TX20 Digital Transmitter

For Weight, Force, Moment and Pressure Sensors

RS 485 · Modbus RTU / TCP · TCP IP (2 Ports) · PROFINET (2 Ports) · PROFIBUS (2 Ports) · EtherNet/IP (2 Ports) · EtherCAT (2 Ports) · ETHERNET POWERLINK (Ports) · PROFIBUS · CANopen · CC-Link · CC-Link IE Field

CE · IP 20

Features

- One billion internal resolution, One million data output resolution
- The effect of electronic calibration on weighing error is less than 0.003%.
- All Ethernet output products are dual-port for daisy chain connection
- Variant with direct connection to Profinet S2 System Redundancy
- High reliability with triple signal isolation
- Programming and calibration via Fieldbus
- Vibration filter: Stable reading for agitated tanks and vibrating environments
- Remote programming via web page (EN variant)
- Logging of device interventions and system failures

TX20 series digital transmitters are designed for force, moment, and pressure measurement processes in addition to static and dynamic weighing.

They transfer precise measurement information acquired at a high conversion rate to your PLC/SCADA/PC system. All products with Ethernet output are dual-ported to provide Ethernet daisy chain connection. TX20 can also be integrated to Profinet Redundant S2 systems directly.

TX20 transmitters can be easy programmed with alphanumeric display which are manufactured identically to each others and individually calibrated. As the TX20 transmitters are individually adjusted and matched to each other during production, they can be changed in counting mode without the need for a new adjustment.

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Technical Specifications

A/D Converter	
Type	30-bit Delta-Sigma ratiometric with integral analog and digital filters and a conversion rate of up to 1600 cycles/second
Minimum input signal / vsi	0.1 µV
Input signal range	0 mV to 75 mV unipolar or -75 mV to +75mV bipolar
Linearity and thermal drift	< 0.0015% FS, ≤ 2 ppm/°C
Resolution	Internal : Up to 1 000 000 000 counts External: Max. 999 999 (weight and force mode), 2 000 000 counts in bipolar at full range and 1 000 000 counts in unipolar input
Setting and Programming	
Setting and programming	With BAYKON xFace PC software, high-precision electronic zero and gain adjustment can be performed via the buttons on the transmitter without the need for a test load. This process is carried out through Fieldbus, with an instrument error of less than 0.003%.
Digital filter	8 steps programmable adaptive filter
Weighing functions	Taring, zeroing, auto zero tracking, auto tare, auto clear, auto print-out, motion detection, auto zero at power up, tare memory in case of power failure, increased resolution, peak, hold.
Load cell	
Excitation and connection	5 VDC, max. 125 mA / 4 or 6 wires cable connection
Number of parallel load cells	Minimum 43 ohm. Up to 8 load cells 350 Ω or 25 load cells 1100 Ω
Connection Options with Peripheral Units	
RS-485 serial output	1200 - 115200 baud, Length 7 or 8 bits; parity even, odd or none. Selectable as Continuous , BSI or Modbus RTU. Maximum station number is 31.
Digital inputs and outputs	3 opto-isolated, 12 - 28 VDC digital inputs and 4 opto-isolated, 12 - 28 VDC digital outputs
Analog output	Galvanically isolated, 0 - 20 mA, 4 - 20 mA, 0-5 VDC, 0-10 VDC, ±5 VDC, ±10 VDC Analog output
Enclosure and Environment	
Power consumption	10 - 28 VDC, min. 60 mA ~ max. 600 mA (Depends on the TX20 model and the number of load cells)
Operation condition	-15 °C - +55 °C, 85% RH max, non-condensing
Box material, type, protection class	Polyamit, DIN rail mount , IP20
Packing size and weight	132 x 112 x 30 mm, 254 g

Ordering Code

TX20 EN-ANIO

Variant 2

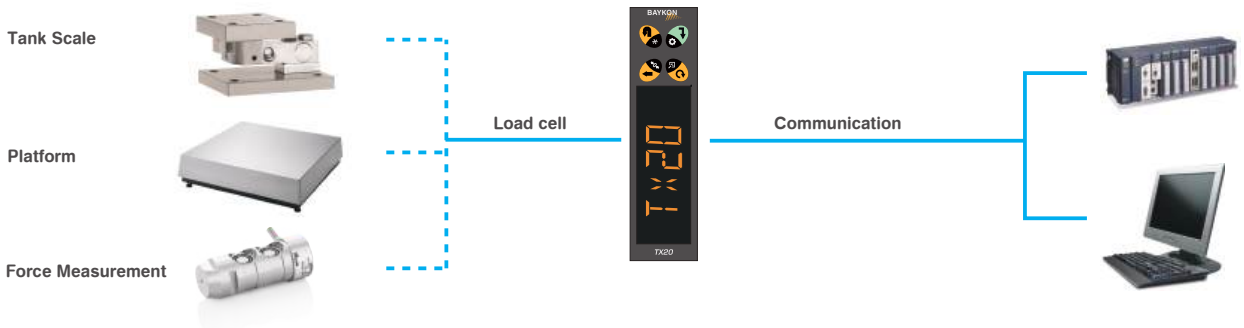
(Blank)	: Variant not available
IO	: Digital 3 In / 4 Out
AN	: Analogue output
ANIO	: Analogue out+Digital 3 In / 4 Out

Variant 1

(Blank)	: Variant not available
EN	: Ethernet TCP / Modbus TCP
PN	: Profinet
PNS2	: Profinet S2
EI	: EtherNet/IP
EC	: EtherCAT
PL	: Powerlink
PB	: Profibus
CO	: CANopen
CC	: CC-Link
IE	: CC-Link IE Field

Model

Typical Applications



(Specifications are subject to change without notice. 04- 12 / 2024)

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