



IT2000M *CONTROL/ONLINE*

Remote-controlled Weighing Terminal

IT2000M CONTROL/ONLINE is a W&M approved industrial weighing terminal which can be remotely controlled over the Ethernet or serial interface from a PC.

Taring, zero setting and other functions can alternatively be released via digital inputs (from external push buttons).

Eight configurable setpoints are available.

IT2000M CONTROL/ONLINE connects to one scale with analog force transducers. The A/D converter provides fast update rates together with excellent weighing performance and high immunity against electromagnetic interference.

The controller will connect to load cells or scales of all types and weight ranges, e.g.:

- Floor scales
- Built-in scales
- Tension load cells.

The controller is available in two styles:

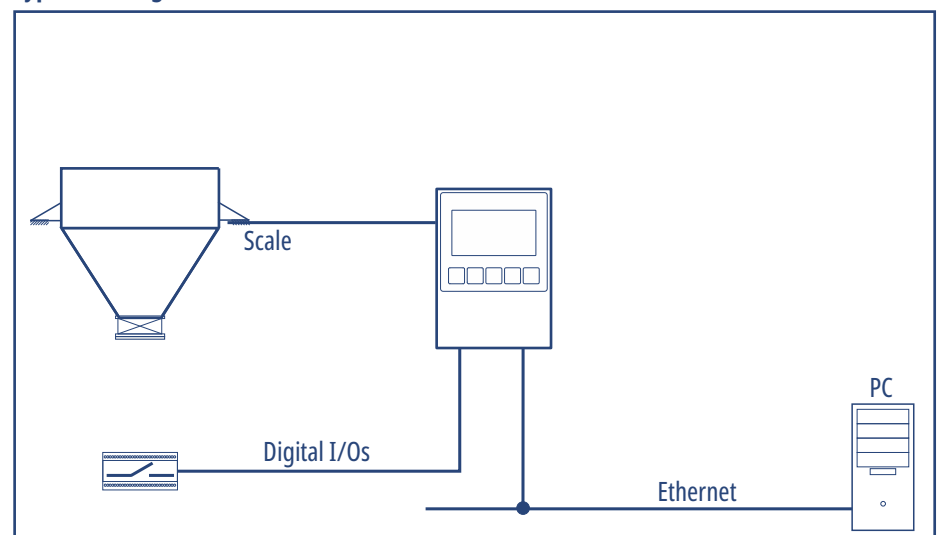
- **Compact module for the installation on DIN rail** with integrated display/keyboard
- **Split-mount version consisting of Blackbox module for the installation on DIN rail** and a separate display/keyboard for the installation in door of switch cabinet.

The integrated **approved data archive** eliminates the need to use a separate log printer.

Supported ONLINE commands from PC:

- Capture weight
- Tare scale / Set Zero
- Show text, acknowledge message
- Set setpoints
- Read inputs, e.g. state of limit switches or light barriers
- Set outputs, e.g. to control traffic lights or roller conveyors.

Typical Setting:



Weighing electronics

Integrated factory calibrated signal amplifier to connect up to 8 strain gauge load cells (350 Ohm) in 4- or 6-wire mode.

Resolution 30,000 d, internal resolution 524,000 d, W&M approved resolution 10,000 d with a max. of 80 % preload. Smallest load cell signal 0.33 μ V/e, update rate 225 filtered weight values / sec.

Calibration as single or multiple-range and as single or multi-interval scale. Option for the linearization of the load curve.

Security

Power-fail-safe storage of data, password protection, securing of calibration parameters with switch. Fast replacement without recalibration possible for applications that are not subject to Weights & Measures acceptance.

Remote control (ONLINE)

IT2000M CONTROL/ONLINE enables the simple creation of intelligent weighing locations, e.g. for production, shipping/ receiving or truck scales.

The weighing terminal is connected to the Ethernet LAN or a serial interface.

The PC software transmits commands to control the operating sequence.

IT2000M CONTROL/ONLINE responds to each command with an 'acknowledge' data string.

The PC program is always in full control of the complete sequence of the operation. The following example demonstrates how the PC, with 3 commands, controls the manual weighing operation to a target weight:

Example:

- The PC sends the tare command *TA*. The scale is automatically tared and a status message is returned to the PC.
- The PC sends the command to display: *DA FILL 100 kg'*. The weighing terminal displays the prompt 'FILL 100 kg' and sends the code of the acknowledge key back to the PC.
- The PC sends the weight capture command *RN*. The weighing terminal captures the weight as soon as the scale has settled and returns a data string containing date, time, gross, tare and net weight to the PC.

Control commands

- Capture weight, settled or in motion (approved data archive for max. 80,000 weighing transactions)
- Manual tare
- Auto-tare
- Show text with/without acknowledgement
- Set setpoints
- Read digital input
- Set digital output on/off.

Setpoint functions

Max. 8 setpoints for min. or max. or range checks or scale status. Digital inputs for zero setting, taring, storing of weight etc.

Simple and secure operation

- Operator is guided on a backlit high-contrast display with clear-text messages. Display of weight (6 digits, height of characters 15 mm) and symbols for scale status, e.g. taring, below zero, overload.
- One additional display line (20 characters, height of characters 4 mm) for operator prompting.

Standard interfaces

USB, Ethernet and 2 digital outputs.

Add-on modules

- Plug-on board PIO2000M with 8 digital inputs (24 V DC, 7 mA, opto-isolated) and 8 digital outputs (24 V DC, 500 mA, opto-isolated, short-circuit proof)
- Plug-on board SPU2000M with 2 digital inputs (24 V DC, 7 mA, opto-isolated) and – one socket for serial interface module (SIM) – two sockets for digital I/O modules (PIM500) or analog output modules (DAU15)
- Serial interface modules: SIM-RS232, SIM-RS485, SIM-20mA
- Digital I/O module: PIM500 with 2 digital inputs (24 V DC, 7 mA, opto-isolated) and 2 digital outputs (24 V DC, 500 mA, opto-isolated, short-circuit proof)
- Analog output module: DAU15 (0/4–20 mA or 0/2–10 V, opto-isolated, 15-bit resolution)
- Zener barriers for the connection to Exi load cells (max. 15,000 d, 3,000 d for W&M approved applications)
- Grounding rail to connect the shield of connection cables.

Electrical connections

Supply voltage: 12–30 V DC, power consumption max. 17 VA.

Operating temperature

–10 °C (+14 °F) to +40 °C (+104 °F) at max. 95 % relative humidity, non condensing.

Construction:

Module With Display



Dimensions W x H x D:
92 x 120 x 106 mm
(3.6" 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")

Directives: 2014/30/EU, 2014/31/EU, 2014/32/EU

Standards: EN 61000-6-2, NAMUR NE21, EN 61000-6-4, EN 45501, OIML R 76-1, OIML R 61

CE EU Type-examination Certificate as non-automatic weighing instrument, AGFI

NTEP NTEP approval as indicating element

ETL ETL certified in accordance with UL 62368-1 and CSA C22.2 No. 62368-1

FC EMI compliance with FCC Part 15

Canada Measurement Canada: Approval as indicating element

UK CA Type-examination Certificate as non-automatic weighing instrument, AGFI

EtherNet/IP **Modbus**
PROFI **NET** **PROFI** **BUS**