

# Weight indicator X3

With clearly readable display and integrated dosing function



German Quality



## ! Advantages

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



The verifiable weight indicator X3 ensures fast and reliable display of the weight values. With the integrated EasyFill® application, filling with liquids, powders or granules can be controlled.

## Ideal for weighing and dosing processes

- ! **Reliable and fast processing** of weight values with up to 120,000 increments. The efficient weight indicator with large, transfective display offers **excellent readability** even in direct sunlight.
- ! **'Smart Calibration'** allows PC-based calibration without any weights. This efficiently reduces installation times to an absolute minimum.
- ! EasyFill® for one-component dosing of liquids, powders and granules **reduces programming time** in the PLC, enabling fast and flexible process changes.
- ! The global **Remote Service** avoids downtime in your production.

## Flexible and diverse for individual configurations

The weight indicator X3 is fitted with three freely configurable digital inputs and outputs as standard. These can be used with an application-specific limit function and associated values to avoid over and under filling. The weight indicator also has option slots for interfaces and input/output cards. Various interfaces allow integration into existing networks. The serial interface RS 232 allows direct connection of a printer or an additional remote display for documentation and to print weight values.

## Product description

**Structure**

Front view \*

Rear view \*

Side view \*

Panel cut-out \*

\* 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.

### Assignment via IP address

There are flexible solutions for IP address allocation: it is either set manually by the operator, defined as an auto IP directly by the weight indicator X3 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.

### Simple online operation

Using an integrated website, users have access to a wide range of weighing process functions using the weight indicator X3:

- 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



- Display weight on the PC screen
- View and readout of Alibi memory and readout of fault memory
- Store/download a device configuration as PC file

### Versatile interfaces

To guarantee integration into existing control systems:

- Standard: Ethernet TCP/IP interface with integrated Modbus TCP protocol
- Optional: Field bus interfaces Profibus DP, Profinet, DeviceNet or Ethernet/IP  
OPC server included – for connection to higher-level systems.

### Calibration via PC in under a minute

The integrated functionality 'Smart Calibration' allows efficient calibration of the silo and hopper scale via PC. Weights are not required for this.

Optionally available for use in ATEX Zone 2/22

## Technical data

Weight indicator X3 – weight recording with display for silos and vessels		
Housing	Dimensions	192 × 96 × 150 mm
	Front panel cut-out	187 <sup>+0.5</sup> × 91 <sup>+0.5</sup> mm
	Material	Aluminium
	Protection class	IP30
	Front panel	IP65 RoHS compliant
Supply voltage	110 V/240 VAC, -15%/+10%, 50/60 Hz or: 24 VDC	
Power consumption	13 VA/11 W	
Display	LCD, transfective, back-lit	
	Elements	6 digit (7 segments)
	Digit size	18 mm
	Colour	black/white
	Weight and status symbols	
Key	6 double-function keys (short lift keys)	
Status display	→ 0 ← zero readout between ± 1/4 d standstill Ⓑ Gross weight displayed NET Net weight displayed T Tare weight displayed Dimensions can be set: g, kg, t, lb Decimal point can be set	
Control outputs	Quantity	3, optocoupler isolated, max. 30 VDC, max. 30 mA
Control inputs	Quantity	3, optocoupler isolated, max. 30 VDC, max. 10 mA
	Functions	Zero setting, taring, EasyFill® application
Load cell connection	All strain gauge load cells; 6 or 4 wire connection 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. 1920 ms
Accuracy	10,000 e, Class III in accordance with EN 45501; according to OIML R 76,	
	Smallest signal	0.5 µV/e
Sensitivity (internal)	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)
Linearity	< 0.002%	

## Weight indicator X3 technical data continued

ATEX approval	Only weight indicator type PR 5410/03	
Zone 2/22	II 3G Ex nA II T4 X II 3D Ex tD A22 IP5x T80°C X As an indicator for installation by the customer, instructions supplied with the device	
Temperature effect	Zero point	$TK_{0m} < 0.05 \mu V/K RTI$
	Measuring range	$TK_{span} < +/- 2.5 ppm/K$
Digital filter for load cell connection	4th order (low pass), Bessel, aperiodic or Butterworth	
Alibi memory	Internal 50,000 inputs	
Ethernet interface	Ethernet TCP/IP and Modbus TCP	
	Assignment of an IP address: <ul style="list-style-type: none"> <li>- AutoIP</li> <li>- DHCP server assignment</li> <li>- fixed input of the IP address</li> </ul>	
	Automatic detection of signal transmission with corresponding change-over (cross-over or patch cable)	
Ambient conditions temperature	Verifiable	-10°C to +40°C
	Industrial	-10°C to +50°C
	Storage	-20°C to +70°C
Protection class	Front plate IP65, housing IP30	
Packaging dimensions	W 291 × H 331 × D 160 mm	
Weight	Net	1.45 kg
	Delivery	2.3 kg

## Ordering information

Type	Description	Order number
PR 5410/00	Weight indicator X3, 110–230 V	9405 154 10001
PR 5410/01	Weight indicator X3, 24 V <sub>DC</sub>	9405 154 10011
PR 5410/03	Weight indicator X3, 24 V <sub>DC</sub> , ATEX Zone 2/22	9405 154 10031

Options	Description	Order number
PR 5510/02	Serial interface 2 × RS 232	9405 355 10021
PR 5510/04	Serial interface 1 × RS 232 and 1 × RS 485	9405 355 10041
PR 5510/07	Analogue 4 inputs/1 output	9405 355 10071
PR 5510/08	BCD open emitter	9405 355 10081
PR 5510/09	BCD open collector	9405 355 10091
PR 5510/12	Expansion 6 digital inputs and 12 digital outputs	9405 355 10121
PR 1721/31	Profibus DP	9405 317 21311
PR 1721/34	Device NET	9405 317 21341
PR 1721/35	CC-Link	9405 317 21351
PR 1721/36	Profinet	9405 317 21361
PR 1721/37	Ethernet/IP	9405 317 21371

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.

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