMA 10 ATEX 0065 X	

Ordering information

Type	Description	Order number
PR 5230	Weight transmitter in field housing, IP 65, stainless steel incl. Ethernet TCP/IP and Modbus TCP, RS232, RS485/422, 3 relay outputs, 3 digital inputs, OPC server license included	9405 152 30000

Option	The options are installed	
Power supply	230 V _{AC}	L0
	24 V _{DC}	L8
A/D converter	Load cells (strain gauge) scale connection in safe area	W1
	Load cells (strain gauge) intrinsically safe for scales in EX-area	WE1
EX Zone	ATEX Zone 2/22	Y2
Digital input output	Digital input passive (external 24 V supply required)	DE1
	Digital input active (internal 12 V supply)	DE2
	Digital output relay passive	DA1
	Digital output optocoupler passive	DA2

Option cards		SLOT	1	2	3
	Analogue output 0/4–20 mA	C11	X		
	Profibus DP	C21		X	
	DeviceNet	C24		X	
	CC-Link	C25		X	
	Profinet	C26		X	
	Ethernet/IP	C27		X	
	Load cell connection board for up to 4 load cells	C31			X
	Ethernet RJ45	Ethernet connector RJ45, IP65	M39		
	Ethernet cable with cable gland, 7 metres, RJ45 plug	M40			

Accessories	The accessories are enclosed	
PR 5230/06	Analogue output 0/4–20 mA	9405 352 30061
PR 5230/22	Load cell connection board for up to 4 load cells (instead of a cable junction box)	9405 352 30221
PR 5230/30	Ethernet connector RJ45, IP65	9405 352 30301
PR 5230/31	Ethernet cable with cable gland, 7 metres, RJ45 plug	9405 352 30311
PR 1721/41	Profibus DP	9405 317 21411
PR 1721/44	DeviceNet	9405 317 21441
PR 1721/45	CC-Link	9405 317 21451
PR 1721/46	Profinet	9405 317 21461
PR 1721/47	Ethernet/IP	9405 317 21471

The documentation and software are supplied on CD.

Software supplied: Indicator Browser, ConfigureIt Professional, OPC Server, VNC Viewer, Modbus TCP examples

Paper versions can be ordered separately if needed.

The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice.

Last updated 07/2017

Minebea Intec GmbH
 Meiendorfer Straße 205 A
 22145 Hamburg, Germany
 Phone +49.40.67960.555
 sales.hh@minebea-intec.com
 www.minebea-intec.com