

# FT-113 fill indicator



## product description

FT-113Fill is a smart and very versatile instrument which is used for a wide variety of filling and packing processes. With his 12 predefined modes for filling and partly programmable digital I/O it is a very good choice for many applications.

With the free programmable inputs and outputs a use of PLC is not necessary required. FT-113Fill can control valves, switches, pump, etc.

The information on the LCD display are informative, the operation in several languages and plenty of keys support an easy operation of the instrument. The changing background colours help to easily follow the filling process. A range of predefined functions can be assigned to 7 programmable keys.

The instrument is approved by a European Notified Body of Weights and Measures for use in Accuracy Class III applications with up to 10,000 intervals according to OIML R76.

The integration into fieldbus systems is very easy. FT-113Fill supports Profinet, Profibus, CANopen, EtherNET/IP, EtherCAT, CC-Link, Powerlink, CC-Link IE Field.

## applications

Filling & packing machines, silo filling, big bag filling.

## key features

Digital 12 Inputs / 14 Outputs board or as a separate DIN rail mount box

Smart filling algorithm

A wide range of available connectivity RS232, RS485, RS422, Ethernet TCP/IP, USB

High speed conversion rate

Approved sensitivity 0.4µV/d

EU Type Examination (in prep.)

Configurable receipt content

## options + accessories

Indface2x software (in prep.)

Digital I/O available as internal board or as a separate box



EU Type Examination (in preparation)



## specifications

|                           |                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accuracy class            | OIML class III, single range, multi range or multi interval up to 10,000 divisions.                                                                                                                           |
| EU Type approved          |                                                                                                                                                                                                               |
| Display                   | Wide angle and bright LCD display with multicolor backlight.<br>22mm in height, 6-digits weight display and 8mm in height 16 digits alphanumeric information display.                                         |
| Display resolution        | Up to 300,000 divisions at industrial usage.                                                                                                                                                                  |
| A/D conversion            | 24 bit Delta-Sigma ADC with up to 1600 conversions rate.                                                                                                                                                      |
| Minimum input sensitivity | 0.4 $\mu\text{V/e}$ ( legal metrology ), 0.05 $\mu\text{V/d}$ ( industrial )                                                                                                                                  |
| Analogue input range      | -5 mV to +19 mV                                                                                                                                                                                               |
| Internal resolution       | Up to 16 000 000 counts.                                                                                                                                                                                      |
| Calibration               | Calibration with test weights,<br>eCal-electronic calibration without test weights,<br>Span calibration with temporary zero of charged tank,<br>Zero adjustment, Gain adjustment, Coefficient entry.          |
| Digital filter            | 7 steps programmable adaptive filter.                                                                                                                                                                         |
| Scale functions           | Taring, zeroing, auto zero tracking, motion detection, auto zero at power up, tare status save at power off, increased resolution, automatic tare and clear, temporary gross indication, unit change.         |
| Filling modes             | 12 different packing / filling modes with smart filling algorithms.                                                                                                                                           |
| Memory                    | Two memories for recipe and ID , each has 250 records size.                                                                                                                                                   |
| Programmable keys         | 7 programmable keys to assign specific functions.                                                                                                                                                             |
| Digital I/O               | Internal: 12 digital inputs / 14 digital outputs<br>External: 16 digital inputs / 16 digital outputs with DIN rail mounting RIO16 unit.                                                                       |
| Digital inputs            | Opto-isolated and reverse polarity connectable, 12 to 28 VDC, 10mA. Selectable input(s) can be programmed as logic and time functions or used as a Remote Input of your PLC over Fieldbus.                    |
| Digital outputs           | Opto-isolated and short circuit protected transistor outputs, 12 to 28 VDC / 100 mA, Selectable output(s) can be programmed as logic and time functions or used as a Remote Output of your PLC over Fieldbus. |
| Data outputs              | Galvanically isolated RS232C, RS485, USB and Ethernet TCP/IP                                                                                                                                                  |
| Fieldbus interface        | Profibus, Profinet, CANopen, Modbus TCP, Modbus RTU, Ethernet TCP/IP, EtherNet/IP, EtherCAT, CC-Link, Powerlink                                                                                               |
| Number of load cells      | Up to 8 load cells 350 $\Omega$ or up to 26 load cells 1200 $\Omega$ (min. 43 $\Omega$ )                                                                                                                      |
| Load cell connection      | Connection with 4 or 6 wires. Cable with 6 wires length maximum 1000 m/mm <sup>2</sup>                                                                                                                        |
| Load cell supply voltage  | 5 VDC @ max. 150 mA                                                                                                                                                                                           |
| Operation temperature     | -15°C to +55°C max. ( Operational ), -10°C to +40°C ( Legal metrology )                                                                                                                                       |
| Humidity                  | Max. 90 % non-condensing relative humidity. For legal metrology max. 80 %                                                                                                                                     |
| Alibi memory              | 99,999 weighing records                                                                                                                                                                                       |
| Housing and protection    | IP67 protected stainless steel front panel, aluminum body and stainless steel rear panel.                                                                                                                     |
| Power supply              | 12 – 28 VDC, 100mA@24 VDC ( Basic instrument )                                                                                                                                                                |
| Dimensions ( H x W x D )  | 108 x 205 x 112.5mm Panel mount cutout dimensions ( H x W ): 92 x 186mm                                                                                                                                       |
| Gross weight              | 1.75kg                                                                                                                                                                                                        |

Dimensions and specifications are subject to change without notice.

