

# iLoad TR Digital USB<sup>™</sup> Integrated Load Cell



The iLoad TR Series load cell based on our patented capacitive sensing technology is designed for applications requiring reduced sensitivity to off-center loading. These load cells offer direct measurement of static loads via the USB port of a PC. No need for signal conditioners, data acquisition systems or special software. Just connect and start measuring!

## **Alternative Configurations**







With Inline Adapter (TX-300TA)

With Rod End (RE-325)

and force measurements.

**Overview** 

With Tension Adapter (TX-300TA) & Rod Ends (RE-325)

The iLoad TR Digital Series of load cells provide unprecedented integration of

sensing and measurement electronics to offer Plug and Sense™ simplicity for load

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## **Highlights**

#### Capacitive Load Cell Technology

- Digital Integrated Electronics
- Standard USB output
- Power supplied via USB port
- \* Integrated power conditioning
- Stored calibration

#### **Rugged Construction**

- \* Compact design with low profile
- Aluminum or Stainless
   Steel construction
- Mechanically robust
- Weather-resistant packaging available.

#### **Easy Attachments**

 Convenient, robust mounting on top and bottom of sensor

### **Ordering Information**

Multiple Load Compression or Te	Iultiple Load Cell Capacities ompression or Tension Load Cells					
iLoad TR Digital	Part No.	Analog				
2 pounds	TUF-002-100-A	TAF-002-100-A				
5 pounds	TUF-005-100-A	TAF-005-100-A				
10 pounds	TUF-010-050-A	TAF-010-050-A				
50 pounds	TUF-050-025-A	TAF-050-025-A				
100 pounds	TUF-100-025-S	TAF-100-025-S				

\*Analog option available via HX-100 or as pigtail. Please Specify



Simply connect the digital load cell to a PC via the USB port. The digital load cell appears on the PC as a virtual COM port. Using a standard terminal emulator, send commands to the sensor to directly display sensor outputs in pounds as ASCII text. You can query loads one reading at a time or get a continuous stream of readings. Alternatively, further simplify load and force measurements using our application software (LoadVUE or LoadVUE Lite). You can easily get load data into your custom application using our simple ASCII command set with real load information in ASCII format.

Additional Configurations
Inventory Management Scales
Rack & Louvre Scales













Accuracy Specifications At Room Temperature ~25°C

Accuracy $\cdot$ with tare (% of FS)	2 lb.	5 lb.	10 lb.	50 lb.	100 lb.	
Non-linearity	± 1%	± 1%	± 0.5%	± 0.25%	± 0.25%	
Hysteresis	± 1%	± 1%	± 0.5%	± 0.25%	± 0.25%	
Non-repeatability	± 1%	± 1%	± 0.5%	± 0.25%	± 0.25%	

## **Load Cell Specifications**

Off Center Loading	± 1% or better @ 0.625 in. from center
Data Update Rate	150 Hz (500 Hz available)
Safe Overload	to 150% of capacity
Deflection	0.003-in typical at rated capacity
Sensor Size	3-in. OD, 1.2-in thick top-to-bottom
Input Power	Input power from USB Digital Output - USB 2.0 (5V at 60mA)
Mating Cable	USB 5-pin mini-B to male USB-A 6' long included Optional 10' cable available Optional 16' active extender cable available (UX-100)
Creep, in 20 min	± 0.03% of full scale
Operating Temperature Range	10°C to 40°C, non-condensing
Temperature Effect on Span	up to ±0.05 % full scale/°C (from calibration temperature)
Mating Cable	USB 5-pin mini-B to male USB-A 6' long included Optional 10' cable available Optional 16' active extender cable available (UX-100)

## **Suggested Mounting**

B-C Ø2.760

3X #4-40 UNC-2B

0.22



Optional analog 0.5V-4.5V DC output can be obtained between pins 4 and 5 using HX-100 breakout board.

The load cell is circular with a female threaded mounted surface at the top of the load cell. The flat bottom surface has multiple stepped areas with tapped mounting holes. Mount the load cells on a flat surface and apply loads perpendicular to the sensor body. Avoid side loads and twisting loads. Use under steady temperature conditions for best results.

Certifications

CE FC TROHS

## **Compatible Accessories**



TX-300TA Inline Adaptor BE-325 Rod End

FP-325 Foot Pedal

Caster Wheels

EB-325

Eye Bolt



Load Button

IB-325



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LF-325 Leveling Foot

3X 120.0°