IND131 / IND331

Max Connectivity, Mini Footprint

Easy Integration for Weighing

Weigh

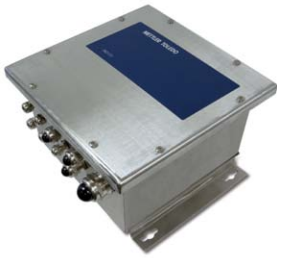
The IND131 and IND331 terminals deliver excellent accuracy, reliability and efficiency for process weighing applications.

Comply

These superior weighing terminals feature the performance and reliability expected of instruments designed to comply with Weights & Measures and product safety regulations. They include features and functionality never before offered in such a compact and versatile form factor.

Control

The inherent qualities of process weighing terminals from METTLER TOLEDO make it easier for OEMs and system integrators to build best-in-class weighing systems cost-effectively.



Connect

Easy integration into process-based network architectures provides valuable plant-floor information to process owners to optimize production and reduce down-time.

Multiple PLC interfaces

All IND131 and IND331 terminals can be equipped with any of a wide array of PLC options.

IND131 and IND331
Weighing Terminals

The IND131 and IND331 analog scale terminals deliver precision measurement data in a single, cost-effective package. Terminal features include:

- Organic LED display readable in all light conditions Ultra-fast A/D conversion rate and TraxDSP® digital filtering
- Enclosures designed to match application environment – modular design enables multiple mounting possibilities
- Choice of AC or 24 VDC operation
- Support for a wide variety of options, including DIO, additional serial port, and PLC interfaces
- Portable calibration/configuration settings and firmware upgrades via an SD memory card
- Scale calibration through PLC interface. CalFREE® allows scales to be calibrated without test weights

METTLER TOLEDO

IND131 and IND331 Packaged Solutions
Enhanced Terminals in Robust Enclosures

- **IND131 and IND331 in enclosures configured with optional COM2/DIO and optional PLC interface**
- **Packages include AC terminal/s or terminal/s with DC power supply**

Enclosure Specifications

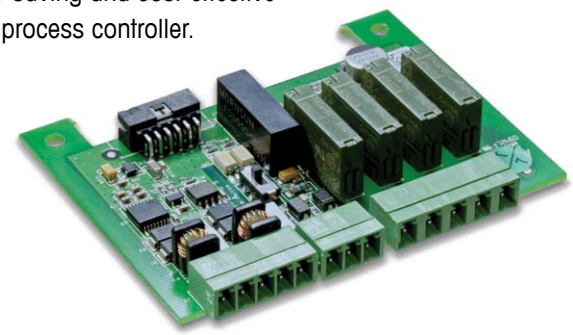
Fiberglass, painted mild steel (shown at left) or stainless steel enclosures (at right) can be used, depending on the installation environment. Each enclosure type includes integrated mounting brackets, and for the DC-powered terminals, an internal 24 VDC power supply can be added.

Enclosure material		Fiberglass	Painted Mild Steel	Type 304 Brushed Stainless Steel
Environmental rating	NEMA	4/4x/12/13	4/12	3R/4/4x/12/13
	IP	66	66	66
Approvals		UL, cUL	UL, cUL	UL, cUL

Customized Interfaces
Configure the packaged IND131 and IND331 terminals for specific applications with convenient operators for I/O, such as annunciators and pushbuttons. This makes operator interactions even easier, more consistent and safer.

Multiple Terminal Installations
Reduce both mounting space and cabling runs by combining multiple terminals into one enclosure. Each terminal can be configured for the exact application required, including DC power supply and optional second serial port with DIO and PLC interface.

Direct High Voltage Control
Using the dry contact relay option, the IND131 and IND331 terminals can provide high voltage control signals directly to devices such as ball valves and vibratory feeders. Select latched or coincidence targets in combination with user-defined limit values for up to three comparators, to create a time-saving and cost-effective basic process controller.



IND131 and IND331 Weighing Terminals

Technical Data			IND131/DIN	IND331/Panel	IND131/JBox	IND331/Harsh
						
Enclosure types		Unit of Measure	DIN rail-mount, plastic, with operator interface	Panel mount, stainless steel + plastic chassis	Stainless steel enclosure including internal board to sum load cells	Stainless steel desk- or wall-mountable enclosure, with operator interface
Dimensions	L × H × D	mm in.	68 × 138 × 111 2.7 × 5.4 × 4.4	Front panel: 168 × 68 × 12 6.6 × 2.7 × 0.5	251 × 261 × 123 9.9 × 10.3 × 4.8	220 × 131 × 177 8.7 × 5.2 × 7.0
Shipping weight		kg / lb	1 / 2.2	1.5 / 3.3	5.5 / 12.1	3 / 6.5
Environmental protection			IP20, Type 1	IP65, Type 4x and 12	IP69k	IP66
Ambient environment	Operation	°C / °F	-10 to 40 / 14 to 104, 10 % to 90 % relative humidity, non-condensing			
	Storage	°C / °F	-20 to 60 / -4 to 140, 10 % to 90 % relative humidity, non-condensing			
Power requirements	AC version	VAC / Hz / mA	85-264 / 49-61 / 27-73			
	DC version	VDC / mA	18-36; nominal 24 / 84-170; nominal 120 (IND131), nominal 130 (IND331)			
Display	Type		Green OLED including weight display, weight units, gross/net indication and graphic symbols for motion and center of zero. 10 updates/sec.			
	Character height	mm / in.	5.6 / 0.22	12 / 0.47	5.6 / 0.22 (internal)	12 / 0.47
Weight display			Maximum displayed resolution of 100,000 divisions			
Scale type			Analog load cells			
Number of cells			Up to 8 350 Ω load cells (AC version), up to 4 350 Ω load cells (DC version), 2 or 3 mV/V			
Number of scales			1			
Analog/Digital update rates		Hz	Internal analog: 366 / Target comparison: 50 / PLC Interface: 20			
Digital Filtering			TraxDSP®			
Memory			Stores two-speed target control values and limit values for three comparators			
Applications			Basic process weighing for gain-in-weight (filling), loss-in-weight (dosing) and level indication			
Load cell excitation voltage		VDC	5			
µV Build Minimum/Approved		microvolts	0.1 / 0.6			
Keypad			4 keys (Clear, Zero, Tare, Print); 1.22 mm thick polyester overlay (PET) with polycarbonate display lens			
Communications	Serial interfaces		Standard: One serial port (COM1), RS-232, 300 to 115,200 baud Optional: Serial port (COM2), RS-232/485, 300 to 115,200 baud			
	Protocol		Serial inputs: ASCII commands for CTPZ (Clear, Tare, Print, Zero), SICS (most commands, levels 0 and 1); Serial outputs: Continuous, Extended continuous, or Demand (limited formats)			
Approvals	Weights and Measures		USA: NTEP Class III/IIIL - 10,000d; CoC 09-051 Canada: Class III/IIIHD - n max. 10000/20000; * AM-5744		Europe: OIML, Class III, 6000e; R76/2006-NL1-09.26	
	MID		OIML R51 (Automatic Catchweighing) T10262; OIML R61 (Automatic Gravimetric Weighing) T10261			
	Product Safety		UL, cUL, CE			

Options

COM2 / DIO, includes:	COM2 RS-232/485 serial		
	4 discrete outputs, solid state or relay	Modbus RTU capability	
	2 discrete inputs (selectable active or passive)		
Programmable Logic Control (PLC) interfaces	4-20 mA Analog Output	Ethernet/IP™*	DeviceNet™
	PROFIBUS® DP	Modbus TCP	
	Allen-Bradley RIO™	ControlNet™ (24 VDC units only)*	
	CC-Link® (Division and Integer data formats only)		

* Class 1 Cyclic and Class 3 Discrete / Explicit messaging supported

IND331 with PTPN adapter plate

Accessories		
	Wall mounting bracket (for IND331 Harsh unit)	PTPN Terminal adapter plate for IND331 Panel unit
	Swivel mounting bracket (for IND331 Harsh unit)	2GB SD Memory Card

USA
Mettler-Toledo, LLC
1900 Polaris Parkway
Columbus, OH, 43240
Tel. (1) 800 523 5123

Canada
Mettler-Toledo, Inc.
2915 Argentia Road, Unit 6
Mississauga, Ontario, L5N 8G6
Tel. (1) 800 523 5123

www.mt.com

For more information