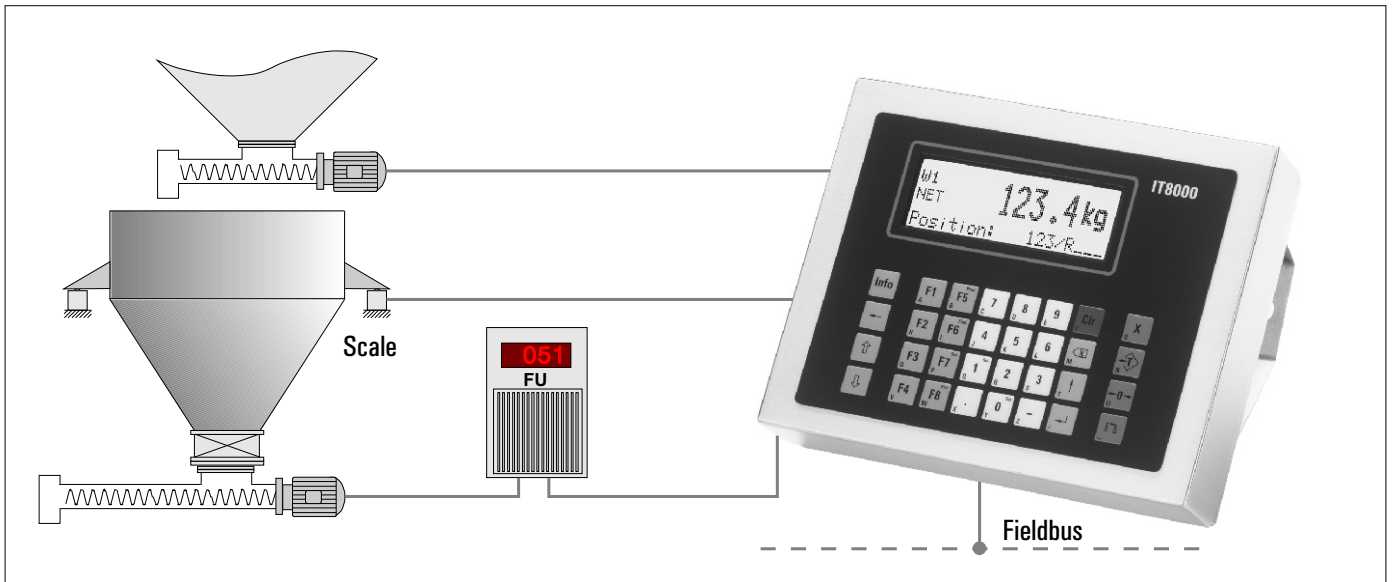


Controller for Constant Rate Loss-In-Weight Feeder



IT8000 FLOW CONTROL is a controller for loss-in-weight feeders which discharge material from a supply hopper at a constant rate into a continuous process, eg in the food, chemical or cement industry.

Force transducers and scales of any type can be connected.

IT8000 FLOW CONTROL handles a broad range of material feeding applications, eg to deliver product into:

- continuous mixers,
- extruders and
- injection moulding machines.

The material is continuously discharged from the supply hopper with screw-, rotary- or vibratory feeders.

IT8000 FLOW CONTROL measures the actual flow rate, compares it with the desired nominal value and corrects any deviation by adjusting the speed of the drive motor. When the material in the supply hopper reaches a predetermined low level, the feeder locks in and continues discharging of material at constant rate, while the hopper is refilled to preset target. After refilling the hopper, the loss-in-weight cycle resumes.

The controller offers functionality to conform with ISO 9001 standards:

- **Accurate fill control** through fast signal processing, high resolution and intelligent control algorithms
- **High operational security** through extensive monitoring functions and clear operator guidance via text messages
- **Recording of all data** in a batch log, daily and shift totals, error reports.

The controller is available in two styles:

- **Compact stainless steel enclosure (IP65)** for desk, floor-column or wall mounting
- Panel-mount version.

Accurate feeding:

- PID controller with user-friendly features, the tuning constants can be adjusted on the fly while process is running
- Control of a frequency inverter via RS232/RS485 interface or analog output
- Feeding with display of actual flow rate and tolerance check.

Operation:

- Operator prompting in English, German, French and Dutch (other languages on request)
- Operator prompting for parameter entry and display of actual values is via high-contrast alphanumeric display, data entry is made on an alphanumeric keyboard.

Security:

- Data is retained in the event of power loss
- Password protection
- Battery-backed realtime clock
- Display of all error conditions.

Files:

- Raw material file for the storage of filling parameters for 15 materials
- Parameter file.

Simple Integration:

- Stand-alone or remote controlled operation possible - target values and parameters can be entered via the keyboard or transferred via a fieldbus interface (eg from PLC)
- Accept, Start, Interrupt functions are possible from external switches
- Target value can be set over analog input.

Weighing electronics:

- Integrated signal amplifier for connection of up to 16 strain gauge loadcells in 4- or 6-wire mode
- Fast signal processing, (50 updates / sec)
- 524,000d internal resolution.

I/O signals:

- Opto-isolated inputs and outputs (24V) or external relay modules
- Option: Profibus DP, Modbus or DeviceNet
- RS485 interface to connect to frequency inverter
- Analog input / output.

Serial interfaces:

- for data transmission to PC or printer (option)
- selectable protocols, eg DUST3964R
- RS232, 20mA CL, RS422, RS485 selectable - baudrate configurable.

Ethernet connection:

Optional built-in Ethernet interface.

Electrical connections:

110 (-15%) – 240 (+10%) VAC, 50/60 Hz, option: 12 – 30VDC, power consumption max. 25VA

Operating temperature:

-10°C to +40°C, 95% relative humidity, non condensing.

Ex version (option):

Model IT8000Ex with ATEX approval for installation in hazardous area, zone 1 (gas) or zone 21 (dust), with limited interface options (see IT8000Ex leaflet).

Model IT8000 Ex2/22 with ATEX approval for installation in hazardous area, zone 2 (gas) or zone 22 dust).

Typical sequence:

- Selection of material via keyboard or input signal (1 out of 15)
- Setting of target value via keyboard or data transmission and start
- Continuous discharging of material from supply hopper, metering of weight difference per interval and comparison with desired value
- Calculation of corrected control variable via PID controller and adjustment of feeder speed
- Motor speed 'locks in' when supply hopper reaches a predetermined low level, after refilling of hopper, cycle is resumed.

Construction:

Desk / wall version



- Stainless steel housing, IP65
- Available for desk-top or wall-mount installation or with optional column for floor mounting
- Dimensions WxHxD: 260x210x135mm

Panel-mount version



- Stainless steel housing, fascia plate protected to IP65
- Panel-mount installation
- Dimensions WxHxD: 260x215x70mm
- Cut-out in panel: 243x198mm

Directives: 2009/23/EC, 2004/108/EC, 2006/95/EC



EC approval as non-automatic weighing instrument

Standards: EN 45501, OIML R76-1, EN 61000-6-2, EN 61000-6-3, NAMUR NE21, EN 60950



NTEP approval as non-automatic weighing instrument



ETL-certified in accordance with UL 60950-1 and CSA C22.2 No. 60950-1



EMI compliance with FCC Part 15



Mesures Canada: Approval as non-automatic weighing instrument



Russia: Approval as non-automatic weighing instrument



Ukraine: Approval as non-automatic weighing instrument