

Conveyor Scale Controller for reliable in-motion weighing



High speed dynamic weighing

controller provides weights and measures-approved weighing accuracy at conveyor speeds of up to 77 m/min (240 ft/min), allowing for use in high-volume transport and logistics application.



Data integration

allows for automatic integration of package-specific information such as bar code, RFID tag data, and dimensional data. Data communication to peripheral devices via serial, Ethernet and PLC interface is available.



Superior in-motion performance

The METTLER TOLEDO 9477 scale conveyor is an in-motion scale for weighing large packages such as boxes, cartons, cases, bags or sacks. The robust frame and conveyor construction withstands the impact of heavy packages, so the system is ideal for tough environments.



Exceptional performance even in tough applications

with features such as advanced filtering, IP69k protection, chemical-resistant display and bright vacuum fluorescent display that is easily readable in low light conditions.



IND560dyn Conveyor Scale Controller

The IND560dyn controller provides a robust and reliable interface to conveyor scales for in-motion weighing. Items can be weighed while crossing an analog load cell-based conveyor at speeds up to 100m/minute. Data from bar code scanners, RFID readers, or dimensioning equipment can be integrated with the IND560dyn to provide a complete transaction record. A target can be recalled and weights compared against target values to trigger an output or identify in the transaction record out of tolerance items. Optional Ethernet and PLC connectivity provides flexibility for interface to other control or data analysis equipment.

METTLER TOLEDO

Technical data

IND560dyn

Conveyor Scale Controller

Features and benefits

- High-speed A/D plus TraxDSP™ filtering achieves accurate weighments in the shortest possible time, even under adverse conditions with high vibration
- Flexible interface to peripheral data sources allows user to integrate bar code and dimensional data with package weight into the transaction record. Input data string can be parsed automatically, allowing user customization
- Multiple connectivity options allow communication of transaction data to a wide variety of Ethernet-enabled devices, and to communicate with automation equipment via DeviceNet™, A-B RIO or Profibus™ protocol
- Objects of analysis such as daily weighments, number of in-tolerance items weighed by product ID, error logging and tracking, can be recalled or exported to a PC-based application
- IND9D56 packaged system includes IND560dyn with power supply and I/O for photo-eye interface
- Optional LED status lights and rugged pushbuttons can be configured to provide operators with additional visual system status cues, minimizing confusion and increasing productivity
- 25-target ID memory with tolerance check allows user to program and monitor 3-zone toleranced ranges specific to each target ID. A discrete output can be configured for out-of-tolerance weighments, to trigger reject timers
- Bright, multi-line VFD display ensures easily readable scale data and status information, error messages, last package average weight, and setup menu
- Error logging is configurable, to provide flexible handling of scale alarms and errors
- Weights and Measures approvals permit use in legal-for-trade applications

Technical data

9477 Scale Conveyor

In-motion weighing of large packages

Construction	Powder-coated mild steel or stainless steel for washdown			
Line speed and rate*	30 - 240 fpm			
Conveyor belt materials	Seamless Habasit black for mild steel, USDA white for washdown			
Fixed speeds	30, 40, 50, 60, 70, 80, 90, 100, 120, 140, 150, 160, 180, 200, 220, 240 fpm			
Variable speeds	30 to 100, 80 to 160, 120 to 200, 150 to 240 fpm; up to 600 fpm (Mach II option)			
Photoeyes	Send/receive type, IP67			
Operating environment¹	14°F to 104°F (-10°C to 40°C), 10% to 95% humidity, non-condensing			
Power requirements²	230/3φ, 460/3φ	230/3φ, 460/3φ	575/3φ	575/3φ
Motor and drive³	0.4 HP IP65 motor with in-line reducer. Taper-lock timing belt drive		1/2 HPIP55 ³ motor with right angle reducer. Taper-lock timing belt drive	
Load cells	Four 5000 division, 50 kg load cells		Four 5000 division, 250 lb load cells	
Hazardous environment	Not available		Class I or II, Division I or II, Groups C, D, E, F and G	
Rate capability	Up to 100 ppm	Up to 80 ppm	Up to 60 ppm	Up to 50 ppm
Conveyor belt widths	12"	18"	24"	30"
Conveyor belt lengths⁴	21, 24, 30"	24, 30, 36"	36, 48, 60"	48, 60, 72"
Line height⁵	18 - 36, ±2"	18 - 40, ±2"	24 - 44", ±2"	24 - 44", ±2"
Nominal weighing capacities	40 kg	40 kg	100 kg	100 kg
Accuracy**	From ±10 g	From ±15 g	From ±30 g	From ±45 g
Pulley diameter	2.5"	2.5"	4"	4"

* Depends on the design and dimensions of the weighing belt used

** Depends on the weight, dimensions and transport of the product to be weighed

¹ Describes environment for a mild steel construction. Stainless steel construction is rated IP65, and suitable for clean-up with low pressure and mild detergent

² 575V option is special order

³ Motor for stainless steel construction is IP56

⁴ Conveyor length sizes are also available as non-weighing infeed and outfeed conveyors

⁵ Heights given are the standard range. For special lower or higher machines, consult factory

Standard Features

- Powder-coated mild steel construction
- Seamless Habasit black conveyor belt
- IP54 ingress protection
- Unique design makes belt replacement simple and easy

Options and Accessories

- Remote display
- Stainless steel washdown construction
- IP65 ingress protection
- Infeed and outfeed conveyors to match speed
- Heavy duty push-off rejector (requires compressed air supply, 60 to 115 psi)
- Special power requirements available upon request

IND9D56 Enclosure dimensions (L x W x D) 406.4 x 406.4 x 152.4 cm (16 x 16 x 6 in.)

Shipping weight 14 kg (30 lb)

Enclosure construction/ environmental protection CRS ANSI 61Gray, optional 304 stainless steel, certified IP54
Mounts to wall or a machine using integrated brackets

Display Vacuum Fluorescent 128 x 64 dot graphical; 21mm high weight display

Power Universal power supply, 87 to 264 VAC at 49 to 61Hz, 750 mA consumption maximum (IND560 terminal only)

Scale types Analog scale: 10 VDC excitation interfaces to 4 350Ω load cells, 2 or 3 mV/V

Keypad 5 programmable softkeys, 4 scale function keys, numeric keys, navigation keys

Photo-eye interface Interface provided via connection within IND560dyn terminal to two external photo-eyes

Package throughput Up to 130 ppm

Connectivity Standard: COM1 - RS-232/422/485. Optional: 10Base-T Ethernet TCP/IP port; COM2: RS-232; COM3: RS-232/422/485

I/O Four standard discrete inputs: entrance photo-eye, exit photo-eye, run permissive, silence alarm
Six standard discrete outputs: scale running, scale empty, fatal error, non-fatal error, weighment complete, reject output
Optional inputs: clear alarm, send weight data

Serial interface Outputs: METTLER-TOLEDO Continuous or Demand; continuous template using 1 of 5 configurable templates

PLC optional interface Allen-Bradley® Remote I/O, DeviceNet™, Profibus® L2 DP

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

Approvals cULus, CE, 3000d, NTEP CQC # 05-065



Quality certificate ISO9001
Environment certificate ISO14001
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Tailored Services

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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.

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For more information