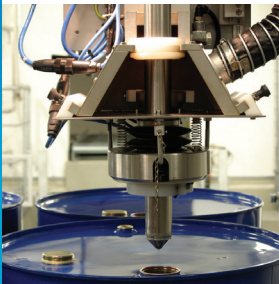# Uncompromised weighing
in hazardous areas

Increase speed
The IND560x features an ultra-fast A/D conversion rate. With TraxDSP™ tunable digital filtering to suppress environmental effects on weighing accuracy, enjoy precise, repeatable measurements from milligrams to tons.

Control process
Internal discrete I/O options establish direct control of automatic and semi-automatic processes fully within hazardous areas.

Connect easily
Fast PLC integration and network access into the hazardous area available via the ACM500 communication module.

Weigh intuitively
SmartTrac™ graphical display, operator prompting and one-touch access to terminal features through softkeys, work to improve productivity and minimize errors.

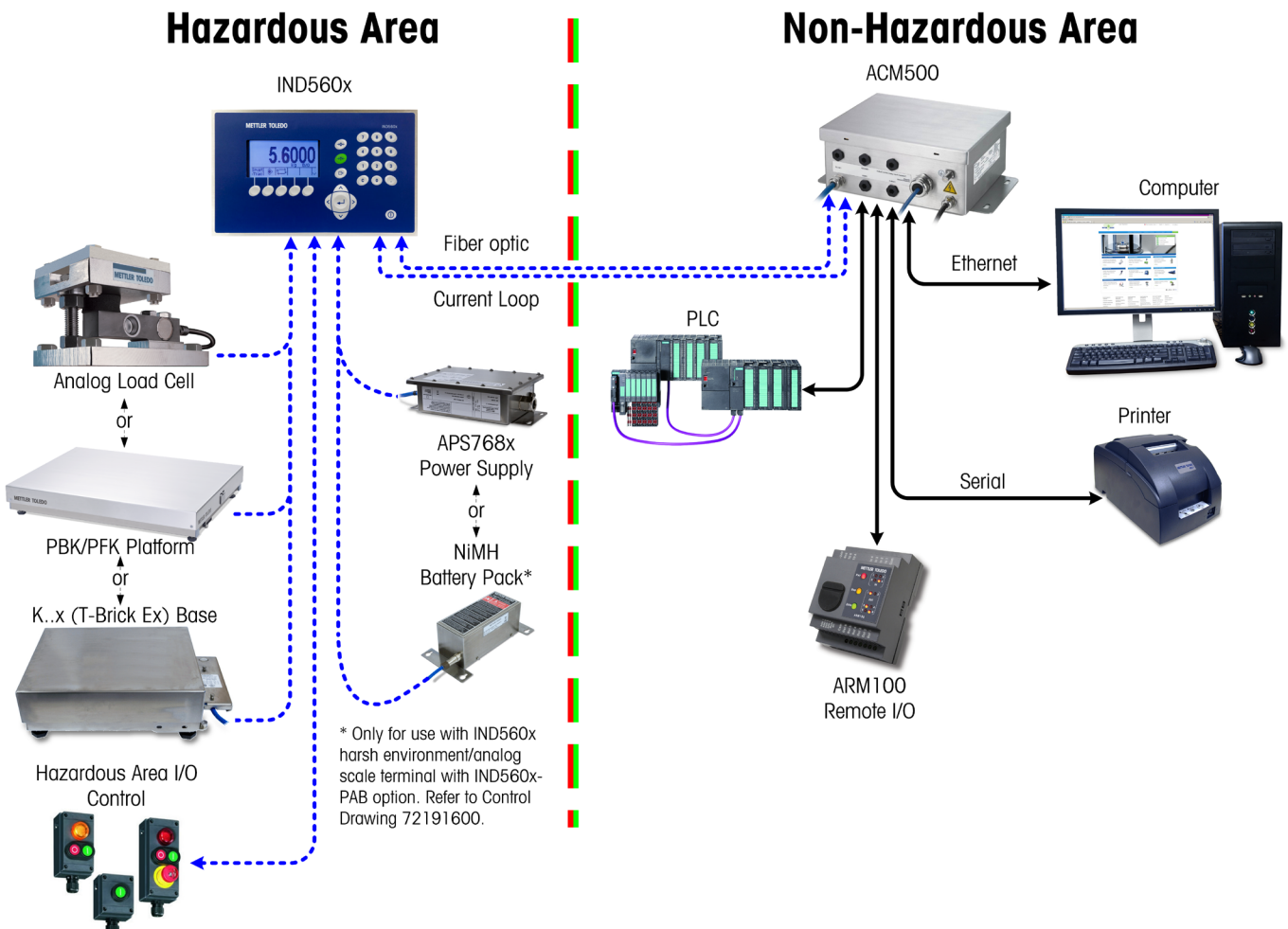**Zone 1/21, Division 1**

IND560x Terminal

The intrinsically safe IND560x weighing terminal brings uncompromising power and versatility into Division 1, Zone 1 and Zone 21 classified areas. Choose from analog or digital weighing technologies and communicate via serial, Ethernet and a variety of PLC interfaces. Easily program the feature-rich IND560x or create custom software applications. Whatever the need, the IND560x is the perfect solution for hazardous area weighing.

METTLER TOLEDO

IND560x terminal

CE NTEP NMI+

Features and benefits

- Intrinsically safe design means no barriers or enclosures required when placing terminal in hazardous areas classified Zone 1, Zone 21 or Division 1
- Mobile weighing available when harsh/analog enclosure model is used with the IND560x-PAB (Power Adapter Board) and available external NiMH battery pack
- TraxEMT™ (Embedded Maintenance Technician) automatically logs critical system information to aid with stringent process validation requirements and compliance to regulatory controls. Built in diagnostic tests improve serviceability
- ACM500 non-hazardous area communication module supports a variety of PLC interfaces along with Ethernet and serial ports, allowing for easy integration of the IND560x into facility networks and broader control systems
- Reduce installation costs by utilizing the ACM200 communication module when only serial communication to the non-hazardous area is required
- Communication hardware options include both current loop and fiber optics. Interface with legacy METTLER TOLEDO data converters is ensured, providing a clean migration path from legacy equipment
- 15 programmable softkeys help eliminate operation errors and increase productivity
- Easily accessed memory tables store target and tare records, eliminating the need for external data storage and improving process efficiency
- Programmable on-screen prompts guide operators consistently through complex operations, supporting facility SOPs and improving overall process quality
- Over/Under mode of operation is enhanced with graphical display and programmable I/O to clearly indicate transaction status
- Material Transfer mode supports latched target control I/O, making the IND560x an excellent hazardous area filling or dosing controller
- Optional application software modules add enhanced features when required:
    - Fill-560: Advanced filling and dosing
    - COM-560: Support for legacy communication protocols
    - Drive-560: Simple (In/Out) vehicle weighing
    - TaskExpert™: To create custom applications

Hazardous Area — Non-Hazardous Area

IND560x
ACM500
Computer
Fiber optic
Current Loop
PLC
Ethernet
Analog Load Cell
or
PBK/PFK Platform
or
K...x (T-Brick Ex) Base
APS768x Power Supply
or
NiMH Battery Pack*
Printer
Serial
ARM100 Remote I/O
Hazardous Area I/O Control

* Only for use with IND560x harsh environment/analog scale terminal with IND560x-PAB option. Refer to Control Drawing 72191600.

Technical Specifications

Enclosure dimensions (H x W x D)	Panel mount: 160 x 265 x 92 mm (6.3 x 10.4 x 3.6 in.) Harsh environment/desk/wall: 170 x 289 x 183 mm (6.7 x 11.4 x 7.2 in.)
Enclosure construction/ environmental protection	Panel mount: Stainless steel front panel, aluminum chassis. Certified IP65. Low profile front panel reduces contamination Harsh environment: Full stainless steel housing. Certified IP69k, IP68, IP65
Operating environment	-10°C to 40°C (14°F to 104°F), 10% to 95% relative humidity, non-condensing
Display	128 x 64 dot matrix Liquid Crystal Display with backlight standard. 21mm high weight display
Power	Works with APS768x intrinsically safe power supply. 120 VAC and 240 VAC models available. Harsh environment/analog model compatible with external NiMH battery pack, when optional IND560x-Power Adapter Board (PAB) is installed
Keypad	Power on/off. Clear, Tare, Print, Zero. Numeric keys. Navigation keyset. 5 softkeys
Scale types	Supports single scale interface: Analog scale, 5 VDC excitation, up to 4 x 350Ω load cells (87Ω minimum resistance), 2 or 3 mV/V, 100,000d maximum resolution IDNet scale, high-precision TBrick-Ex bases or SICSpro scale, high-precision PBK9/PFK9 Category 2 (MPXI) Bases
Calibration	Separate single-step Zero and Span, available 5-point linearity adjustment, step calibration or CalFREE™ (no test weights needed). Program and save a 25-step calibration test sequence for guaranteed repeatability. Configurable calibration expiration and email alerts available
Update Rates	A/D conversion ≤366 Hz. Target up to 50 Hz. PLC up to 20 Hz. Discrete I/O up to 25 Hz
Serial connectivity	Standard: One standard intrinsically safe RS-232 port (COM1). Optional COM4/COM5: Bi-directional, dual-channel fiber optic or intrinsically safe current loop interface for communication to non-hazardous area
Peripheral communication devices	Fiber optic or current loop connection to ACM500 in non-hazardous area; Current loop connection to ACM200 in non-hazardous area; Fiber optic connection to legacy METTLER TOLEDO fiber optic converter. Can operate as a remote display for other terminals in Ex or non-hazardous area
Supported communication*	Serial (RS-232/422/485), Ethernet 10 Base-T, PLC (Analog Output, DeviceNet, PROFIBUS DP, EtherNet/IP, Modbus TCP) Inputs: ASCIII, CPTZ, SICS Level 0/1, Remote display Outputs: METTLER TOLEDO Continuous, Demand, Continuous template, 5 configurable templates * Some communication options only available with ACM500
I/O	Internal solid state discrete I/O options offer a total of 4 inputs and 6 outputs. Choose from one of three options: Active Inputs/Active Outputs, Active Inputs/Passive Outputs, Passive Inputs/Passive Outputs - **Active Inputs** are powered internally by the IND560x and are designed for use with simple hazardous area switches - **Active Outputs** are powered internally by the IND560x and provide 12 VDC switching at 50 mA total. These are intended for use with low-power, intrinsically safe solenoids - **Passive Inputs** and **Passive Outputs** require power to be provided externally through an appropriate barrier. Entity parameters must be confirmed Total I/O control expandable to 12 inputs and 18 outputs using ARM100 modules and RS-485 from the ACM500

Ex approvals	US: IS, Class I, II, III; Div 1; Groups A-G T4 Ta = -10°C to +40°C; IP65; Type 4
	  I/1/AEx ib IIC T4
	  Control drawing 72191600
	Canada: IS, Class I, II, III; Div 1; Groups A-G T4 Ta = -10°C to +40°C; IP65; Control drawing 72191600 — ATEX: Certificate BVS 09 ATEX E 010 and supplement 2
	  II 2 G Ex ib [op is Ga] IIC T4 Gb
	  II 2 D Ex ib [op is Da] IIC T60°C Db
	  IP65 — IECEx Certificate IECEx BVS 10.0096X
	  Ex ib [op is Ga] IIC T4 Gb
	  Ex ib [op is Da] IIIC T60°C Db
	  IP65

Weights and measures approvals	USA: Class II, 100,000d; Class III/IIIL, 10,000d; CoC #05-0572A4 Canada: Class II, 100,000d; Class III, 10,000d; Class IIIHD, 20,000d; AM-5593 Rev 3 Europe: Class II, resolution determined by platform approval; Class III, 10,000e; TC6812 Rev 15 MID: Catchweighing – T10230; Gravimetric Filling – T10231

METTLER TOLEDO Service
Essential Services for Dependable Performance

METTLER TOLEDO is uniquely qualified to provide the installation, calibration and maintenance services essential to ensuring accuracy, optimizing uptime and prolonging equipment life. Our service representatives will be there at the right time, with the right parts, the right tools and the right skills to meet your needs.

www.mt.com/IND560x