

X2 – Process Indicator



Features:

- Accuracy 6000 d (acc. to OIML R76 Class III)
- High-speed conversion with response times from 5 ms
- Software Calibration
- Serial Interface RS232, RS485 for Printer Remote Display Modbus RTU
- 3 digital In- and 3 Outputs for limit function
- Transflective LCD Display, back lighted
- Panel Mount, Field Mount, Table Top, Zone 2/22 Version available

Optional Interfaces:

- Analog output, 0 | 4-20 mA, 0-10 V D.C.
- Fieldbus: Profibus-DP, DeviceNet

The new X2 Process Indicator provides an easy and reliable solution for process hopper scales with strain gauge load cells in process automation applications.

The flexibility of the instrument with different options as serial and digital interfaces or fieldbus allows a simple integration into automation systems. Also a high resolution 0 | 4-20 mA analogue output card is available.

The X2 Process Indicator is available in a robust aluminium housing for front panel mounting and stainless steel housing for field and table top mounting. Utmost interference suppression and long term stability guarantees optimum use in harshest environments.

The LCD weight display with 25 mm characters is back lighted and transflective. It allows a good readability even under difficult conditions as e.g. direct sunlight.

Three freely configurable digital In- and Outputs can control simple process functions, like limits.

The high-quality Sense-amplifier supports 4 and also 6 wire Load Cells. This allows connections over long distances without losing accuracy.

Additional security guarantees the fully galvanically isolated sensor input circuit and supply from supply voltage and all in- | output circuits.

Technical Data:

Power Supply AC version

Supply voltage	100 V – 240 V AC +10% / -15%
	50 – 60 Hz
Max. power consumption	16VA/ 8W

Power Supply DC version

Supply voltage	24 V DC	±20 %
Max. power consumption	8 W	

Environmental Conditions

Temperature range	
Ambient temperature for Stainless steel version	-10... +40 °C
Ambient temperature for Panel version	-10... +50 °C
Power-on temperature	0... +40 °C
Storage/transport	-20... +70 °C
Humidity	<95 %, no condensation, (acc. to IEC 68-2)

Accuracy and Stability

Accuracy class	6000 d (Cl. III) acc. to OIML R76
Min. measuring signal (OIML)	0.25 mV/V = 3 mVcorr. to 0.5 µV/d for 6000 d
Linearity error	<0.003 %
Zero stability error (TK0)	<0.05 µV/K RTI 0,004%/10K at 1mV/V
Span stability error (TKSpn)	<2.5 ppm/K

Sensitivity

Sensitivity	0.5 µV/d @ 6000d (Cl. III) OIML R76;
Input voltage (input signal + dead load)	
Dead load range	0...max. 36 mV DC, symmetrical to 0 36 mV DC (max. input signal);

Display

6-digit 7-segment LCD transfective display with Orange backlight

Operating Keys

Setup Key, Tare Set/Reset, Gross, Zero, Print & Test key

Load Cell input

Load cell type	Strain gauge, 6 or 4-wire connection possible
Supply voltage	12 V DC
Impedance	for up to 8 load cells of 650 Ω each or 4 load cells of 350Ω each
Max. load	≥75 Ω

Measuring time

Configurable	5, 10, 20, 40, 80, 160, 320, 640, 960, 1200, 1600 ms
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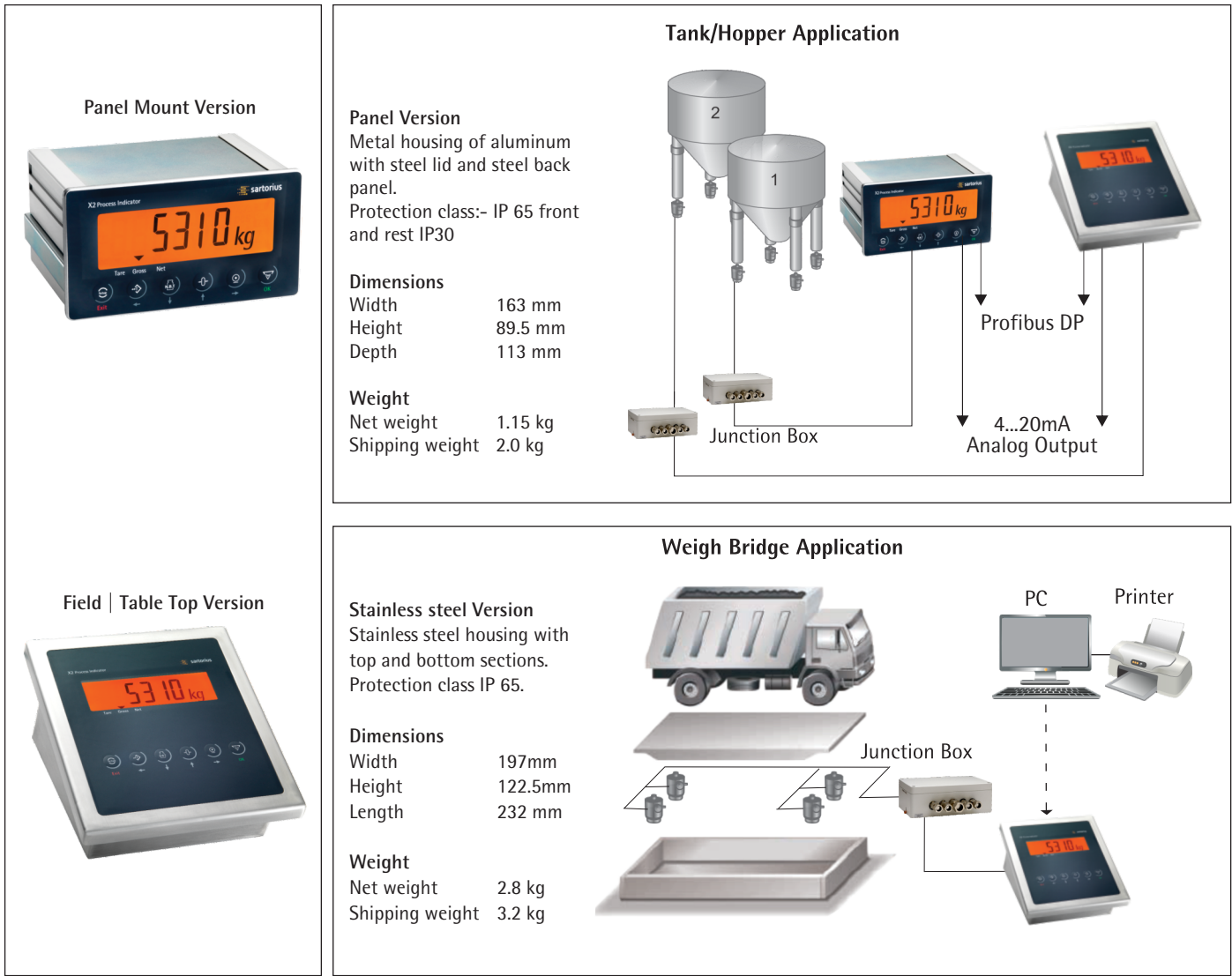
Filter

Selectable, 4th order (low-pass), with configurable cut-off frequency

Characteristic

Bessel, Aperiodic, Butterworth, Tschebyscheff

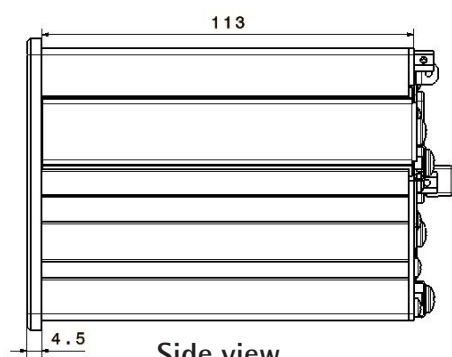
Functional Diagram



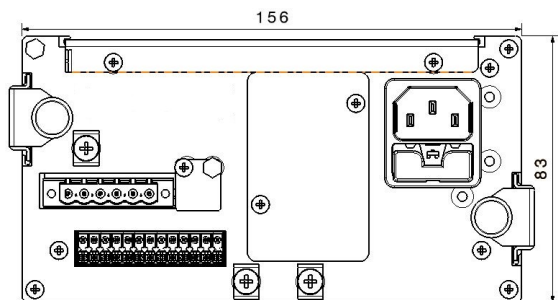
Panel Version



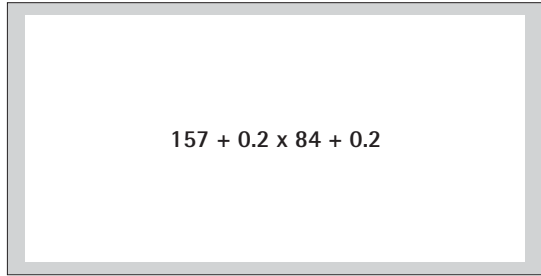
Front view



Side view



View from the back



Panel cut-out

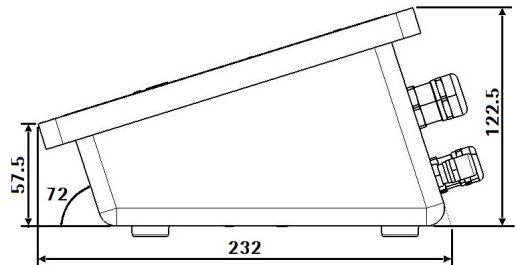
Table Top | Wall Mount Version



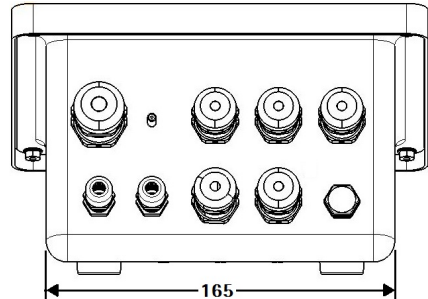
Front view



Isometric view

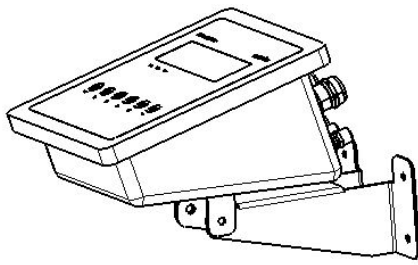
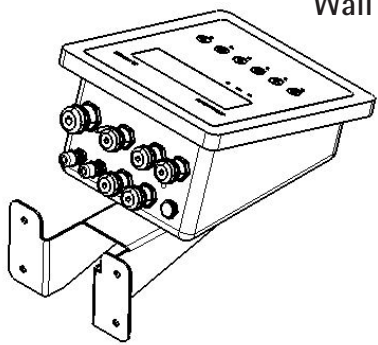


Side view



View from the back

Wall Mounting Accessories



X2 Ordering codes		
Model	Variant Description	Order code
Panel Variants		
PR5310/00	Basic, 230V AC	9407 1 5310 00 1
PR5310/01	Basic, 24V DC	9407 1 5310 01 1
PR5310/20	Basic, Analog O/p, 230V AC	9407 1 5310 20 1
PR5310/21	Basic, Analog O/p, 24V DC	9407 1 5310 21 1
PR5310/40	Basic, Profibus option, 230V AC	9407 1 5310 40 1
PR5310/41	Basic, Profibus option, 24V DC	9407 1 5310 41 1
PR5310/60	Basic, Devicenet option, 230V AC	9407 1 5310 60 1
PR5310/61	Basic, Devicenet option, 24V DC	9407 1 5310 61 1
SS Variants		
PR5310/10	Basic, 230V AC	9407 1 5310 10 1
PR5310/11	Basic, 24V DC	9407 1 5310 11 1
PR5310/30	Basic, Analog O/p, 230V AC	9407 1 5310 30 1
PR5310/31	Basic, Analog O/p, 24V DC	9407 1 5310 31 1
PR5310/50	Basic, Profibus option, 230V AC	9407 1 5310 50 1
PR5310/51	Basic, Profibus option, 24V DC	9407 1 5310 51 1
PR5310/70	Basic, Devicenet option, 230V AC	9407 1 5310 70 1
PR5310/71	Basic, Devicenet option, 24V DC	9407 1 5310 71 1
Ex Variants		
PR5310/12	Basic, 24V DC, SS, Zone2/22	9407 1 5310 12 1
PR5310/32	Basic, Analog O/P, 24V DC, SS, Zone2/22	9407 1 5310 32 1
PR5310/52	Basic, Profibus, 24V DC, SS, Zone2/22	9407 1 5310 52 1
PR5310/72	Basic, Devicenet, 24V DC, SS, Zone2/22	9407 1 5310 72 1

Note : Accessories for wall mounting unit to be ordered separately.

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