SensorData Technologies, Inc.

Fatigue Rated Hydraulic Actuator Universal Load Cell Models F300, F301, F302

- *Fully fatigue rated*
- *Compact design*
- *Capacities from 5K through 100K*
- *Deflection less than 0.002 inch*
- *SAE 4340 alloy steel construction with satin nickel finish*
- *Supplied with mating connector*

The F300, F301, and F302 were designed for direct in-line connection to hydraulic actuator rod ends and for use in airframe test fixtures and material testing machines. The F300, F301, and F302 feature fatigue rating, high stiffness, small diameter, and resistance to the negative effects of extraneous forces. Integral receptacle protection enhances its ruggedized construction by preventing accidental damage during setup or dismantling. The F300, F301, and F302 can be used 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 F300, F301, and F302 with customer-supplied electronics for a fee.

Specifications

(Subject to change without notice)

Rated Fatigue Capacity	5K, 10K, 20K (F300), 20K, 25K (F300-110), 50K, 75K (F301), 100K (F302) lbs
Nonlinearity	0.15% of rated output
Hysteresis	0.15% of rated output
Nonrepeatability	0.05% of rated output
Rated Output, typical	2 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	750 ohms
Output Impedance	700 +/-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 capacity tension to full fatigue capacity compression load	10^8 cycles
Number of Bridges	1, 2nd bridge optional
Weight	Refer to table next page
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.

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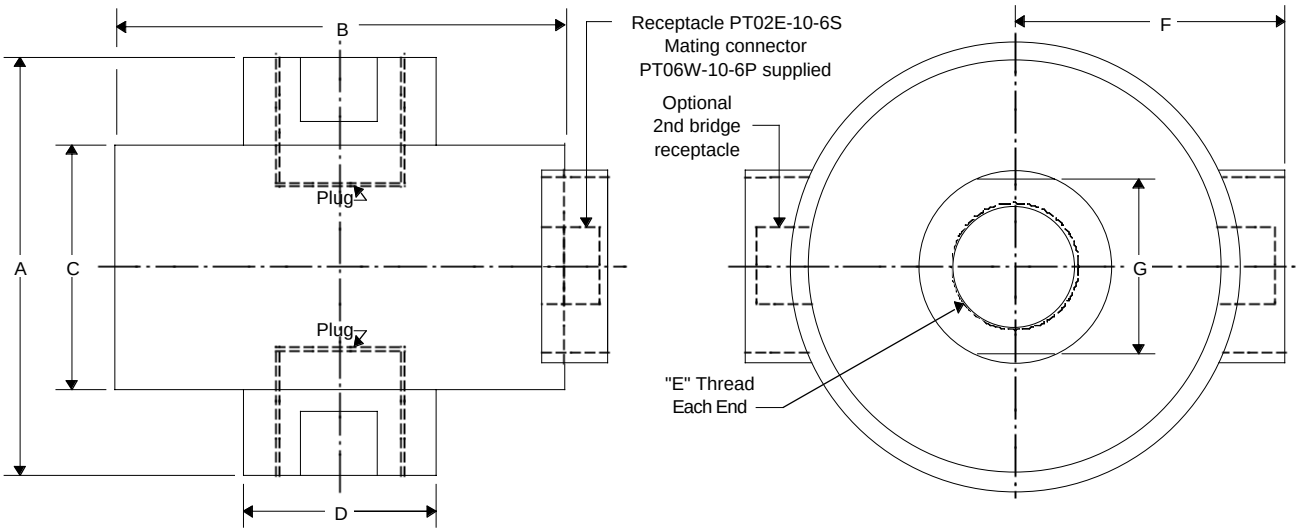
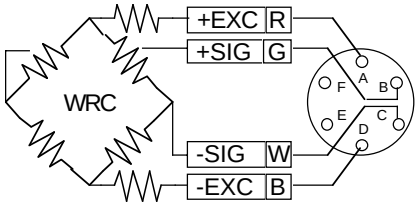


Model	A	B	C	D	Thread - E	F	Wrench Flat - G	Weight - lb
F300-STD	3.250	3.50	1.900	1.500	1 - 14 UNF x 1.150 dp	2.25	1.375	≤ 5
F300-110	4.000	3.50	2.400	1.750	1.25 - 12 UNF x 1.250 dp	2.25	1.600	≤ 6
F301-STD	6.000	5.50	3.00	3.375	1.75 - 12 UNF x 1.750 dp	3.25	3.00	≤ 23
F302-STD	6.000	5.50	3.00	3.375	2 - 12 UNF x 1.750 dp	3.25	3.00	≤ 23



PT02E-10-6S

ORDERING INFORMATION

F300-STD-Capacity	Standard, capacity 5K, 10K, and 20K lb, and supplied with PT02E-10-6S receptacle and PT06W-10-6P mating connector.
F300-110-Capacity	Standard, capacity 20K and 25K lb, and supplied with PT02E-10-6S receptacle and PT06W-10-6P mating connector.
F301-STD-Capacity	Standard, capacity 50K and 75K lb, and supplied with PT02E-10-6S receptacle and PT06W-10-6P mating connector.
F302-STD-Capacity	Standard, capacity 100K, and supplied with PT02E-10-6S receptacle and PT06W-10-6P mating connector.
F300-STD-Capacity-DB	Same as F300-STD-Capacity except supplied with dual bridge option.
F300-110-Capacity-DB	Same as F300-110-Capacity except supplied with dual bridge option.
F301-STD-Capacity-DB	Same as F301-STD-Capacity except supplied with dual bridge option.
F302-STD-Capacity-DB	Same as F302-STD-Capacity except supplied with dual bridge option.
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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