

iLoad Mini Pro™ Stainless Steel Miniature Load Cell



“ The iLoad Mini Pro Series load cell is designed for applications where size is a major constraint. The iLoad Mini Pro is only 2.0" in diameter and outputs a 5V TTL square wave whose frequency is proportional to applied loads. ”

Overview

Loadstar's iLoad Mini Pro load cells are similar to the iLoad Mini load cells in almost every respect, but are meant for higher capacity applications. They come in the dome version for compression force measurements and in the threaded stud version for tension force measurements and for universal (compression and tension force) measurements.

The sensor accepts a 5V DC input and outputs a TTL square wave whose frequency is proportional to the applied load. Most data acquisition systems, microprocessors and microcontrollers have the capability to measure the frequency of the signal.

Highlights

Capacitive Load Cell Technology

- ★ Simplifies load measurements
- ★ Standard 5V DC input
- ★ 5V TTL frequency output
- ★ Temperature compensated

Integrated Load Cell Electronics

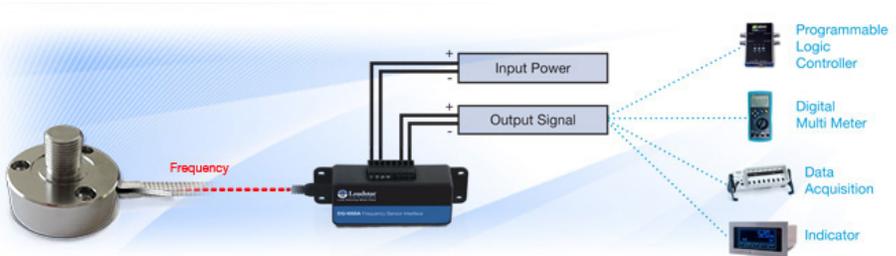
- ★ Large signal to noise ratio
- ★ Saves space & reduces clutter

Rugged & Reliable

- ★ Stainless Steel Construction
- ★ Mechanically robust design
- ★ Weather-resistant packaging available.
- ★ Industrial strength strain relief



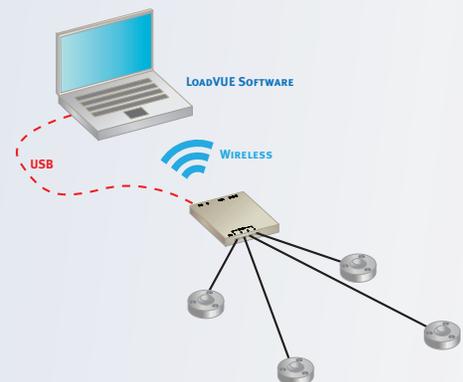
If one wants an analog (0.5 V—4.5V or 2mV/V) or digital USB output from the iLoad Mini the DQ-1000A, DQ1000U or DQ-4000U are available options.

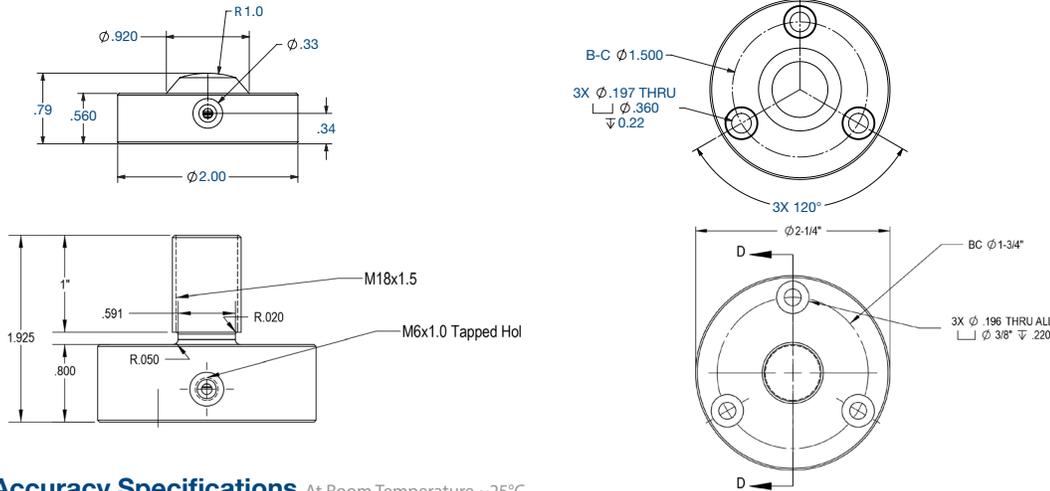


Multiple Load Cell Capacities	
Domed Top	Part No.
500 pounds	MFD-500-100-S
1,000 pounds	MFD-01K-100-S
2,500 pounds	MFD-2HK-100-S
5,000 pounds	MFD-05K-100-S
10,000 pounds	MFD-10K-100-S
Threaded Stud	Part No.
500 pounds	MFM-500-100-S
1,000 pounds	MFM-01K-100-S
2,500 pounds	MFM-2HK-100-S
5,000 pounds	MFM-05K-100-S
10,000 pounds	MFM-10K-100-S

iLoad Mini Pro™ Wired or Wireless Kit

Our new iLoad Mini Pro Kit includes four iLoad Mini Pro load cells, one DQ-4000U and our LV-4000 software. Wireless connectivity is also available as an option.



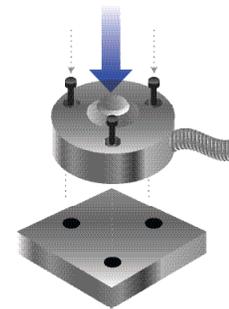


Accuracy Specifications At Room Temperature ~25°C

Accuracy · with tare (% of FS)	
Non-linearity	± 1%
Hysteresis	± 1%
Non-repeatability	± 1%

Data Update Rate	150 Hz (500 Hz available)
Safe Overload	to 150% of capacity
Deflection	0.002-in typical at rated capacity
Sensor Size	2.0 OD, for height see table above
Input Power	Regulate 5V at 60 mA
Output	5V TTL variable frequency signal Calibration parameters provided by Loadstar
Connections	Integrated 6 ft. cable with pigtail for terminal attachment or 5 pin male USB mini-B Connector
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)

Suggested Use



The load cell is circular with a dome on top. It has three counterbore holes with Ø 0.197 x Ø 0.360 inch spaced 120° apart for three #10-32 socket head cap screws. 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



DQ-1000U/DQ-1000A DQ-4000 DS-4000

Applicable Software · w/DQ-1000U, DQ-4000 or DS-4000			
LV-100	see page 127	LV-4000R	see page 128
LV-400	see page 128	LV-4000HS	see page 128
LV-1000	see page 127	LV-4000CG	see page 129
LV-4000	see page 128	SensorVUE	see page 128

Digital Interfaces · requires dq-1000u or DQ-4000 to obtain USB Signal



DS-3000U Display & Controller HX-400 Wired USB Hub HX-700 Wired USB Hub WX-400 Wireless USB Hub EX-500 Ethernet Hub SC-1200 Sensor Concentrator UX-100 USB Extender