SensorData Technologies, Inc.

Fatigue Rated Hydraulic Actuator Load Cell Model F643



- *Fully fatigue rated*
- *Tension & compression operation*
- *4.25” overall height & 1.5” overall diameter*
- *3/4-16 UNF-2A & 3/4-16 UNF-2B threads*
- *SAE 4340 alloy steel construction with satin nickel finish*
- *Supplied with mating connector*

The F643 is fully fatigue rated and designed to measure in-line axial loads. Its sensing element has proved, in actual tests, to be highly resistant to the effects of bending and off-center loading. The F643 is mechanically interchangeable with competitors’ products and is compatible with AC carrier and DC strain gage signal conditioning electronics. Interconnecting cable assemblies are available as an option. SensorData will provide in-house calibration of the F643 with customer-supplied electronics for a fee.

Specifications

(Subject to change without notice)

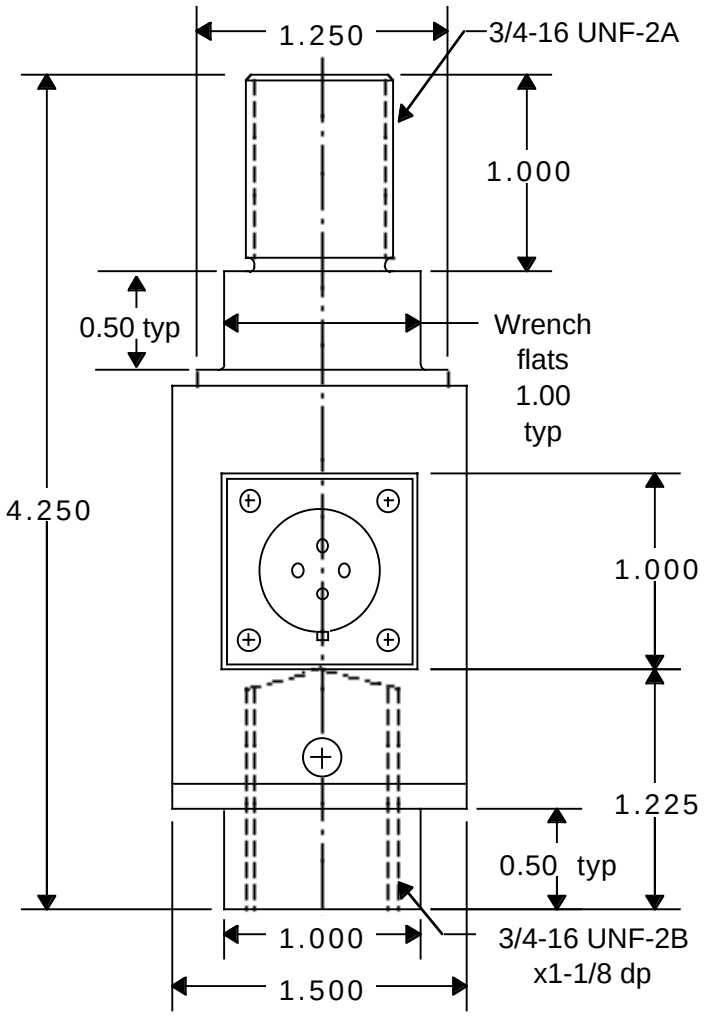
Rated Capacity	500, 1K, 2K, 3K, 5K lbs
Nonlinearly	0.25% of rated output
Hysteresis	0.15% of rated output
Nonrepeatability	0.05% of rated output
Rated Output, typical	2 mV/V (500 lb, 1 mV/V)
Zero Balance	+/-1% of rated output
Temperature Range, operating	-65 to +200 F
Temperature Range, compensated	+70 to +170 F
Temperature Effect on Output	0.002% of load/F
Temperature Effect on Zero	0.002% of rated output/F
Input Impedance, minimum	380 ohms
Output Impedance	350 +/-3.5 ohms
Excitation Voltage, typical	10 VDC or VAC rms
Excitation Voltage, maximum [1]	20 VDC or VAC rms
Insulation Resistance	>5000 megohms at 50 VDC
Maximum Load, safe [2]	150% of rated capacity
Maximum Load, ultimate [3]	300% of rated capacity
Deflection at Rated Capacity, typical	0.002 in
Fatigue Rating, full fatigue tension to full fatigue compression	10^8 cycles
Number of Bridges	1
Weight	1.2 lbs
Construction	SAE 4340 alloy steel with satin nickel finish

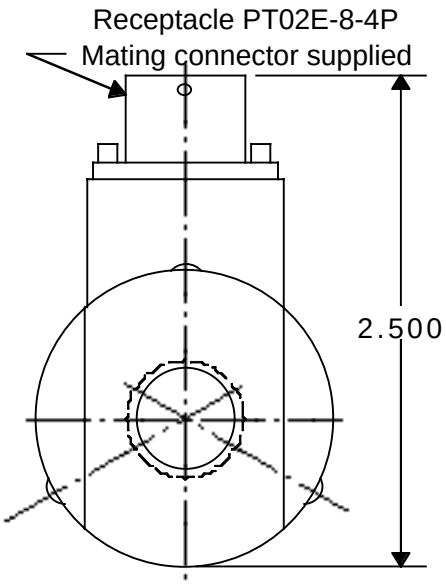
[1] Temperature gradients caused by higher excitation voltages may effect performance.
[2] With load centered, maximum load that can be applied without producing a permanent shift in performance characteristics.
[3] With load centered, maximum load that can be applied without physical damage.

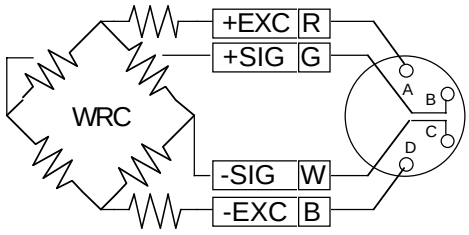
AGT Absolute Gauge Technologies™

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PT02E-8-4P

ORDERING INFORMATION

F643-107-Capacity	Standard supplied with PT02E-8-4P receptacle and mating connector.
Cable Assembly	Optional; 10 ft, color coded, shielded, mating connector sensor end, customer supplied connector instrument end.
Cable Assembly	Optional; 10 ft, color coded, shielded, mating connector sensor end, leads stripped and tinned instrument end.

IMPORTANT NOTICE

Dimensions above are in inches unless otherwise noted. Manufacturer not responsible for any modification to product, fixtures, or accessories made by user or third party. User should request certified drawings before designing mountings or fixtures. Manufacturer reserves right to modify or change design, dimensions, specifications, and features of this product without prior written notice. Changes to NOTICE must be in writing and accepted by manufacturer.

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