

IT2000M

Weighing and filling module

For installation on DIN rail

IT2000M weighing module applications

IT2000M is designed for high-precision weighing and filling on any kind of scales with analog load cells like bagging scales, hopper scales, etc.

The modular IT2000M provides a scale interface, Ethernet/Modbus TCP and USB interface as a standard. Plug-in modules are available for: Ethernet/IP, ProfiNet, PROFIBUS DP, one serial interface (RS232, RS485, 20 mA), analog input, analog output, pulse counting input and up to 14 digital 24 V DC inputs and outputs.

Weight and status information is continuously transmitted to the connected PLC or process control system via fieldbus or Ethernet (eg SIEMENS S7 or PCS7 or PC).

IT2000M features integrated batching functionality with material flow and tolerance check and can be started and controlled over network /fieldbus.

The integrated display and keyboard provide check of weight as well as scale calibration on site without auxiliary means. A separate panel mount display/keyboard unit is available as an option. Setup time is reduced by simple installation on DIN rail, connection of cables with pluggable screw terminals and clear text prompts for the calibration with or without test weights.

Data words to PLC or host system

- Scale status, gross and net weight
- Batch ready message with transmission of actual weight and optimized preact
- I/O status
- Service and calibration data

Data words from PLC or host system

- Set zero
- Autotaring
- Taring with specified value
- Start batching with transmission of target weight, preact and tolerance
- Discharging
- Read digital input
- Set digital output



Display and operation

Clear text display with background lighting to indicate weight (16 digits, character height 15 mm) and scale status (eg scale tared, under zero, overload). Up to 3 additional display lines (20 characters each, character height 4 mm). Info-key to show fieldbus input/output data words. Additional function keys for zero setting, taring and configuration/calibration.

Weighing electronics

Integrated factory calibrated A/D converter to connect up to 8 strain gauge load cells (350 Ohm) in 4- or 6-wire mode. Resolution 30,000d, internal resolution 524,000d, W&M approved resolution 6000d at 80% preload, 0,33 $\mu\text{V}/\text{e}$, update rate 50-800 filtered weight values per second. Calibration as single-range or multiple-range scale. Option to linearize the weight curve.

Operational security

Powerfail safe storage of data, password protection, switch to protect calibration data, modules can be replaced without new calibration (only for systems not subject to W&M approval). Internal W&M approved weight storage for the last 120.000 weighings. Integrated webserver for remote access via password for setup, backup and maintenance.

Weighing and filling module IT2000M

Construction

- Compact stainless steel housing with integrated display/keyboard for installation on DIN rail, insusceptible to vibration, protected to IP20, screw terminals at bottom.
- Version with blackbox for installation on DIN rail and separate panel mount display/keyboard unit for installation in the door of a cabinet, front protected to IP69K.

Certifications

- Directives: 2004/108/EC, 2009/23/EC
- Standards: EN 61000-6-2, NAMUR NE21, EN 61000-6-4, EN 45501, OIML R76-1
- EC-approval as non-automatic weighing instrument and AGFI

Module with display



Dimensions W x H x D:
86 x 120 x 106 mm

Display unit and blackbox



Display Unit W x H x D:
110 x 107 x 35 mm

Connections



Pluggable screw terminals, field bus and 110 modules as options

For more information please contact:

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Power Supply

Supply voltage: 12 – 30 V DC
Power consumption: max. 17 W

Ambient Temperature

–10 °C to + 40 °C at 95% max. relative humidity, non condensing.

Options

- Grounding rail to connect shield of cables
- Plug-in modules for Ethernet/IP, Profinet, PROFIBUS DP
- Plug-in module with 8 digital inputs (24 V, 7 mA, opto-isolated) and 8 digital outputs (24 V, 500 mA, opto-isolated, short circuit protected)
- Plug-in module with 2 digital inputs (24 V, 7 mA, opto-isolated) and
 - socket for a serial interface (SIM)
 - two sockets for digital I/O modules (PIM500) or analog I/O modules (DAU15, ADI)
- Serial interface modules: SIM-RS232, SIM-RS485, SIM-20mA
- Digital I/O module: PIM500 with 2 digital inputs (24 V, 7 mA, opto-isolated) and 2 digital outputs (24 V, 500 mA, opto-isolated, short-circuit protected)
- Analog input module: ADI (0/4–20 mA or 0/2–10 V, opto-isolated, resolution 15 bit)
- Analog output module: DAU15 (0/4–20 mA or 0/2–10 V, opto-isolated, resolution 15 bit)
- 2-channel pulse counting module: DUAL-ISM
- Zener barriers to connect Exi loadcells (max. 15,000d, 3000d W&M approved)

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