

Avery Weigh-Tronix



High-capacity, legal-for-trade, IP69K sealed load cells, ideal for new and retrofit applications in extreme weighing environments.

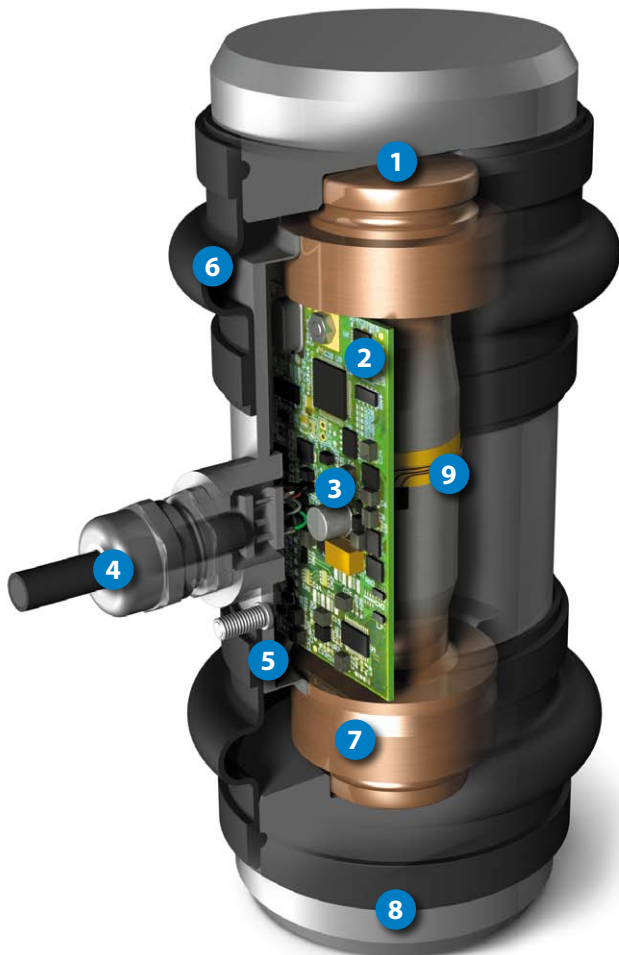
T300  
SERIES LOAD CELLS

Legal-for-trade weighing  
in extreme environments

# T300 Series

**Avery Weigh-Tronix**

T300 Series load cells are high-capacity, IP69K sealed cells which are ideal for new and retrofit applications. Suitable for use in extreme conditions such as lightning rich or monsoon areas, these load cells are available in both analogue and digital variants to offer precision weighing in a range of environments.



## Physical Features

### 1. Anti-rotation low friction load bearing surfaces

Unique double-camber load-bearing surfaces designed to improve point loading contact and accuracy and greatly reduce the cell rotation that can cause damage.

### 2. Lightning protection

Four specially designed surge arresters are mounted inside the load cell housing close to the cable entry, to help protect the load cell from high voltage surges. On the T301X, a second layer of defence comes from specially positioned transorbs that help to neutralise any dangerous voltage surges, offering additional protection, even in lightning rich areas.

### 3. Digital accuracy (T301X)

Digitising data within each load cell offers improved speed and accuracy, while internal diagnostics capabilities enable this digital load cell to be used in hard-to-reach sites, or areas with high electrical interference.

### 4. RS485 cabling (T301X)

Fitted with a 25 metre RS485 cable that has an electrically, mechanically and chemically tough polyurethane sheathed cable, sealed with a cable gland to IP69K for added protection. This allows the signal to travel up to 1km.

### 5. Robust case

The 2.5mm thick, stainless steel outer walls are designed to protect internal elements from accidental damage.

### 6. IP69K hermetically sealed housing

This hermetically sealed cell is IP69K rated, guaranteeing no water ingress even when pressure washed to 100 bar. Ideal for use in food and quarry applications, as well as monsoon regions where flooding is common.

### 7. Custom alloy steel construction

The weighing element itself is manufactured from a solid piece of hardened stainless steel, aircraft-quality alloy, to guarantee accurate performance.

### 8. Built to last

Fully gaitered and pre-greased top and bottom load buttons help reduce wear from dust and moisture, while guaranteeing accuracy and high performance at all times.

### 9. Unaffected by off-centre loads

The T301X uses eight load-measuring gauges rather than the conventional four to guarantee consistently high accuracy, even when the load cell is operating at 3 degrees off centre.



## Industry Applications and Calibration

T300 Series load cells are used in a wide variety of applications around the world, from weighbridge and rail through to bin, hopper and tank weighing.

## Compact Design

Our new T301X and highly successful T302X have been developed to work within the industry standard height of 200mm, compared to the previous generation of T301 (right). This new compact design allows more service and installation options than ever before.



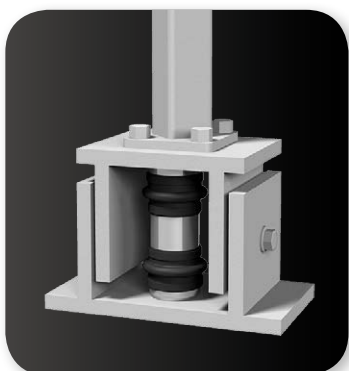
## Harsh Environments

Each load cell is IP69K rated, with pre-greased top and bottom load cell buttons that are fully gaitered to keep out unwanted dust and moisture.

T300 Series load cells operate in some of the harshest environments on the planet, with a working temperature range of -50°C to + 60°C.

## External Tank Mount Applications

T300 Series load cells are ideal for indoor / outdoor vessel weighing applications. When used in conjunction with structurally approved vertical and horizontal restraints, these load cells will provide accurate weighing results in a wide range of industrial applications whilst withstanding harsh



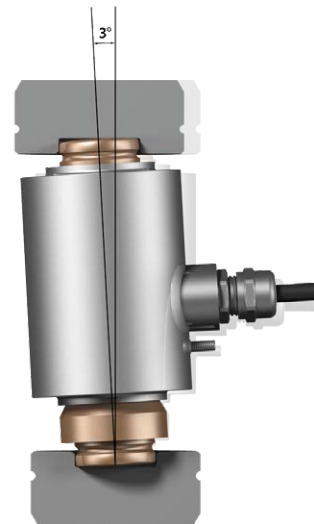
environmental conditions.

The digital T301X is digital and pre-linearized, making installation, cornering and calibration a fast and simple process without the need for large numbers of calibration weights. Simply by applying a known weight that can be recognised by the load cell, each cell can quickly be electronically adjusted to supply fast and accurate readings.

## Unparalleled Precision

Both of these industry leading load cells guarantee accuracy even when working at 3 degree angle from vertical, making them perfect for less-than-ideal installation conditions. When installed to manufacturer's specifications, the cell design eliminates load cell rotation, removing the need for any outside anti-rotation restraints.

Unlike conventional analogue load cells, which rely on external wiring, junction boxes and A to D circuitry, the digital T301X is enclosed in a hermetically sealed casing. This, added to the fact that the signal is digitized as close to the gauge area as possible, offers additional protection from the unwanted electrical interference that can affect analogue load cells. Each individual T301X is fine-tuned and factory calibrated to guarantee that performance is well within the 5000d R60 OIML legal for trade window.



## Quality Assured

All Avery Weigh-Tronix T300 Series load cells are manufactured using the very latest state-of-the-art load cell manufacturing and testing equipment. Built and tested in a company facility with ISO9001 certification, strict compliance to ISO procedures ensures accuracy and reliability at all times.

Additionally, T301X load cells are pre-calibrated prior to installation, resulting in quick and simple load cell replacement with minimum down time. All of these factors combine to make the T301X an ideal choice for hard to reach locations like isolated quarry pits or tropical plantations.



## Lightning Protection

The T300 Series load cells were designed with the goal of being the most lightning resistant cells on the market. Four large surge arrestors and trans-orbs are internally mounted as close to each gauge as possible, to maximise protection from lightning strikes.

## Hazardous Applications

An ATEX version of the T302X load cell is available for use in dust and hazardous gas areas, when attached to other Avery Weigh-Tronix ATEX instrumentation. There is currently no ATEX T301X.

## Specifications

	<b>T302X</b>	<b>T301X</b>
<b>Capacities</b>	22.5 tonnes 45 tonnes	30 tonnes 45 tonnes
<b>Cable Lengths</b>	Available with either 25 metre or 40 metre of cable. 40 metre cable on hazardous area version.	The T301X includes a 25 metre cable.
<b>Accuracy</b>	5000d OIML OIML Certificate No R60/2000-GB1-09.10	C5 OIML OIML Certificate No. R60/2000 - GB 1-11.05
<b>Construction</b>	Fully stainless steel construction	Fully stainless steel construction
<b>Resistance to Dirt &amp; Moisture</b>	Designed to exceed IP69K	Designed to exceed IP69K
<b>Operating Temperature Range</b>	-50° C to +60° C	-50° C to +60° C
<b>Calibrated Temperature Range</b>	-10° C to +40° C	-10° C to +40° C
<b>ATEX Classification</b>	Gas: Ex ia IIC T6 Ga -10° C ≤Ta≤ +50° C Dust: Ex ia IIIC T85° C Da Category: 1GD Temp +50° C Dual Certification: Dual ATEX & IECEx approval for international markets.	Not available
<b>Warranty</b>	2 years	2 years

### Avery Weigh-Tronix - UK

Foundry Lane, Smethwick,  
West Midlands B66 2LP UK  
info@awtxglobal.com  
Phone: +44 (0) 8453 66 77 88  
Fax: +44 (0) 121 224 8183

### Avery Weigh-Tronix - USA

1000 Armstrong Drive,  
Fairmont, MN 56031-1439 USA  
usinfo@awtxglobal.com  
Toll-Free: (800) 533-0456  
Phone: (507) 238-4461

## Avery Weigh-Tronix

Please call us or visit [www.averyweigh-tronix.com](http://www.averyweigh-tronix.com)



© Avery Weigh-Tronix group of companies 2012. All rights reserved. Avery Weigh-Tronix is a registered trade mark of the Avery Weigh-Tronix group of companies. This publication is issued to provide outline information only which, unless agreed by an Avery Weigh-Tronix group company in writing, may not be regarded as a representation relating to the products or services concerned. This publication was correct at the time of going to print however, Avery Weigh-Tronix reserves the right to alter without notice the specification, design, price or conditions of supply of any product or service at any time.