



PF

PRECISION LOW PROFILE LOAD CELL

applications

- Laboratory Measurements
- Materials Testing
- Dynamic Measurements
- Process Control
- Weighing

features

- 100 to 5000 lbs. Capacities
- Compact Low Profile Design
- 500% Overload Capability
- Stainless Steel Construction
- 0.1% Accuracy Class
- High Frequency Response
- IP66/IP67 Environmental Sealing
- Low Sensitivity to Side Load and Off-Center Loading
- Two Year Warranty

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Application Tip:

The PF Series is designed for applications requiring excellent performance in a compact, rugged low profile load cell.

The PF Series is a high performance, low profile, bonded foil strain gage load cell constructed of electro-polished stainless steel (PF3). To achieve sealing ratings of IP66 and IP67 (thoroughly sealed against airborne particles, strong jets of water and the effects of immersion up to 1 meter.) proprietary, multi-redundant environmental barriers are incorporated, including VITON® Fluorelastomer O-ring seals to protect sensitive areas. The PF Series is designed to accurately measure compression forces in capacities ranging from 100 lbs. to 5,000 lbs. The integrated sensing diaphragm and precision ground base combine to produce excellent performance, superior environmental integrity and reduced sensitivity to off-center and side loading effects. Integral overload protection permits compression loads of 500% of rated capacity to be applied without adverse effects. Side loads of 50% of rated capacity can be tolerated, simultaneously. The low deflection of the PF Series yields a high dynamic response for applications in structural analysis and materials testing. The durable polyurethane jacketed cable, features a braided, tinned-copper shield for mechanical protection and to minimize the effects of common industrial electrical noise, e.g. RFI and EMI. The attributes of the PF Series make it an ideal choice for measurements in the laboratory, manufacturing and process applications, and for general force measurements and weighing situations where an extraordinarily rugged, low profile precision load cell solution is needed.

VITON® is a registered trademark of E. I. DuPont Co.

Innovative Measurement Solutions





performance

Rated capacities ⁽¹⁾ (lbs.)	100, 250, 500, 1K, 2K, 3K, 4K, & 5K
Rated output (FSO)	2 mV/V \pm 0.25%
Combined error	= 0.25 % FSO
Non-linearity	= 0.10 % FSO
Hysteresis	= 0.10 % FSO
Non-repeatability	= 0.05 % FSO
Creep (30 minutes)	= 0.03 % of load
Zero balance	= 10 % FSO
Zero Return (30 minutes)	Better than 0.03 % FSO

⁽¹⁾ ("K" = thousand)

mechanical

Material:	17-4PH Stainless steel
Finish:	Electro-polished
Safe overload	Compression: 500% FSO Tension: N/A
Ultimate overload	Side load: 50% FSO Compression: 1000% FSO Tension: N/A
Deflection	Side load: 100% FSO
Weight	0.005" (.13mm) nominal 1 lbs.

electrical

Input impedance	400 ohms (nominal)
Output impedance	350 ohms (nominal)
Insulation resistance	>5000 Megohms @ 50VDC
Excitation Voltage	10 V AC/DC (15 V maximum)
Cable Color code:	+ Excitation (red) - Excitation (black) + Output (green) - Output (white) Shield (bare)
Cable type	4-conductor, 22 AWG, tin-copper braided shield, polyurethane jacket
Cable termination	Finished conductors

environmental

Temperature, operating	-20 to +180 °F (-29 to +82°)
Temperature, compensated	+40 to +140 °F (-10 to +60°C)
Temperature effects:	Zero < 0.002% FSO/°F < 0.0036% FSO/°C Output < 0.002% of Rdg./°F < 0.0036% Rdg./°C
Sealing	IP66/IP67; redundant

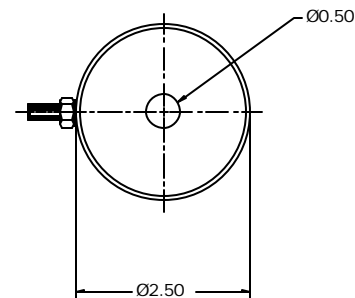
options

Shunt calibration, Special cable lengths, High Temperature operation, MS connectors and Control Instrumentation.

dimensions



Bottom View Showing Mounting Stud



4-COND, 22 GA SHIELDED, BLK POLYURETHANE CABLE, 10 FT LG.

