TOX® Process monitoring EPW 600

Data sheet 100.15

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Subject to technical changes.

TOX® PRESSOTECHNIK SE & Co. KG, Riedstrasse 4, 88250 Weingarten / Germany
www.tox.com

TOX® Process monitoring system

Monitoring production processes in real-time

The EPW 600 is seamlessly monitors processes, in which precisely defined functional correlations between force and distance have to be verified. Ideal applications you find in the monitoring of joining, riveting, press-in and caulking processes and there they care for continuous quality assurance in production.

Here the devices read the force/distance data pairs from two measuring channels 'X' and 'Y' during the measuring operation. The data are written to memory and can be displayed graphically. The resulting force/distance function is compared with the specified data limits of the set window values or envelope curve. An OK message is issued if the data limits are complied with, otherwise a NOK message is issued.

Configuration

The configuration and parametrization can be made directly on the device and quality data can be evaluated. Thanks to a logically arranged graphic illustration, the display makes a fast visual inspection possible.

The change from manufacturing parts can be implemented easily and fast via the selection of the respective test program. For this, 64 individual definable programs are available which can be called up either with a PLC or via menu.

Functions

- Simultaneous real time monitoring of the manufacturing processes
- Supplies important information about the process sequence
- Special monitoring via window and envelope curve technique
- Individual measuring programs are available
- Operating language can be switched over
- Data backup of measuring curve and final values
- Several password levels
- Touch screen

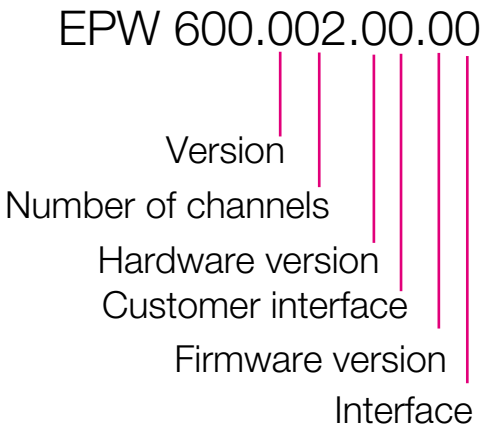
Optional fieldbus interfaces

- EtherNet IP
- EtherCat
- PROFINET

Technical data

Technical data	EPW 600 installation version 7"	EPW 600 installation version 10.1"	EPW 600 wall version10.1"
Supply voltage	24 V DC	24 V DC	24 V DC
Current consumption	≤ 1.5 A	≤ 1.5 A	≤ 1.5 A
Power supply connection	Phoenix Contact DFMC	Phoenix Contact DFMC	M12 connector
Display	7" TFT LCD WSVGA (1024 x 600) Color depth: 18-bit	10.1" TFT LCD WSVGA (1024 x 600) Color depth: 18-bit	10.1" TFT LCD WSVGA (1024 x 600) Color depth: 18-bit
Processor	ARM Cortex A7 2 x 1 GHz	ARM Cortex A7 2 x 1 GHz	ARM Cortex A7 2 x 1 GHz
Number of measuring programs	64, 10 windows per measuring program	64, 10 windows per measuring program	64, 10 windows per measuring program
Dimensions (W x H x D)	Front frame: 200 mm x 133 mm x 7.5 mm	Front frame: 268 mm x 175 mm x 7.5 mm	Housing: 268 mm x 175 mm x 116.2 mm
Weight	575 g	910 g	2500 g
Ethernet	Ethernet (10 / 100 Mbit/s) EtherCat (1 Gbit/s)	Ethernet (10 / 100 Mbit/s) EtherCat (1 Gbit/s)	Ethernet (10 / 100 Mbit/s) EtherCat (1 Gbit/s)
USB	2 x USB 2.0	2 x USB 2.0	2 x USB 2.0
Digital (optional)	16 input / 8 output	16 input / 8 output	16 input / 8 output
Analog	Input (selectable 0 - 10 V / 4 -20 mA) Output + / - 10 V	Input (selectable 0 - 10 V / 4 -20 mA) Output + / - 10 V	Input (selectable 0 - 10 V / 4 -20 mA) Output + / - 10 V
Strain gauge	Non-isolated Input size voltage range adjustable via software	Non-isolated Input size voltage range adjustable via software	Non-isolated Input size voltage range adjustable via software
Fieldbus interfaces	CC40 Module (EtherCAT, Ethernet IP, PROFINET)	CC40 Module (EtherCAT, Ethernet IP, PROFINET)	CC40 Module (EtherCAT, Ethernet IP, PROFINET)
Housing	Plastic - PA66 CF25, RAL 9000, UL 94-H	Plastic - PA66 CF25, RAL 9000, UL 94-H	Stainless steel
Fastening type	Clamp mounting via fixing elements	Clamp mounting via fixing elements	VESA adapter
Protection class	IP 65 front plate, IP 20 housing	IP 65 front plate, IP 20 housing	IP 65 front plate, IP 40 housing
Measuring channels	Force strain gauge Standard force signal Standard distance signal	Force strain gauge Standard force signal Standard distance signal	Force strain gauge Standard force signal Standard distance signal
Measuring channel resolution	16 bit	16 bit	16 bit
Max. sampling rate	1 kHz	1 kHz	1 kHz
Window types for different monitoring criteria	16	16	16
Password protection	Yes	Yes	Yes
Operating temperature range	+5 °C - +55 °C	+5 °C - +55 °C	+5 °C - +55 °C
Operating languages	German, English	German, English	German, English

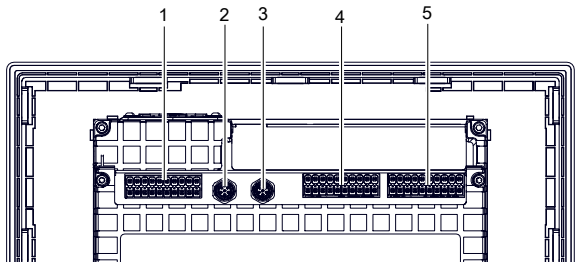
Code Matrix



Designation	Description
Version	■ 0 = Built-in device 7" ■ 0 = Built-in device 10.1" ■ 5 = Wall housing version 10.1"
Number of channels	■ 02 = 1 x X-channel / 1 x Y-channel ■ 22 = 2 x X-channel / 2 x Y-channel, individual evaluation, upon request
Hardware version	■ 0 = with X-channel in 0 - 10 V and Y-channel in strain gauge / 0 - 10 V
Customer interface	■ 0 = Digital 16 input / 8 output ■ 3 = Profinet CU ■ 5 = Ethernet IP ■ 8 = EtherCAT ■ 9 = EthernetIP CU-Slave ETH / EthIP / Power M12D / M12D / 7 / 8" plugs (only in wall housing version)
Firmware version	■ 0 = Standard, no process sequence control ■ 1 = Process sequence control, on request
Interface	■ 0 = TOX standard ■ 1 = Customer-specific with separate material number

Connections

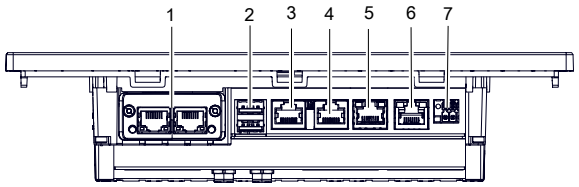
Installation version rear side



1	X5 I/O	2	X4 strain gauge 2 / Reserve
3	X3 strain gauge 1	4	X1 DIG I/O
5	X1 DIG I		

Fig. 1 Installation version connections rear side

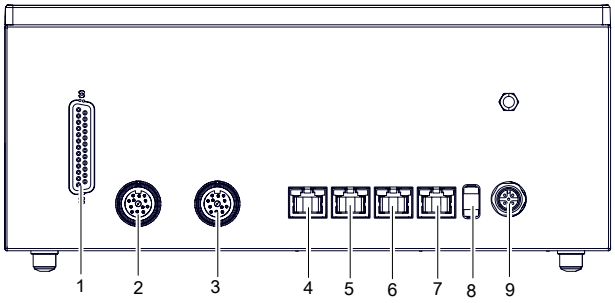
Installation version underside



1	Anybus module	2	USB
3	not occupied	4	not occupied
5	Ethernet	6	EtherCat
7	Power supply		

Fig. 2 Installation version connections underside

Installation version wall version



1	DIG I/O	2	Y / Ch1
3	X / Ch2	4	FB Out
5	FB In	6	Ethernet
7	EtherCat	8	USB
9	Power supply		

Fig. 3 Wall version connections

Dimensions

7" Installation version

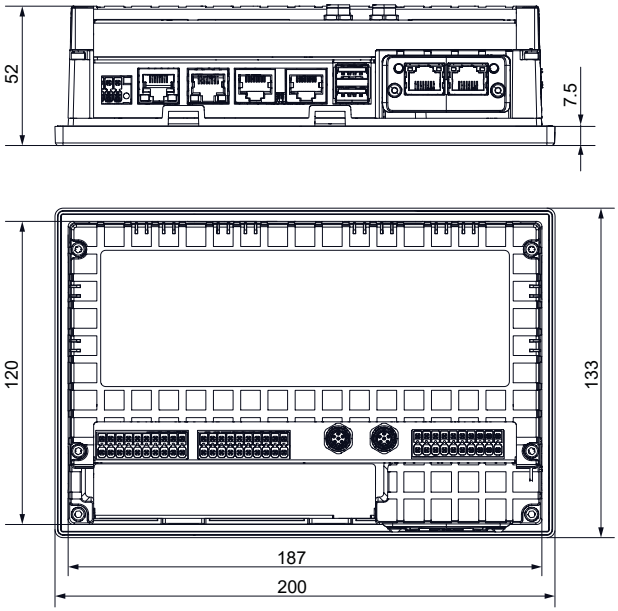


Fig. 4 7" Installation version dimensions

10.1" Installation version

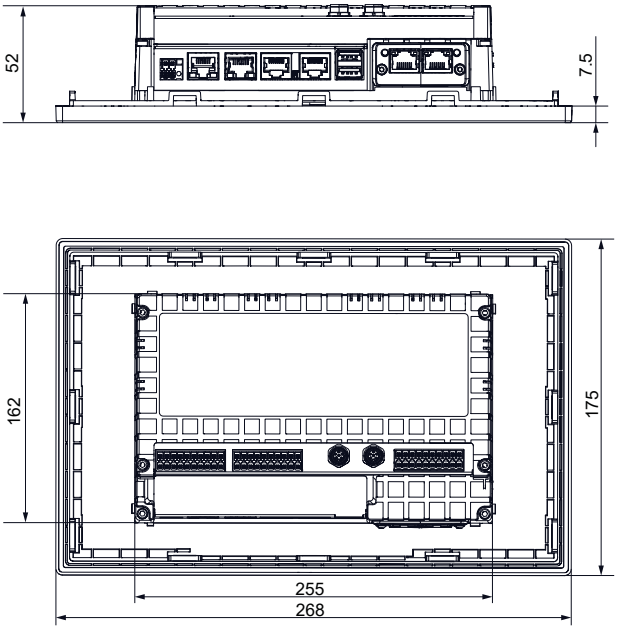


Fig. 5 10.1" Installation version dimensions

Dimensions

10.1"Wall version

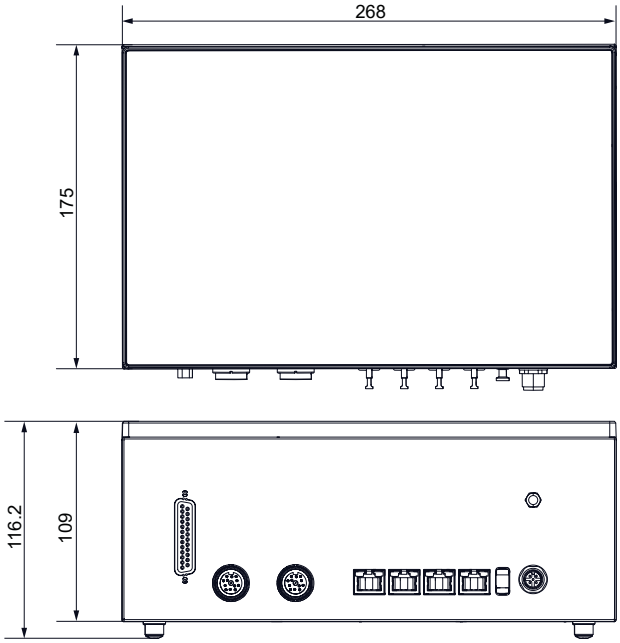


Fig. 6 10.1"Wall version dimensions

Interface

Curve data, final values and setting parameters can be transmitted securely encrypted via SFTP client.