Weighing Indicators

IND500x Indicators

- Hazardous-Area Approved
- Consistent Process Control
- Error-Free Operation
- Filling and Formulation

Zone 1/21, Division 1

Powerful Process Control

Consistent Quality in Ex-Areas

METTLER TOLEDO

IND500x Weighing Indicator
Optimize Safety and Productivity

In hazardous production areas, safety is critical. For Zone 1/21 and Division 1 classified areas, the intrinsically safe IND500x weighing indicator delivers process control and versatility to enable the perfect balance of safety and maximum productivity. Optimize your manual, automatic or semi-automatic applications with IND500x.

www.mt.com/IND500x

Pharma / Cosmetics
Reliable weighing performance can help you to ensure compliance with global and local regulations. IND500x supports high-precision weighing and enables you to achieve maximum data traceability.

Chemical
When the cost of raw materials is high, accurate weighing processes are critical to help save costs and optimize resources. IND500x helps you to prevent bad batches to reduce waste and rework.

Achieve error-free operation
The high-resolution graphic display reduces operator fatigue and human error. Ensure consistent quality in manual applications with a solution designed with operators in mind.

Maximize control, minimize costs
Accurate, repeatable and traceable processes due to the built-in application controls help you to reduce material waste and rework in your filling or formulation processes.

Enable full connectivity
With flexible communication options, you gain the ultimate flexibility. Connect the IND500x with the ACM500 for easy integration with your existing PLC or DCS to enhance your process management.

We offer global and local partnership, no matter where you do business.

Whether you are a multinational business or a systems integrator serving customers worldwide, our globally approved weighing platforms enable you to standardize your weighing solutions to minimize procurement and engineering hours and deliver a reliable value to your customers or production facilities worldwide. Our comprehensive consulting and extensive weighing portfolio are available to help you simplify your job.

Repeatable Manual Formulation
Consistent, Traceable Batch Quality

The built-in formulation application on IND500x speeds up manual formulation and ingredient handling processes in hazardous areas. It is designed to minimize operator errors, reduce waste and enable high-quality production and data traceability.

The built-in formulation application helps you to…

Speed Up Workflows
Clear work instructions on the indicator guide operators through production steps, while colorWeight® graphics visually indicate when the target weight is reached. This enables error-free operation and speeds up your processes.

Simplify Formula Management
Integrated formula management provides process control in a compact package. Create formulations, recipes and article databases directly on the indicator or a PC. Raw materials, lot numbers, and operator messages can also be stored for easy operator recall.

Achieve Data Traceability
IND500x can store 20,000 transaction logs to track weighing data, and you can print reports for a clear overview of material consumption and process results, helping you to ensure traceability and audit readiness.

Advanced Formulation with Multiple Workstations
For more complex production setups, IND500x can be easily integrated with Form+ software, which helps you to ensure traceable formula execution across multiple bench or floor scales.

▸ **www.mt.com/Formplus**

Flexible Filling Processes
Maximum Yield, Minimum Cost

The IND500x excels in manual, semi-automatic or automatic filling of single materials. Benefit from the built-in memory tables for filling targets so that you can seamlessly switch between materials in manual processes without reprogramming or have peace of mind in your process accuracy for fully automated applications.

The built-in filling application helps you to...

Achieve a Faster ROI

IND500x's pre-programmed filling application shortens the time needed to setup your system and start production so that you can start realizing a return on your investment much quicker.

Maximize Process Control

For automated applications, high accuracy and a range of lance-placement options help to dispense the correct amount of material every time. Controlling the lance through IND500x also means less equipment is required for a fully functional system.

Get Information at Your Fingertips

You require easy-to-access information on your processes to make proactive and informed decisions. Valuable and actionable real-time data is only a few button pushes away with IND500x

Intuitive and Safe Operation
Thoughtful Indicator Design

The IND500x thoughtfully blends intrinsically safe construction with a user-friendly interface and flexible connectivity options to accelerate your processes, increase productivity and improve product quality.

User-Friendly Interface
The easy-to-understand, high-resolution color display reduces operator fatigue and minimizes required training time

Zone 1/21, Division 1

Flexible Connectivity
Easily connect to your automation network and integrate with different control systems to match your process requirements.

Exceptional Safety
The ESD-protected keypad prevents build-up of static electricity to protect operators from shocks during cleaning and operation.

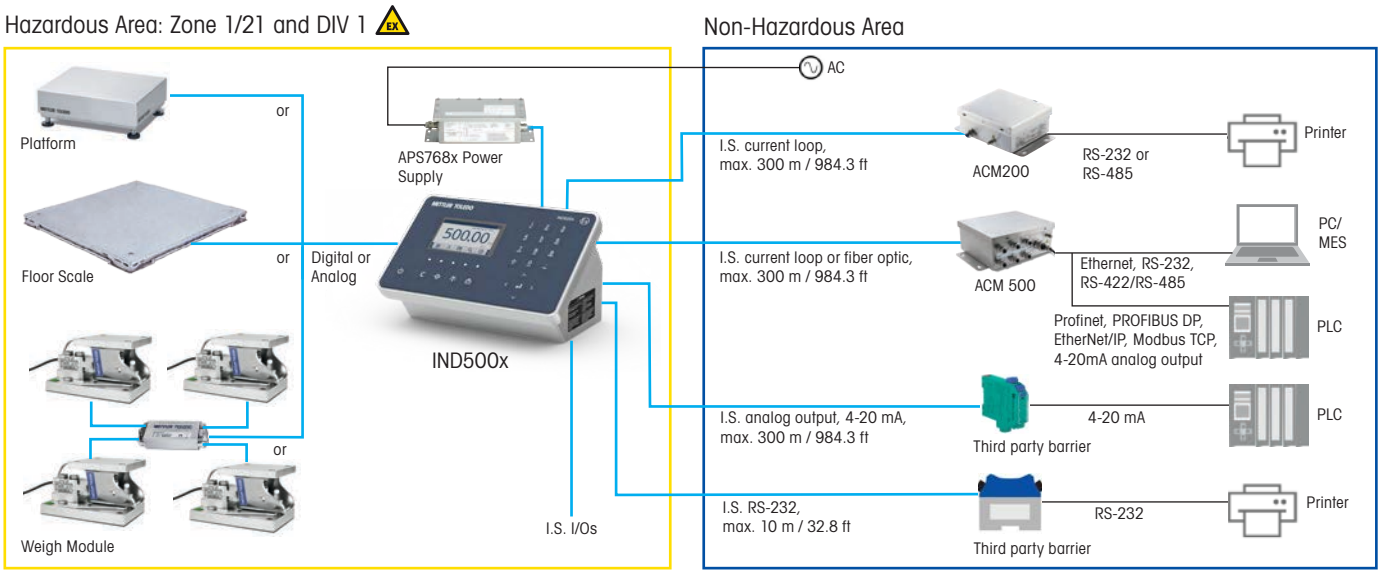
Integrated Data Collection
Weighing data can be stored in the memory of IND500x for complete traceability, while customizable reports help you to be audit-ready.

> The IND500x thoughtfully blends intrinsically safe construction with a user-friendly interface and connectivity options.

Technical Data
IND500x Specifications

Specifications		
Enclosure Type and Dimensions	Harsh enclosure (type 304 stainless steel): 289 x 184 x 162 mm (7.2 x 11.4 X 6.4 in.), VESA100	
Keypad	27 keys, polyester overlay (PET) with hard coating, Electro-static discharge protected, Polycarbonate (PC) display lens	
Display	4.3" TFT color display (480 x 272), with 20 mm high weight display	
Clock Accuracy	< 1 second / day (without time server access) at 25° C consistent room temperature	
Shipping Weight	4.0 kg / 8.8 lb (net weight)	
Environment Protection	Harsh Environment enclosure meets IP65 requirements	
Power	APS768x power supply with intrinsically safe outputs	
Supported scale types	One scale interface for Analog or Digital (SICSPro or IDNet) Platform	
Analog Scale Interface	Load Cell Excitation Voltage: 4.8 VDC Minimum Sensitivity: 0.3µV/e approved, up to four 350 Ohms load cells, 1-3 mV/V"	
Analog/Digital Update Rates	Internal: Analog: >366 Hz; IDNet: determined by base; SICSpro: 50 Hz for bases that include Advanced Setup Mode; Target Comparison: up to 50 Hz	
Weight Display	Displayed resolution of 100,000 counts for analog load cell scales Display resolution for IDNet and SICSpro bases is determined by the specific base used	
Standard Interfaces	One intrinsically safe RS-232 serial port (COM1), 300 to 115,200 baud (maximum cable length: 10 m / 32.8 ft) Discrete I/O with 3 active inputs and 3 passive outputs	
Optional Interfaces	Discrete I/O interface with 5 inputs and 8 outputs intrinsically safe RS-232 serial port (COM6), 300 to 115,200 baud (maximum cable length: 10 m / 32.8 ft) Intrinsically safe 4-20mA analog output interface (maximum cable length: 300 m / 984.3 ft) Dual-channel intrinsically safe active current loop interface to communicate with ACM200 or ACM500 (maximum cable length: 300 m / 984.3 ft) Fiber optic interface (to communicate with ACM500) (maximum cable length: 300 m / 984.3 ft)	
Data and PLC Interfaces	RS-232, RS-422/RS-485 provided by ACM200 located in the non-hazardous area	
	Ethernet TCP/IP, RS-232, RS-422/RS-485 and PROFINET, Profibus DP, EtherNet/IP, Modbus TCP provided by ACM500 located in the non-hazardous area	
Protocols	Serial Inputs: ASCII commands for CTPZ (Clear, Tare, Print, Zero), SICS (most level 0 and level 1 commands), and Shared Data Server Access Serial Outputs: Continuous or Demand with up to ten configurable print templates or SICS host protocol, report printing PROFINET: SAI™ (Standard Automation Interface SAI) 1, 2 and 4-Block format (2 recommended) certification certificate Z13186 Profibus DP and EtherNet/IP: IND560 Shared Data Protocol Modbus TCP: IND560 compatible protocol	
Interface and Function Update Rates	Weight display: 25 Hz Internal discrete I/O: 50 Hz SICS continuous (SIR): up to 20 Hz Continuous Template (Eprint): 20 Hz Continuous Template (serial): 18 Hz (115.2Kbaud), 14 Hz (38.4Kbaud)	PLC cyclic data: 25 Hz External discrete I/O (ARM100): 25 Hz MT Continuous Output: up to 20 Hz
Operating Environment	-10° to 40° C (14° to 104°F), 10% to 95% relative humidity, non- condensing	
Storage Environment	-20°C to 60° C (-4° to 140°F), 10% to 95% relative humidity, non- condensing	
Approvals	Weights & Measures USA: NTEP Class II 100,000d; Class III/IIIL 10,000d Canada: Class II 100,000d; Class III 10,000d; Class IIIHD, 10,000d Europe: OIML R76 Class II approved divisions determined by platform; Class II 100,000e, Class III 10,000e and Class IIII 1,000e; MID R61 (Automatic Gravimetric Filling Instrument); MID R51 (Automatic Catchweigher)	
	Hazardous Locations **ATEX, Zone 1 and Zone 21, FM21ATEX0033X** II 2 G Ex ib [op is Ga] IIC T4 Gb; II 2 D Ex ib tb [ib] [op is Da] IIIC T60°C Db; Tamb = -10°C to +40°C **IECEx, Equipment Protection Level Gb and Db, IECEx FMG 21.0022X** Ex ib [op is Ga] IIC T4 Gb; Ex ib tb [ib] [op is Da] IIIC T60°C Db: IP65; Tamb = -10°C to +40°C **FMus for US, DIV 1 and Zone 1 and Zone 21, FM21US0064X** IS Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T4; Class I, Zone 1, AEx ib [op is Ga] IIC T4 Gb; Zone 21, AEx ib [op is Da] IIIC T60°C Db; IP65; Tamb = -10°C to +40°C **cFM for Canada, DIV 1 and Zone 1 and Zone 21, FM21CA0040X** IS Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T4 Ex ib [op is Ga] IIC T4 Gb; Ex ib [op is Da] IIIC T60°C Db; IP65; Tamb = -10°C to +40°C"	

Technical Data
IND500x Specifications



I.S.: intrinsically safe

Indicator Power Supply (in hazardous area)

AM	EU	AP	CN	Description
22026723 (120V)	22026727 (230V)	22026727 (230V)	72242546 (230V)	APS768x Power Supply

Communication Module (in non-hazardous)

AM	EU	AP	CN	Description
72223667 (US Plug)	22026695 (Configured Plug)	72215012 (US Plug)	30366439 (CN Plug)	ACM200-CL-RS232, AC Power
64061126 (US Plug)	22026698 (Configured Plug)	72258999 (Schuko Plug)	72248974 (CN Plug)	ACM500-CL-Ethernet TCP/IP and dual RS232
64061131 (US Plug)	22026704 (Configured Plug)	30059638 (Schuko Plug)	72252983 (CN Plug)	ACM500-CL-Analog output 4-20mA
64061130 (US Plug)	22026700 (Configured Plug)	30041346 (Schuko Plug)	72244805 (CN Plug)	ACM500-CL-Ethernet TCP/IP and dual RS232-Profibus
30838916 (US Plug)	30792409 (Configured Plug)	30725978 (Schuko Plug)	30725971 (CN Plug)	ACM500-CL-Ethernet TCP/IP and dual RS232-ProfiNet

Indicator Brackets (in hazardous area)

22020286	VESA100 bracket for column mount
30353299	Adapter kit to mount IND500x (100mm x 100mm) on existing IND560x brackets (120mm x 95mm)
71209353	KOP Mounting Bracket Harsh for fixed wall mounting
22014833	Wall mount Bracket for flexible wall mounting (VESA100 is excluded and needs to be ordered separately)

Indicator Sealing Kits

30674202	Metrological sealing IND500x CN (China)
30674209	Metrological sealing IND500x EN (Global, except China)

Explore Our Service Solutions

Tailored to Fit Your Equipment Needs

METTLER TOLEDO Service delivers resources to enhance your efficiency, performance, and productivity by providing service packages that fit your operational needs, maximize your equipment lifetime and protect your investment.

Start with professional installation

Installation services include support for your unique production situation:

- Professional IQ/OQ/PQ/MQ documentation
- Initial calibration and confirmation of fit-for-purpose
- Hazardous area installations

Calibrate for quality and compliance

The professional Accuracy Calibration Certificate (ACC) determines measurement uncertainty in use over the entire weighing range. Corresponding annexes gives a clear pass/fail statement for specific tolerances applied, such as fit-for-purpose (GWP®), OIML R76, NTEP HB44, or further regulations.

Maintain accuracy over time

Receive professional guidance (GWP® Verification™), including a routine testing plan that specifies four key factors to maximize your efficiency and ensure quality:

- Tests to perform
- Weights to use
- Testing frequency
- Tolerances to apply

Extend your warranty coverage

Add two years of preventive maintenance and repair coverage to protect your equipment purchase and achieve maximum productivity and budget control.

Schedule maintenance

Full preventative maintenance plans offer inspection, functional testing, and proactive replacement of worn parts.
Health inspections offer a full assessment of current equipment condition with professional maintenance recommendations.

www.mt.com/IND500x

For more information

METTLER TOLEDO Group
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