

iLoad Pro Digital USB™ INTEGRATED LOAD CELL



“ THE ILOAD PRO DIGITAL USB 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! THE ILOAD PRO SERIES OFFERS GREATER RUGGEDNESS, BETTER MOUNTING AND CABLE STRAIN RELIEF FOR MORE DEMANDING APPLICATIONS. ”

Alternative Configurations



With Inline Adapter (TX-325)



With Inline Adapter (TX-325) & Rod Ends (RE-325)



With Load Button (LB-325)

Highlights

Capacitive Load Cell Technology

- Plug and Sense Simplicity
- Digital Integrated Electronics
- Standard USB output
- Power supplied via USB port
- Integrated power conditioning
- Stored calibration

Rugged Construction

- Compact design with low profile
- Stainless steel construction
- Mechanically robust
- Weather resistant packaging available

Easy Attachments

- Convenient mounting on top and bottom of sensor
- Self balancing multiple point support on base

Ordering Information

Multiple Load Cell Capacities COMPRESSION OR TENSION LOAD CELLS	
iLoad Digital	Part No.
50 pounds	PUF-050-015-S
100 pounds	PUF-100-015-S
250 pounds	PUF-250-015-S
500 pounds	PUF-500-015-S
1,000 pounds	PUF-01K-025-S
2,500 pounds	PUF-2HK-025-S
5,000 pounds	PUF-05K-050-S
10,000 pounds	PUF-010-050-S

Overview

Loadstar's iLoad Pro Digital USB Series provides unprecedented integration of sensing and measurement electronics to provide Plug and Sense™ simplicity for load and force measurements.

Here's How It Works

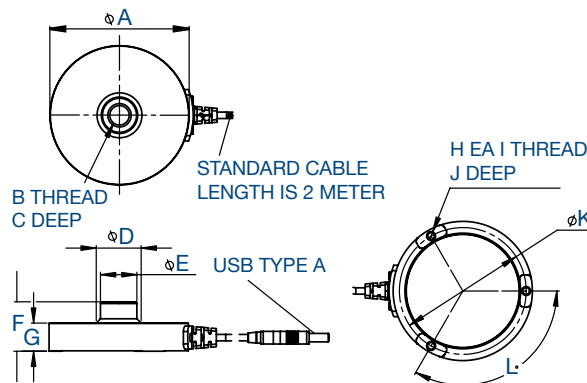


Simply connect the digital load cell to a PC via the USB port. The digital load cell appears on the PC as a virtual COM port. Using a standard terminal emulator, send commands to the sensor to directly display sensor outputs in pounds as ASCII text. You can query loads one reading at a time or get a 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.



Dimensions

Capacity	lb/inches							
	50 lb.	100 lb.	250 lb.	500 lb.	1,000 lb.	2,500 lb.	5,000 lb.	10,000 lb.
A	3.25 in.							4 in.
B	#1/2-20 UNF-2B							#7/8-14 UNF-2B
C	0.4 in.							0.75 in.
D	0.89 in.	0.94 in.	0.97 in.	1.05 in.	1.25 in.	1.25 in.	1.69 in.	1.57 in.
E	0.85 in.	0.85 in.	0.85 in.	0.85 in.	0.85 in.	0.85 in.	1.25 in.	1.25 in.
F	1.16 in.	1.16 in.	1.16 in.	1.16 in.	1.2 in.	1.2 in.	1.72 in.	1.72 in.
G	0.66 in.	0.66 in.	0.66 in.	0.66 in.	0.7 in.	0.7 in.	0.90 in.	0.90 in.
H	3							6
I	#10-32 UNF-2B							#1/4-20 UNC-2B
J	0.4 in.							0.5 in.
K	2.96 in.							3.44 in.
L	120°							60°



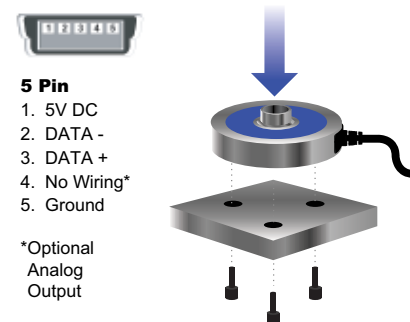
Accuracy Specifications AT ROOM TEMPERATURE ~25°C

Accuracy • WITH TARE (% OF FS)	50, 100, 250, 500 lb.	1,000, 2,500 lb.	5,000 lb.	10,000 lb.
Non-linearity	± 0.15%	± 0.25%	± 0.50%	± 1%
Hysteresis	± 0.15%	± 0.25%	± 0.50%	± 1%
Non-repeatability	± 0.15%	± 0.25%	± 0.50%	± 1%

Load Cell Specifications

Data Update Rate	150 Hz (500 Hz available)
Safe Overload	to 150% of capacity
Deflection	0.003-in. typical at rated capacity
Sensor Size	3.25 to 4-in. OD, 1.15 to 1.72-in thick top-to-bottom
Input Power	Input power from USB Digital Output - USB 2.0 (5V at 60mA)
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



5 Pin

1. 5V DC
2. DATA -
3. DATA +
4. No Wiring*
5. Ground

*Optional Analog Output

The load cell is circular with a female threaded mounted surface at the top of the load cell. The flat bottom surface has three slightly stepped areas 120° apart with tapped mounting holes. Mount the load cells on a flat surface and apply loads perpendicular to the sensor body. Off-center or laterally-applied loads will reduce accuracy. Avoid side loads and twisting loads. Use under steady temperature conditions for best results.

Certifications



Compatible Accessories

Digital Interfaces							Software
							LV-400 page 47
DS-3000U Display & Controller (see page 21)	HX-400 Wired USB Hub (see page 23)	HX-700 Wired USB Hub (see page 24)	WX-400 Wireless USB Hub (see page 25)	EX-500 Ethernet Hub (see page 26)	SC-1200 Sensor Concentrator (see page 22)	UX-100 USB Extender (see page 27)	LV-4000 page 47
Hardware Accessories							LV-4000R page 47
							LV-4000HS page 47
TX-325/400 Inline Adaptors (see page 54/55)	RE-325/400 Rod Ends (see page 52)	FP-325 Foot Pedal (see page 51)	Caster Wheels (see page 56)	EB-325 Eye Bolt (see page 51)	LB-325/400 Load Button (see page 55)	LF-325 Leveling Foot (see page 51)	LV-4000CG page 47
							LV-7000 page 47