

# TX2 Digital Load Cell Transmitters

Precise Digital Weighing Data to PLCS



## Features

- **Communication:** RS-232C, RS-485, Ethernet TCP/IP, Profibus, Modbus RTU, Modbus TCP/IP, Profinet, CANopen
- **High speed:** 800 conversions/sn
- **Weighing functions:** Zeroing & taring power-on zero, AZT, net indication at power on, motion detection
- **Software support:** Windows based BAYKON xFace software for calibration and setup via PC
- **eCal:** Electronic calibration without test weight
- **Vibration filter:** Configurable active filter for stable weight



The TX2 Digital Transmitter is ultra fast (800 measurements per second), accurate and reliable and easily integrated into process control and force measurement systems. Its setup is quick and easy with free Xface PC Software and calibration can be done via standard weights, fieldbus commands or using eCal Electronic Calibration.

A programmable smart filter minimizes any ambient vibration to produce the best possible filtered signal to your PLC for any weight and force measurement systems. Matched production ensures quick servicing as transmitters can be directly replaced out of the box without the need for calibration.

eCal Electronic Calibration gives the advantage of easy calibration of high capacity tanks and silos.

DIN Rail mounting makes the TX2 easy to incorporate into new or existing cabinets.

# TX2 Specifications

<b>TX2 Series Instruments</b>	TX2-AD : RS-232C and RS-485 TX2-EN : Ethernet Modbus TCP/IP TX2-MB : Modbus RTU TX2-PB : Profibus DP TX2-PN : Profinet TX2-CO : CANopen
<b>A/D Converter</b>	
Type	24 bit Delta-Sigma ratiometric with integral analog and digital filters
Conversion rate	Up to 800 measurements per second
Minimum input voltage	< 1 mV
Minimum input sensitivity	0.1 $\mu$ V per interval
Analogue input range	0 mV to 18 mV unipolar or -18 mV to 18 mV bipolar
Linearity	Within 0.0015% FS, 2 ppm/ $^{\circ}$ C
Resolution	Internal up to 8 000 000; External up to 100 000 counts in Weighing / Force modes, 1 000 000 counts for unipolar input and for selected range in Count mode and 2 000 000 counts for bipolar input and for selected range in Count mode
<b>Scale Calibration and Functions</b>	
Calibration	By etalon weights: Via xFace software or fieldbus eCal: Electronic calibration without etalon weights via xFace Count mode: All instruments are adjusted in production for equal performance. Calibration at PLC side
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up
<b>Load Cell</b>	
Excitation	5 VDC, max. 100 mA
Number of load cells	Up to 6 load cells 350 $\Omega$ or 18 load cells 1100 $\Omega$ in parallel
Connection	4 or 6 wire technique. Cable length 274 m/mm <sup>2</sup> for 6 wire connection
<b>Communication</b>	
Serial Interface RS-232C	9600 baud, 8 None 1, Continuous or demand (BSI mode)
Serial Interface RS-485 (TX2-AD and TX2-MB)	1200 to 57600 baud, 7 even/odd, 8 None 1, demand (BSI mode) or Modbus RTU
Modbus RTU interface (TX2-MB)	Up to 31 units on the bus, Baudrate up to 57600
Modbus TCP/IP (TX2-EN)	10Mbits (half duplex), galvanically isolated
Profibus DP V1 interface (TX2-PB)	9,6 kbits/s to 12 Mbits/s automatic baudrate detection
ProfiNet interface (TX2-PN)	100Mbits (full duplex), galvanically isolated
CANopen interface (TX2-CO)	10 kbits/s to 1 Mbits/s automatic baudrate detection
<b>Power Supply and Others</b>	
Power Supply	11 to 28 VDC, max. 100 mA (TX2-AD and TX2-MB), max. 300 mA (others)
Enclosure	Between -15 $^{\circ}$ C and +55 $^{\circ}$ C at 85% RH max, non-condensing
Operation Conditions	Polyamide, for DIN-rail mount, protection class IP20

(Specifications are subject to change without notice. 03 / 2015)

