

TX320Fill Filling & Packaging Controller

High accuracy at high speed on your filling machine



Key Features

- Cost-effective controller designed for very fast and precise filling.
- One billion internal resolution.
- Data output at one million resolution,
- Highly precise filling with a response time of less than 2 milliseconds on control outputs.
- High reliability with triple isolation,
- The effect of electronic calibration on weighing error is less than 0.003%.
- Programming and calibration via PLC/PC,
- All Ethernet-enabled products feature dual ports for daisy-chain connections,
- Variant directly connected to Profinet S2 redundant systems,
- Remote programming via web page (Ethernet variant),
- It records device interventions and system error information.

Parameters	Calibration	Status
Parameters		
15	RS485	Modbus RTU
111	FS001	0-No; Module RTU Level
112	DS02	0-No; Data error
113	LE03	0-No; Data length
114	DS03	0-No; No parity
115	CS001	0-No; Checksum error
116	CR	0-No; Carriage return
117	LF	0-No; Line feed enable
118	AD04	01
12	RS0	01
121	FS001	0-No; Port is disabled
122	CS001	0-No; Checksum error

TX320Fill is an advanced, cost-effective filling controller designed to operate on all types of packaging and filling machines.

By transferring extremely high-speed weighing process with internal resolution as high as one billion to the control outputs, it increases the accuracy and capacity of your filling or packaging machine.

As TX320Fill controllers are individually calibrated and matched during production, they can be easily adjusted with eCal electronic calibration without the test weight, while maintaining their high-precision characteristics.

It can be easily connected to the HMI or PLC on your filling machine via one of 12 different communication protocols.

BAYKON
Industrial Weighing Systems

Super-fast, high-accurate filling and packaging with the cost-effective TX320Fill

Superb accuracy at very high filling speeds thanks to extremely high operational resolution. All parameters can be adjusted by a PLC to have the best performance of your machine.

Common Applications

- ✓ Liquid filling machines
- ✓ Powder and granule filling machines
- ✓ Packaging machines
- ✓ Bag filling machines
- ✓ Formulation
- ✓ Blending processes
- ✓ Dosing systems, etc.

Fast and Accurate Measurement with Very High Resolution

- ✓ With an internal resolution of one billion and a high sampling rate of up to 1,600 per second, it provides extremely fast, highly precise and accurate measurements.
- ✓ The delay in the digital process, including the output signal, is less than 2 ms.

Very high reliability

- ✓ High reliability with triple insulation,
- ✓ Very high EMC immunity,
- ✓ EMC protection on interface connections,
- ✓ Alerts the operator via an error output,
- ✓ Interventions in the weighing system settings and faults are logged to ensure traceability of the system.

Ease of Use

- ✓ Easy programming via the display and buttons,
- ✓ Default parameter values optimised for each filling type are loaded.
- ✓ With the precise eCal feature, easy zero and gain adjustment for high-capacity tank and silo weighing systems,
- ✓ Backup and restore parameters via USB connection to a PC.

Keys and Alphanumeric Display

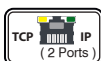
- ✓ Easy to adjust with the with the dedicated alphanumeric display,
- ✓ The measured value is always displayed on the screen,
- ✓ The status of digital inputs/outputs is displayed on the display.
- ✓ It displays system faults alphanumerically, helping you find solutions easily.

Digital Inputs/Outputs

- ✓ Galvanically isolated and protected digital 3 inputs and 4 outputs,
- ✓ Outputs for coarse and fine feeding,
- ✓ Error output,
- ✓ The status of inputs and outputs is displayed on the display.

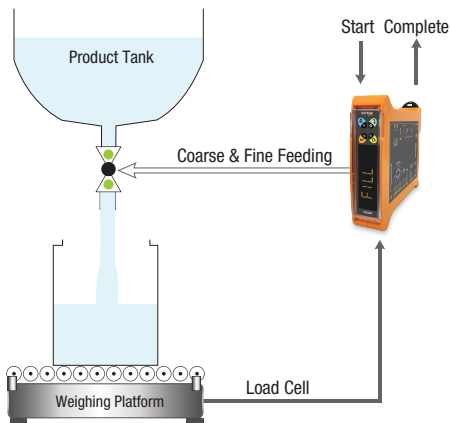
Wide Range of Interface Options

- ✓ Modbus RTU (via RS485), Digital 3I/4O and USB connectivity are standard on all variants.
- ✓ Dual-port industrial Ethernet variants for daisy-chain connections,
- ✓ Profinet S2 System Redundancy variant.

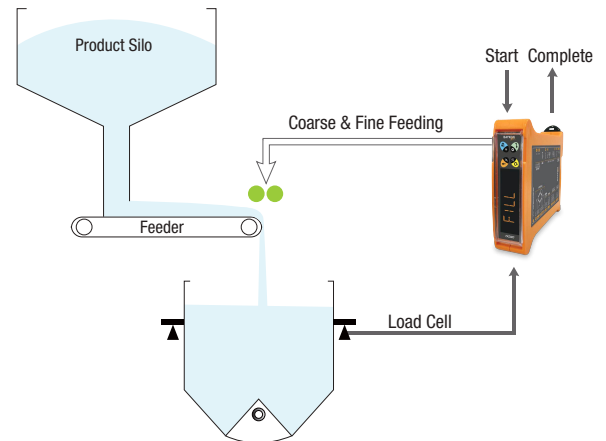


Application Samples

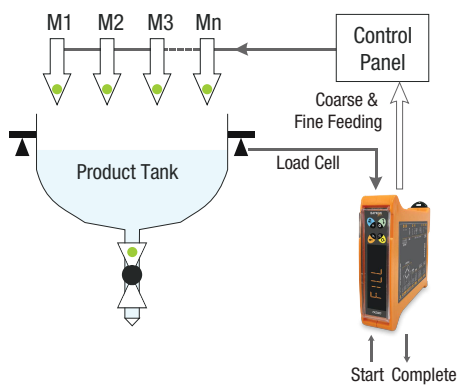
Filling into Container



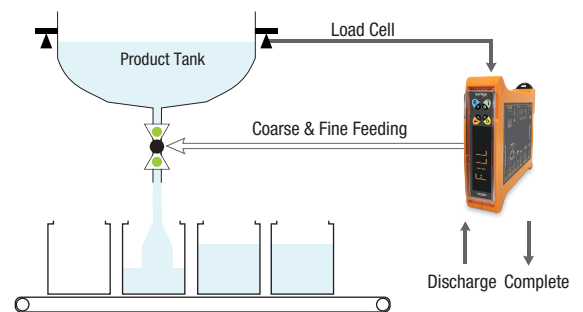
Bunker / Tank Filling



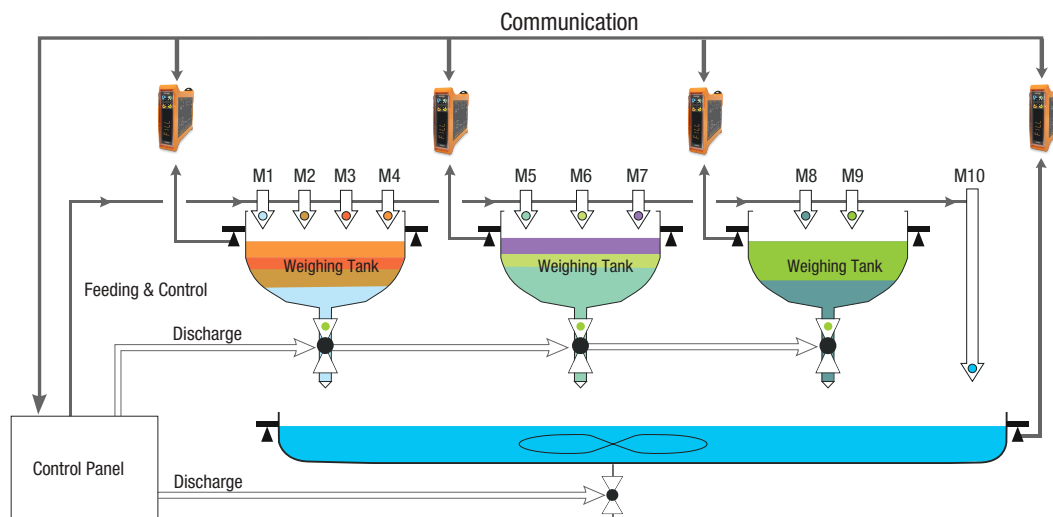
Formulation in Bunker / Tank



Filling from Tank



Recipe Preparation



Technical Specifications

Application	Single or multi-head packaging machines and all types of powder, granule and liquid filling machines
Adjustment and programming	Accessing all the filling parameters via communication, depending on the filling method. The ability to load parameters and calibration coefficients from a computer according to the machine type.
Response delay	The total response delay of digital processing and output circuits is less than 2 milliseconds.
A/D converter type and sampling rate	30-bit Delta-Sigma ratiometric with adaptive digital filter. Conversion rate up to 1600 conversions/s.
Input signal range	Between 0 mV and 75 mV
Linearity and thermal stability	< 0.0015% FS, ≤ 2 ppm/°C
Resolution	Display resolution up to 999 999, The material feed output control operates with a sensitivity 1000 times greater than that of the indicator.
Load cell supply and quantity	5 VDC, up to 8 load cells of 350 Ω or 25 load cells of 1100 Ω each
RS-485 serial output	1200 – 115200 baud, 7 or 8-bit length; even/odd/none, Selectable as Continuous data output or BSI or Modbus RTU. Maximum number of stations: 31.
Digital inputs and outputs	Pre-defined optically isolated 12–24 VDC 3 digital inputs and 4 optically isolated 12–24 VDC digital outputs
PLC communication	Maximising filling capacity through real-time communication via a serial link or fieldbus with the PLC.
Power supply	10-28 VDC, current requirement 80 mA (TX320) / 220 mA (TX320 with Fieldbus variants) @ 24 VDC.
Operating conditions	-15 °C to +55 °C, 85% RH non-condensing relative humidity
Enclosure material, type, protection class	Polyamide, DIN-rail type, protection class IP20
Package dimensions, weight	132 x 112 x 30 mm, 254 g

Order code

TX320Fill EN - AN

Variant-2

(Blank): Not available

AN : Material feeding via analog output (Please contact Baykon)

Variant-1

(Blank): Not available

EN : Ethernet TCP /
Modbus TCP

PN : Profinet

PNS2 : Profinet S2

EI : EtherNet/IP

CF : CC-Link IE Field

PB : Profibus

CO : CANopen

CC : CC-Link

EC : EtherCAT

PL : Powerlink

Everything from a single source

Baykon provides products, solutions and services to enhance the reliability and efficiency of production and packaging lines in the industrial sector. Reliability is ensured through product control at the input and output stages of the packaging line using process weighing.



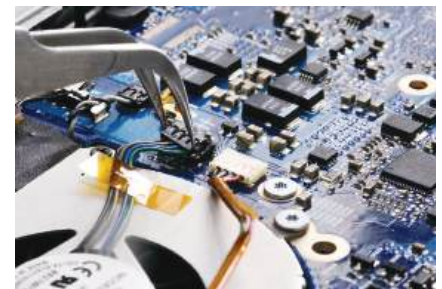
Process weighing and automation

- Tank and silo weighing
- Industrial scales
- Dosing and formulation
- Process control



Product control

- Metal Detectors
- X-ray detectors
- Automatic checkweighers
- SQC Statistical Quality Control



Service

- Technical support
- Commissioning
- Fast and effective service
- Calibration