

# IT8000EX



**Universal Weighing Terminal,  
W&M Approved, for Industrial  
Use in Ex-Zones 1, 2, 21 and 22**

# IT8000Ex - Freely Programmable Industrial Weighing Terminal

## Stainless steel housing IP65

Suitable for harsh environment. With mounting brackets for desk-top or wall-mount installation. All cables connected through tight cable glands.

## LCD text display

For weight, multi-lingual operator prompts and calibration. With backlighting, up to four lines of alphanumeric display with up to 20 characters each.



## Keyboard

Function keys for zero setting, taring and printing.  
Numeric keypad for input of tare weights and IDs.  
Alphanumeric entries possible via multiple key assignment.  
Application-specific functions directly accessible via function keys.

## Power supply

24VDC Ex"e" or 230VAC

## Universal use

Industrial design, modular concept, proven standard programs and free programmability make the IT8000 Ex the ideal weighing terminal for:  
shipping and receiving scales, batching and recipe weighing, filling controllers for drums or IBCs and for weighing installations with customized operating sequences.

## Weighing electronics

Scale interface for one scale base with up to 4 loadcells with an impedance of 350 Ohm each or 8 loadcells with 1000 Ohm. Weights and Measures approved resolution of 6,000d with a maximum preload of 80%. Calibration is possible as single or multiple-range scale (eg 3x 3000d) and as single or multi-interval scale. Internal data archive for the storage of up to 450,000 weighing transactions.

## Modular concept

The modular design provides for several configurations with:

- Up to 2 serial, intrinsically safe interfaces for the connection of printer, PC, PLC, remote display, scanner or fieldbus / Ethernet gateway;
- Flexible I/O concept with 4 digital inputs (5V, intrinsically safe) and several options for digital outputs:  
5VDC, intrinsically safe to connect piezo-electric valves or potential-free relay contacts to connect intrinsically safe 24V solenoid valves.

This ensures that the optimal system configuration can be chosen, for stationary as well as mobile use. Specific software modules support the connection of PCs, PLCs and frequency inverters in safe area.

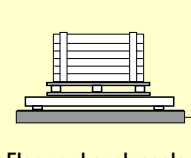
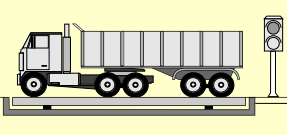
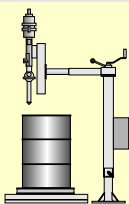

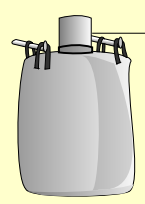
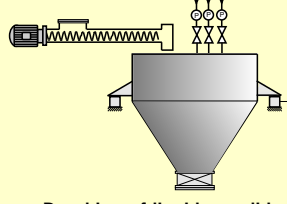
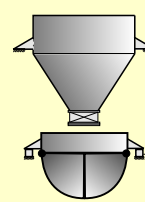
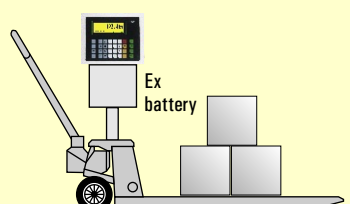
## Free programmability

Standard programs can be adapted to the requirements of a specific application. New programs can be designed in a very simple way on a PC with the RTG program development environment.

## High operational security

Fast and error-free operation is ensured by a high-contrast alphanumeric, back-lit LCD for the indication of weight, IDs and operator prompts in combination with an easy-to-use tactile keyboard for the entry of manual tare and additional data.

# IT8000Ex - Standard Programs (Selection)

<b>BASIC</b>	<p><b>W&amp;M approved weighing terminal</b> Input of IDs. eg order-No. and article-No., taring, weighing and totalizing, approved data archive, printout on form or ticket, data transmission to PC.</p>	 <p>Floor or bench scale</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → RS232 → PC</p>
<b>TRUCK/ONLINE</b>	<p><b>W&amp;M approved truck scale terminal</b> Files for customer, supplier and product data; internal W&amp;M approved data archive; configurable print format; switching / summing function for combined platforms; full remote control from PC.</p>	 <p>Single or combined platform</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Ethernet → Ethernet converter → PC</p>
<b>FILL</b>	<p><b>Filling controller for liquids</b> Operation as automatic or non-automatic weighing instrument, fast / slow feeding with preact optimization, files for products and statistics, control of filling lance and conveyor.</p>	 <p>Scale to fill drums, pails, cans or hoppers</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Profibus converter → Profibus DP → PLC</p>
<b>BAG</b>	<p><b>Filling controller for bags</b> With two-speed filling and preact optimization, files for product parameters and statistics, filling in gross or net mode, operation as automatic or non-automatic weighing instrument.</p>	 <p>Bagging scale</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Remote display (123,5kg)</p>
<b>BIGBAG</b>	<p><b>Filling controller for IBCs</b> With two-speed filling and preact optimization, files for product parameters and statistics, control of inflation, compression and aeration equipment, filltime check, optional fieldbus interface.</p>	 <p>Scale integrated in IBC filling structure</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Relay modules</p>
<b>BATCH</b>	<p><b>Multi-material batchweighing controller</b> With files for raw materials and recipes, automatic two-speed or manual batching, synchronization steps for process control, batch protocol and material statistics.</p>	 <p>Batching of liquid or solid material</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Profibus converter → Profibus DP → PLC</p>
<b>BULK</b>	<p><b>Bulkweighing controller</b> For shipping and receiving of bulk material via trucks, freight cars or ships; with product files and control of silos, remote control possible via fieldbus (eg Profibus DP).</p>	 <p>Bulkweigher</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>24VDC OF 230VAC</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Printer</p> <p>10mA Ex<sup>o</sup>"i" → Separating module → Relay modules</p>
<b>IT8000Ex</b>	<p>Weighing terminal with power supply via rechargeable Ex battery.</p>	 <p>Ex battery</p>	<p><b>Ex zone</b></p> <p><b>Safe area</b></p> <p>12VDC — Battery charger — 230VAC</p>

# IT8000Ex - Technical data

## ATEX Approval

II 2(2)G Ex e ib mb [ib] IIC T4 Gb (Gas)  
II 2(2)D Ex ib tb [ib] IIIC T125°C Db IP65 (Dust)

## Construction

Stainless steel housing with mounting brackets for desk-top, wall-mount or panel-mount installation.

## Display And Keyboard

**4x20-character alphanumeric back-lit LCD display**, height of characters for weight indication 19mm, operator prompts and calibration via 20-character text display.

**Keyboard** with numeric keys for the input of tare weights and additional information, scale keys for zero setting and taring and function keys. Input of alpha characters via multiple assignment of keys.

## Weighing Electronics

For the connection of loadcells with an impedance  $\geq 87.5$  Ohm, e.g. 4x350 Ohm. W&M approved resolution 6000d, internal resolution 524,000d, input signal 0.33µV/e.

## Calibration

Setup as single or multiple range scale or as multi-interval scale. Calibration with test weights or through entry of rated signal, option for linearization.

## Power Supply

Options:

- 230VAC power supply unit mounted on back cover
- external 24 VDC power supply unit for installation in safe area or
- external 12VDC rechargeable Ex battery.

## Operating Temperature

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

## Interfaces

- 4 digital inputs (5VDC, intrinsically safe),
- as option 4 digital outputs (5V, intrinsically safe or potential free relay contacts for connection to intrinsically safe 24V solenoid valves),
- as option 2 serial interfaces, intrinsically safe, for connection to interface separation module.

## Interface Separation module

Can be fitted with RS232, 20mA CL or RS485 interface drivers. Power supply optional 110–240VAC or 24VDC.

ATEX approval:

II (2)G [Ex ib Gb] IIC (Gas)  
II (2)D [Ex ib Db] IIIC (Dust)

## Free Programmability

Comprehensive, PC-based RTG *W/V* program development and test environment including program generator (CASE tool), Pascal and PLC instruction lists.

## Option Fieldbus / Ethernet

Connection to Profibus DP, DeviceNet or Ethernet possible via external converters, installed in safe area

## Other options

- Ex loadcell cable,
- Ex data cable,
- Ex loadcell junction box  
ATEX II 2 (2) G Ex ib [ib] IIC T4 Gb (Gas)  
II 2 (2) D Ex ib [ib] IIIC T50°C Db (Dust)

## Dimensions and accessories:

Desk / wall version	Panel-mount version	24VDC PSU
 <p>Dimensions WxHxD: 270x210x170mm</p>	 <p>Dimensions WxHxD: 300x240x79mm Cut-out in panel: 273x213mm</p>	 <p>Dimensions WxHxD: 250x232x101mm Optionally available for installation on DIN rail</p>
Ex battery, charger	Interface module	JunctionBox Ex
 <p>Dimensions WxHxD: 275x225x116mm</p>	 <p>Dimensions WxHxD: 260x225x105mm</p>	 <p>Dimensions WxHxD: 227x80x53mm</p>

**Directives:** 2009/23/EC, 2004/108/EC, 2006/95/EC, 94/9/EC

**Standards:** EN 45501, OIML R76-1, EN 61000-6-2, NAMUR NE21, OIML R61, OIML R107, EN 61000-6-4, EN 60079-0, EN 60079-7, EN 60079-11, EN 60079-18, EN 621241-0, EN 621241-1, EN 621241-11, OIML R51, EN 1127, EN 61241-1, EN 61241-11

**CE** EC-approval as non-automatic weighing instrument, MID-approval as AGFI and discontinuous totalizer

**Ex** ATEX-approval for Ex-Zones 1, 2, 21 and 22

Systec Systemtechnik und Industrieautomation GmbH  
Tel. +49 (0) 2238 - 9663-0 - [www.systecnet.com](http://www.systecnet.com)

Sales and service

Subject to change without notice

ST.2309.0819 IT8000EX\_DBE.PDF 01.2013