

ABB MEASUREMENT & ANALYTICS | DATA SHEET

# IT1

## Universal weighing terminal



## Measurement made easy

Suitable for difficult environmental conditions and locations with high hygienic standards, W&M approved

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**Stainless steel housing**

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**IP rating IP 69K**

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**Keyboard**

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**Power supply**

- 110 to 240 V AC (integrated) for stationary use
- 12 to 30 V DC (integrated) for mobile use

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**Color display with back lighting**

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**High operational security**

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**Data transmission to PC**

## Features and functions

### Stainless steel housing IP 69K

Suitable for harsh environment weighing locations. With mounting brackets for desk-top or wall-mount installation. Integrated power supply unit, sealed cable glands for all cable connections.

### Color display

For indication of weight, multi-lingual operator prompts and calibration dialog. With backlighted, 11 cm (4.3 in.) display.



### Keyboard

With function keys for zero setting, taring, printing, totalizing and special functions.

### Power supply

110 to 240 V AC or 12 to 30 V DC (integrated) for stationary use or 12 to 30 V DC (integrated) for mobile use.

### Universal use

Suitable for difficult environmental conditions and locations with high hygienic standards, as in the food, pharmaceutical and chemical industry.

### High operational security

Fast and error-free operation is ensured by a color display for the indication of weight, IDs and operator prompts.

### Weighing electronics

IT1 connects to one scale with analog strain gauge load cells, entry impedance 43  $\Omega$  to 3.3 k $\Omega$  (for example suitable for 8 x 350  $\Omega$  load cells), or via zener barriers, entry impedance 87.5  $\Omega$  to 3.3 k $\Omega$  (for example suitable for 4 x 350  $\Omega$  load cells), or digital load cells. The weighing terminal provides a W&M approved resolution of up to 10000 d.

Calibration is possible as single or multiple-range (for example, 3 x 3000 d) and as single or multi-interval scale.

### Weighing program

Display of net, tare and gross weight.

Operator prompting for capturing of weight or piece count.

Totalizing is also possible.

Plug-on modules are used to set up the IT1 for applications of varying complexity.

### Data logging

Via optional printer interface. The print layout for labels or forms is configurable.

Printout of weights, totals, date, time and consecutive-no.

### Data transmission to PC

Via optional PC interface. Transmission of date, time, consecutive no. and weight after each weighing cycle.

### PC ONLINE mode

Via optional PC interface.

Reading of weight, taring, zero setting and other functions can be remotely controlled from a PC.

Weights can be stored in an internal W&M approved data archive for verification. Data transmission is possible through serial interface or Ethernet LAN.

### Switching and filling

With optional input / output modules 3 weight thresholds can be monitored, for example for maximum or minimum values. Start of weighing cycle and taring is possible from external switches.

Alternatively the inputs and outputs can be used for a filling sequence with start / stop / interrupt and two-speed cut-off.

## IT1 – Standard programs

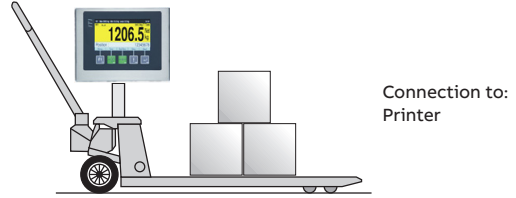
### Basic – W&M approved weighing terminal

Taring, weighing and totalizing, printout of ticket.



### IT1 - Mobile weighing

With data logging  
(IT1 power supply 12 to 30 VDC).



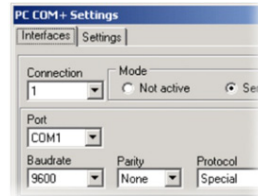
### Check – Checkweighing terminal

Weight tolerance check with color change and output signals for 'under tolerance', 'within tolerance' and 'over tolerance'.



### PC COM+ – PC Software Tool PC COM+ (Option)

ActiveX component for the communication between Windows programs and IT1 terminals in ONLINE mode. In combination with PC ARCHIVE option to store weights internally or on PC hard disk in an approved data archive.



Compatibility: Windows 7 to 10

### Online - W&M approved ONLINE weighing terminal

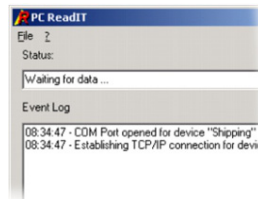
Transmission of weights on request from PC, via serial interface or Ethernet, internal storage of 1,000,000 weighings possible in approved data archive.



### PC ReadIT – PC Software Tool PC ReadIT (Option)

Reception of weighing data and storage in an ASCII file (\*.txt) or a database.

Supported databases: MS SQL, MS ACCESS, Oracle, Interbase SQL or ODBC.



Compatibility: Windows 7 to 10

### IT1 – Weighing terminal with setpoints

Minimum / maximum weight monitoring for hopper scales, output signals for: 'weight under min.' and 'weight over max.'



## Specification

### Construction

Compact stainless steel housing protected to IP 69K, for desk-top, wall-mount and column-mount installation or as panel-mount version, suitable for harsh environments, all cable connections through sealed cable glands.

#### Desk-top or wall-mount installation



#### Panel-mount version

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>• Stainless steel housing, IP 69K, NEMA 4X</li> <li>• Desk-top installation</li> <li>• Dimensions W x H x D: 168 x 177 x 115 mm (6.6 x 7.0 x 4.5 in.)</li> </ul> | <ul style="list-style-type: none"> <li>• Stainless steel housing, IP 69K, NEMA 4X</li> <li>• Wall-mount installation</li> <li>• Dimensions W x H x D: 168 x 151 x 121 mm (6.6 x 5.9 x 4.8 in.)</li> </ul> | <ul style="list-style-type: none"> <li>• Stainless steel housing, fascia plate protected to IP 69K, NEMA 4X</li> <li>• Panel-mount installation</li> <li>• Dimensions W x H x D: 182 x 145 x 47 mm (7.2 x 5.7 x 1.9 in.)</li> <li>• Cut-out in panel: 164 x 128 mm (6.46 x 5.04 in.)</li> </ul> |
|---|---|---|

### Display and keyboard

Bright 4.3 in. (11 cm) color screen for indication of weight and operator prompts and calibration.

Sealed membrane keyboard with tactile feedback, with soft keys for zero setting, taring, printing, totalizing and special functions.

### Weighing electronics

Connection to scales with analog strain gauge load cells, entry impedance 43  $\Omega$  to 3.3 k $\Omega$  (for example suitable for 8 x 350  $\Omega$  load cells), or via zener barriers, entry impedance 87.5  $\Omega$  to 3.3 k $\Omega$  (for example suitable for 4 x 350  $\Omega$  load cells), W&M approved resolution up to 10,000 d. Internal resolution 524,000 d, update rate 50 to 800/s, smallest load cell signal 0.33  $\mu$ V/e.

Calibration as single or multiple range scale with 1, 2 or 3 ranges or as multi-interval scale. Calibration with test weights or through entry of rated output of load cell(s), option for the linearization of the load curve. Clear operator prompts for all steps of calibration sequence. Optional interface modules for digital load cells Flintec RC3D or HBM C16i.

### Electrical connection

110 to 240 V AC, 50 / 60 Hz or 12 to 30 V DC via integrated power supply unit, or 12 to 30 VDC for power supply via external battery.

### Operating temperature

-10 to 40 °C (14 to 104 °F), 95 % relative humidity, non-condensing.

### Interface options

One socket for serial or Ethernet interface and one socket for digital I / Os or analog output:

#### PC interface

Selectable Ethernet, Bluetooth, RS232, RS422 or RS485, configurable as 'data transmission after each weighing cycle' or 'in request mode'.

#### Printer interface

Selectable USB, Ethernet, RS232 or RS485, for the connection of a form or ticket printer, printout configurable via display and keyboard.

#### Interface for remote display

Selectable RS232, RS485 or Ethernet, several protocols configurable.

#### 2 digital inputs and 2 digital outputs

Optoisolated, 24 VDC, outputs for setpoint monitoring or simple filling applications, inputs for start of weighing and taring or start / stop of filling.

#### Additional digital output

Optoisolated, 24 V DC, for  $\pm$  check or setpoint monitoring.

#### Analog output

0 to 20 mA, 4 to 20 mA, 0 to 10 V or 2 to 10 V, 15 bit, 32,000 divisions, for analog output of weight.

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## ...Specification

### Further options

#### Internal W&M approved data archive

To record the latest 1,000,000 weighing results.

#### PC ScaleView

PC software for the display of weighing data and scale status information (Parts Certificate pending).

#### PC COM+ / PC ARCHIVE

PC software for W&M approved recording of weighing data on a PC hard disk, recording of several years on a hard disk possible.

#### PC ReadIT

PC software for the reception of weighing data and storage in an ASCII file or a database.

#### IT CONFIGURATOR

PC software for calibration, backup, configuration of user prompts, and editing of print formats (SIM-NET module required).

#### Remote display

W&M approved IT1 remote display, selectable RS232, RS485 or Ethernet interface.

#### Remote diagnostics

Via Ethernet- / Internet connection with integrated web server.

#### Splash and dust cover

Transparent plastic cover to protect display and keyboard.

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## Certificates

- Directives: 2014/31/EU, 2014/30/EU, 2014/35/EU
- Standards: EN 45501, OIML R76-1, EN 61000-6-2, EN 61000-6-3, NAMUR NE21, EN 60950
- EC-approval as non-automatic weighing instrument
- 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



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