FT-10 weight indicator series

product description

The FT-10 family offers a comprehensive range of weighing indicators for static applications. In total 9 versions are available from basic functionality, through to versions with additional I/O and a range of communication protocols, such as Modbus, Profibus-DP, ProfiNET, EtherNet TCP/IP and CANopen.

Capable of 1,600 measurements/sec and with an accuracy of 0.0015% the FT-10 is an ideal economic weight indicator. Particularly compact, the housing can be supplied in a plastic form or a stainless steel and aluminium construction for industrial environments. Large 6-digit LED weight display (red 14 mm) allows easy readability even in poor light conditions. Tactile 5-key keyboard for basic scale functions.
Applications include universal weighing, process weighing, process automation & control, test and measurement applications.

The following device versions are available:

FT-10 (standard indicator)	FT-10 PN (ProfiNet)
FT-10 P (standard indicator, extended)	FT-10 EN (Ethernet TCP/IP)
FT-10 IO (digital inputs and outputs)	FT-10 CO (CANopen)
FT-10 AN (analog output)	FT-10 EI (EtherNET/IP)
FT-10 MB (Modbus-RTU)	FT-10 EN (EtherCAT)
FT-10 PB (Profibus-DP)	FT-10 CC (CC-Link)

key features

OIML certified to 10,000D

Compact panel housing

High internal resolution, display up to 999,999 counts

Max. conversion rate of 1,600 updates per second

Input sensitivity: 0.4 µV/d per interval for legal-for-trade, 0.1 µV/d per interval non-approved

Calibration with weight or eCal

Linearity better than 0.0015%

6-wire technology

Serial port RS232C, RS485

Digital inputs & outputs (details see technical data)

CE · RoHS compliant · OIML · IP65

specifications

	FT-10	FT-10 P	FT-10 PB / PN / MB / EI / IO / CO / EN / EC / CC	FT-10 AN

display and keyboard

Display	6 digits, 7 segments, LED red, 14mm high
Status Indicator	gross, net, motion, zero, unit (kg, g, t, lb, klb, N, kN)
Keyboard	5-key membrane with tactile feedback (function, gross/net, tare/delete, zero, print)
Key lock	Basic weighing related key can be locked against unauthorized access
Decimal point	At any point of the display value

a/d converter

Type	24-bit Delta-Sigma with integrated analogue and digital filter
Conversion rate	Maximal 1,600 measurement values per second
Minimum input sensitivity	0.4 μV/d per interval legal for trade, 0.1 μV/d per interval non- approved
Analogue input range	0 mV to 18 mV (unipolar) or -18 mV to +18 mV (bipolar), switchable
Resolution	Internal up to 16 million counts; display up to 10,000 counts legal for trade, 999,999 counts non- approved

scale calibration and functions

Calibration	Calibration with weight or eCal (electronic calibration without test weights)
Digital filter	10 step adjustable digital adaptive filter
Weighing functions	Tare, zero, auto zero tracking, motion detection, auto-zero at power-up, auto-net at power-up, increased resolution
Sensor linearization	Up to three interpolation points

linearity and stability

Linearity & temperature coefficient	Within 0.0015 % F.S.; ≤ 2 ppm/°C

load cells

Excitation	5 VDC at 58...1,200Ω, max. 100mA
Number of load cells	Up to 8 load cells (350Ω) or 18 load cells (1,100Ω) in parallel
Connection	4-wire or 6-wire technology. Cable length 1,000 m/mm2 for 6-wire connection

power supply

DC power supply	12...28 VDC, max. 300mA

environment and enclosure

Operation Temperature & humidity	-10 °C to +40 °C; 85% RH max, non-condensing, legal for trade	
	-15 °C to +55 °C non- approved	
Housing & Protection	Panel mount, plastic front panel (IP67), aluminium housing, stainless steel rear panel	Panel mount, stainless steel front panel (IP65), aluminium housing, stainless steel rear panel
Dimensions & Weight	52 x 96 x 100mm (L x B x H), ca. 0.5kg	

serial interface

Serial Interface RS232C	1,200 to 115,200 baud (8N1, 7E1, 701)	
Serial Interface RS485	-	1,200 to 115,200 baud (8N1, 7E1, 701), up to 31 devices in a network

digital input/output

Input	2x I/O (non-isolated) programmable as digital input (10...26 V DC) as well as digital output (Open Collector: 24 V DC, max. 100 mA)	4x opto-isolated input (12...26 VDC; max. 10mA)
Output		5x relays outputs programable for user defined setpoints, 250 VAC or 30 VDC, 1A

analogue output

Programable output	-	-	-	4-20mA, 0-20mA, 0-10V or 0-5V, 16 bit

Dimensions and specifications are subject to change without notice.