

# IT2000M



**Weighing / Filling Module  
for Installation on DIN Rail**

# IT2000M – Technical Data

## IT2000M Weighing Module Applications

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

The modular IT2000M comes with 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, 20mA), analog input, analog output, puls counting input and up to 14 digital 24-VDC inputs and outputs.

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

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.

## Weighing Electronics

Integrated factory calibrated A/D converter to connect to one or several analog strain gauge load cells (overall impedance 87.5–4500 Ohm). Resolution 30,000 d, internal resolution 524,000 d, W&M approved resolution 10,000 d at a max. of 80 % preload, 0.33  $\mu$ V/e, update rate 50–800 filtered weight values / sec. Calibration as single-range or multiple-range scale. Option to linearize the weight curve.

## Operational Security

Power-fail-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.

## Data Words To PLC/Host System

- Scale status, gross and net weight
- Batch ready message, actual weight and optimized preact
- I/O status.

## Data Words From PLC/Host System

- Set zero, Autotaring, Taring with specified value
- Start batching with transmission of target weight, preact and tolerance (weigh-in or weigh-out mode)
- Discharging
- Read digital input, set digital output.

## Display And Operation

Clear text display with background lighting to indicate weight (6 digits, character height 15 mm / 0.6") and scale status (e.g. scale tared / under zero / overload). Up to 3 additional display lines (20 characters each, character height 4 mm / 0.2").

Info-key to show fieldbus input / output data words. Additional function keys for zero setting, taring and configuration / calibration.

## Construction Versions

- 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, NEMA 4X.

## Power Supply

Supply voltage: 12–30 VDC,  
Power consumption: max. 17 VA.

## Operating Temperature

–10 °C (+14 °F) to +40 °C (+104 °F) at max. 95 % 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 puls counting module: DUAL-ISM
- Zener barriers to connect Exi load cells (max. 15,000 d, 3,000 d W&M approved).

Module With Display



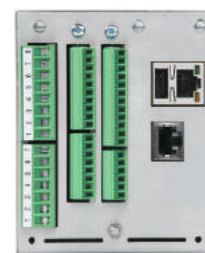
Dimensions W x H x D:  
86 x 120 x 106 mm  
(3.4" x 4.7" x 4.2")

Display Unit And Blackbox



Display Unit W x H x D:  
110 x 107 x 35 mm  
(4.3" x 4.2" x 1.4")

Connections at bottom



Pluggable screw terminals, fieldbus and I/O modules as options

**Directives:** 2004/108/EC,  
2009/23/EC

**Standards:** EN 61000-6-2, NAMUR NE21,  
EN 61000-6-4, EN 45501, OIML R76-1

**CE** EC approval as non-automatic weighing instrument and AGFI

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

**FC** EMI compliance with FCC Part 15

**PROFI**  
**NET** **PROFI**  
**BUS**

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