



## Product Description

The FT-13 Weight Controller is a very accurate and versatile weight indicator which is used for a wide variety of process weighing applications including filling and dispensing. Whether filling or dispensing solids, liquids or gases, the FT-13 Weight Controller automates the entire process. Its variety of interface options and selectable specific scale functions perfectly fit to weighing systems and process control systems.

FT-13 increases the flexibility by offering the possibility to implement specific functions / interlockings with its free programmable feature.

The instrument is approved by Weights & Measures Authorities for use in Accuracy Class III applications with up to 10 000 intervals according to OIML R76.

Large 6 digit LED weight display (red 20 mm / panel type 14 mm) with weight status information and tactile 18-key keyboard for basic scale functions, specific functions and numeric data entry.

## Available Accessories

- Stand mounting kit for stainless steel housing

## Key Features

- EU Type approved for 10 000 intervals
- High internal resolution, display up to 60 000 counts
- Approved sensitivity 0.4  $\mu\text{V/e}$
- Serial Interface RS232C
- 4 digital inputs & 8 digital outputs
- Conversion rate max. 400/s
- Integrated power supply
- Pre-configured applications for typical filling / dispensing tasks
- Programmable functions / interlockings for further optimisation

## Options

- Second programmable serial interface RS232C / RS485 and Modbus RTU
- Ethernet interface TCP/IP and Modbus TCP
- Profibus DP-V0 and DP-V1
- ProfiNet interface
- CANopen interface

<b>Specifications</b>			
<b>ACCURACY</b>			
Accuracy Class	III		
EU Type approved (verification scale intervals)	10 000 vsi (according 90/384/EC directive) respective 6 000 vsi (according 2004/22/EC directive)		
<b>DISPLAY AND KEYBOARD</b>			
Display	6 digits, 7 segments, LED red, 20 mm high (Panel type 14 mm high)		
Update rate	250 ms		
Status annunciators	Gross, net, motion, zero, information, power, unit and 6 LED's for application related status		
Keyboard	18-key membrane, with tactile feedback		
On / off switch	Stainless steel: yes; Panel type: no		
Key lock	Keys are locked automatically during filling process		
<b>A/D CONVERTER</b>			
Type	24 bit Delta-Sigma ratiometric with integral analog and digital filters		
Conversion rate	Max. 400 measurement values per second		
Minimum input sensitivity	0.1 $\mu\text{V/d}$		
Certified accuracy according OIML R76 / OIML R61	0.4 $\mu\text{V/vsi}$ (90/384/EC directive); 0.83 $\mu\text{V/vsi}$ (2004/22/EC directive);		
Analogue input range	0 mV to 20 mV		
Resolution	Internal up to 8 million counts, display up to 60 000 counts		
<b>SCALE CALIBRATION AND FUNCTIONS</b>			
Calibration	Calibration is performed by application weights		
Digital filter	10 step adjustable digital adaptive filter		
Application modes	Open container filling, bunghole container filling, below surface filling, filling and emptying (2 types), filling and discharging, weigh-in/weigh-out		
Weighing functions	Tare, zero, motion detection, auto zero tracking		
Other functions	Date and time, label number, total indication, temporarily switching between net and gross		
Digital inputs / digital outputs	4x isolated digital inputs (24 V) and 8x isolated digital outputs (open collector)		
<b>LINEARITY AND STABILITY</b>			
Linearity & temperature coefficient	Within 0.0015 % FS; $\leq 2$ ppm/ $^{\circ}\text{C}$		
<b>LOAD CELLS</b>			
Excitation	5 V DC at 58...1 200 $\Omega$ , max. 100 mA		
Number of load cells	Up to 6 load cells (350 $\Omega$ ) or 18 load cells (1 100 $\Omega$ ) 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	RS232C, 1 200...57 600 baud, programmable		
Continuous mode update rate	100 ms		
Option board update rate	40 ms		
<b>ENVIRONMENT AND ENCLOSURE</b>			
Operation temperature & humidity	-10 $^{\circ}\text{C}$ to +40 $^{\circ}\text{C}$ legal for trade; 85% RH max, non-condensing		
Dimensions	See data sheet E159		
Enclosure	Panel type (Front IP65)	Stainless steel housing (IP65)	
		70 mm deep	100 mm deep
<b>POWER SUPPLY</b>			
230 V AC, 50/60 Hz, max. 12 VA	•	•	•
12 V DC, max. 12 VA	0	0	0
24 V DC, max. 12 VA	0	0	0
<b>OPTION FOR ADDITIONAL INPUTS / OUTPUTS (for two options please contact FLINTEC)</b>			
2 <sup>nd</sup> Serial interface (RS232, RS485, Modbus RTU)	0	-	0
Profibus interface, DP-V0 and DP-V1, up to 12 Mbit/s	0	-	0
Ethernet interface, Modbus TCP/IP, 100 Mbit/s	0	-	0
ProfiNet, full-duplex, 100 Mbit/s	0	-	0
CANopen 2.0, up to 12 Mbps	0	-	0
4x isolated digital inputs (24 V) and 8x isolated digital outputs (open collector)	0	-	0
<b>ADDITIONAL MECHANICAL HARDWARE</b>			
Wall mount kit	-	•	•
Stand mount kit	-	0	0
		• standard version	0 optionally available
			- not available