

ZT DIGITAL LOAD CELL

Smart - Rugged - Accurate

BENEFITS

Smart diagnostics – The active alarm messaging feature monitors the system to identify a fault and provides a faster turnaround for service. With the added 'Ghosting' feature, the system can be kept up and running, even when one sensor fails (non-trade approved mode only).

Faster installation, simplified calibration – Each **ZT Digital Load Cell** is factory calibrated and supplied with ready-assembled load buttons resulting in quick and simple installation. The Amphenol LTW® X-Lok connectors make the interconnection of the **ZT Digital Load Cells** a faster, flexible and error-free operation.

Built to last – The thick hermetic stainless steel wall protects the internal elements while the two-stage TVS help to neutralize the effects of lightning. The industry leading data cables have a SST overbraid and dual-screen system for maximum abrasion resistance and EMI immunity.

Enhanced weighing applications – 6 million internal divisions and the smart communication protocol assure precision, reliability and system customization to meet any weighing application needs, including: multiscale, load balancing and anti-fraud measures.

Intelligent system management – The **ZT Digital Load Cell** are directly interconnected to a secure digital backbone network. This solution allows the Avery Weigh-Tronix ZM605/ZM615 Indicators to manage up to 32 cells over two separate networks without the need for a junction box or termination plug.

DESCRIPTION

The **ZT Digital Load Cell** is a high accuracy, hermetically sealed to IP68/69K canister cell, which connects to a smart network without the need for a junction box.

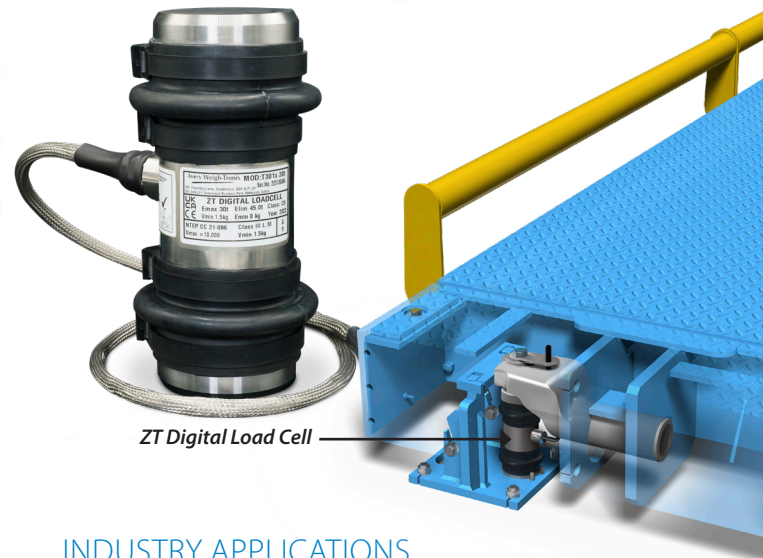
Each **ZT Digital Load Cell** is factory tested and calibrated to supply outstanding weighing performance even in the most extreme operating conditions.

AVAILABLE CAPACITY

- › 66,000 lbs

NTEP approved for accuracy class III L 10,000d
OIML R60 approved for accuracy class C6

Technical Specification



ZT Digital Load Cell

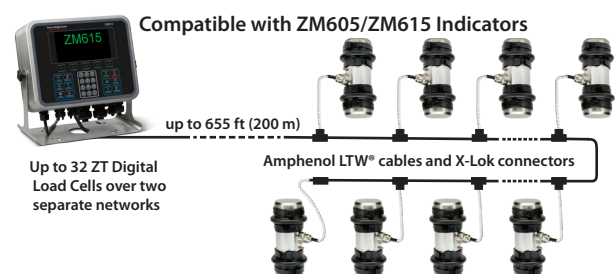
INDUSTRY APPLICATIONS

Due to its industry standard height and conversion kits, the **ZT Digital Load Cell** is used in a wide variety of heavy-capacity applications.

The **ZT Digital Load Cell** technology helps you to maximize performance and profitability while meeting the strictest legislative requirements.

SPECIAL FEATURES

- › IP68 designed cell
- › IP69K sealed cell-cable entry (certified)
- › Amphenol LTW® quick push-lock connections
- › Aircraft-quality alloy stainless steel construction
- › Factory calibrated and pre-linearized
- › Continuous self-diagnostics
- › No junction box or termination connector required
- › Integral lightning protection (Class 4 certified)
- › Anti-fraud digital bus protocol
- › Configurable for multiscale systems
- › Pre-assembled, anti-rotation load buttons



*Maximum length of the home run cable is subject to the number of cells connected

ZT DIGITAL LOAD CELL *Technical Specification*

SPECIFICATIONS

GENERAL

| | |
|-----------------------|--|
| Trade Name | ZT Digital Load Cell |
| Model Name | T301X |
| Load Cell Type | Column compression, digital weight processor |
| Rated Capacity (R.C.) | 66,000 lb |
| Sensitivity | 6,000,000 divisions (internal @ rated capacity) |
| Communication | Linear Bus Network - RS485 multi drop protocol with anti-fraud and self-diagnostic features |
| Communication Rate | 115.2K bps |
| System Update Rate | 50 Hz (automatically adjusted) |
| Asset Management | Up to 32 logically addressed and serial number traceable ZT Digital Load Cells. Two separate networks can each support maximum of 16 load cells. |

WEIGHING PERFORMANCE

| | |
|--|--|
| Temperature Range | <i>Compensated (NTEP/OIML): 14°F to 104°F / -10°C to +40 °C</i> <i>Operating: -40°F to +149°F / -40 °C to +65 °C</i> <i>Safe Storage: -58°F to +185°F / -50 °C to +85 °C</i> |
| Warm-Up Time | 15 minutes |
| Tilt Angle | Up to ±3° from axis of gravity, top and bottom rocker-column suspensions |
| Accuracy Class, nmax | NTEP Class III L, 10,000d / OIML R60, C6, 6000d |
| Non-Repeatability | <±50 ppm @ rated capacity |
| Zero Return (+30 min) | <±80 ppm @ rated capacity |
| Creep (10 s to 30 min) | <±120 ppm @ rated capacity |
| Temperature Effect (range 14°F to 104°F / -10°C to +40°C) | <i>On Zero Balance: <±15 ppm @ rated capacity/°C</i> <i>On Span: <±6 ppm @ rated capacity/°C</i> <i>Metrology Combined Error: <150 ppm @ rated capacity</i> |

DIAGNOSTICS

| | |
|----------------------|---|
| Load Cell | Communication status, overload counter and peak weight, temperature, cell live weight |
| Error Log | Scale over/under load, ZT Cell overload, Scale-ZT Cell communication status, Ghosting activation (if enabled) |
| Notification Systems | On-screen alerts and event logger, web and email (programmable) |
| Corrective Measures | Weighbridge Balance Check, Ghosting feature (for non-trade approved mode only) |

METROLOGICAL APPROVALS

| | |
|--------------------|---|
| Standard | NTEP Certificate 21-086 / OIML Certificate No. R60/2000-A-GB1-21.01 |
| Additional Marking | CH (Hermetic seal) |
| min Dead Load | 0 lb / 0 kg |

ELECTRICAL

| | |
|-------------------------------------|--|
| Supply Voltage | ±12 VDC, internally regulated |
| A/D Conversion | Four pairs of load-measuring gauges to a 24-bit sigma-delta ($\Sigma\Delta$) analog-to-digital modulator |
| EMC and Surge Immunity | Certified to IEC 61000-4-5, Level 4: for severe environments (test reports on file) |
| Lightning Protection | Integral (all lines), two-stage surge suppressors |
| Insulation R (strain gauge circuit) | ≥5000 MΩ at 50 VDC |
| Cell-Cable Entry | Sealed by Glass-to-Metal header, hermetic to IP69K with integral 3.2 ft (1m) long Amphenol LTW® polyurethane jacketed data cable with SST overbraiding: 0.26 in (6.7mm), 4 core+drain, pair twisted with dual metal screen system and X-Lok T-connector (included) |
| Connectors | Amphenol LTW® X-Lok connectors, IP68 (3.28 ft (1m) - 7 days tested. Conform to EIA364-09/21C/23C/20D: Durability, Insulation/Contact Resistance and withstanding voltage test |
| Cable, Cell to Cell | 13.1 ft or 29.5 ft (4m or 9m) long, extendable Amphenol LTW® polyurethane jacketed data cable with SST overbraiding: 0.26" (6.7mm), 4 core+drain, pair twisted with dual metal screen system and X-Lok connectors. |
| Cable, Home Run | 49.2 ft (15m) long, extendable Amphenol LTW® polyurethane jacketed data cable with SST overbraiding: 0.26" (6.7mm), 4 core+drain, pair twisted with dual metal screen system, X-Lok connector and stripped ends. |

MECHANICAL

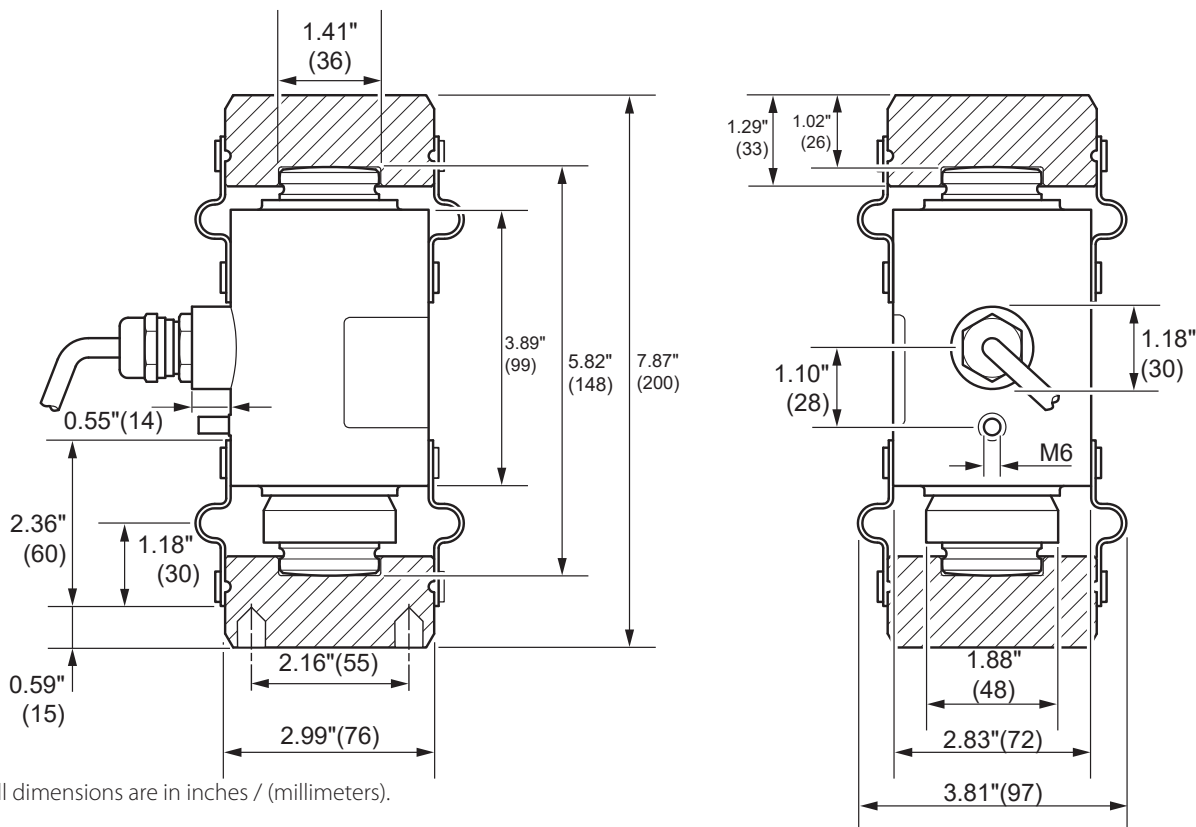
| | |
|--------------------------------|---|
| Material, Cell | Enclosure: 0.09" (2.35mm) thick, 304 2B finish stainless steel outer wall Spring Element: Aircraft quality, 15-5 and 17-4 PH stainless steel (magnetic) Load Buttons: EN24 high strength steel alloy, hardened and tempered |
| Type of Protection | Cell Casing: Hermetic (submersible) Connectors: Hermetic, flammability (UL94V-0), UV exposure (UL-f1) and salt spray corrosion (EIA364-26B) |
| IP Rating (IEC 60529) | Cell and Connectors: IP68, 3.2 ft (1m) - 7 days submersion (tested) Cell-Cable Entry: IP69K, hermetic seal (test reports on file) |
| Load Limit, Compression | Safe: 150% @ rated capacity Ultimate: 230% @ rated capacity Fatigue Life @ rated capacity: 1,000,000 cycles |
| Anti-Rotation Measures | External, pin locking system to secure the low-friction and grease-sealed load buttons Integral, double-camber load bearing surfaces with specially designed end radiuses Top and bottom rubber gaiter bellows as standard. |

PACKAGING

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| Shipping Weight | 12.1 lb / 5.5 kg Includes load buttons and Amphenol LTW® X-Lok T-connector |
| Packaging Dimension (H x W x L) | 9.84 in x 9.84 in x 7.48 in / 250 mm x 250 mm x 190 mm |

DIMENSIONS

ZT Digital Load Cell with pre-assembled load buttons and integral Amphenol LTW® data cable entry.
Amphenol LTW® X-Lok connectors not shown.



Avery Weigh-Tronix



www.averyweigh-tronix.com

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