



PG

PRECISION LOW PROFILE LOAD CELL

applications

- Compression Measurements
- Laboratory Test & Measurement
- Materials Testing Machines
- Dynamic Measurements
- Fatigue Rated To 10^7 Cycles

features

- 1,000 to 500,000 lbs. Capacities
- Compact Low Profile Design
- High Output - 4.0 mV/V
- 0.1 Accuracy Class
- Shear Web Design
- High Frequency Response
- IP67 Environmental Sealing
- Stainless Steel Construction
- Dual Bridge Versions Available
- Two Year Warranty

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Application Tip: *The Model PG robust, versatile design is ideal for precision dynamic compression test and measurement applications.*

The PG Series is a high performance, low profile, bonded foil strain gage load cell constructed of heat-treated stainless steel. The PG is designed to accurately measure compression forces in capacities ranging from 1,000 lbs. to 500,000 lbs. The multiple shear web sensing design and precision ground base produce excellent performance, a very low profile, and reduced sensitivity to eccentric and side loading effects. The high output and low deflection of the PG combine to yield a high dynamic response and superior output resolution for applications in structural analysis and materials testing. A fatigue rating of 10,000,000 cycles further defines the PG Series as an outstanding and versatile test and measurement solution. Dual bridge versions are available for redundancy and/or for discrete, simultaneous measurements. To achieve a sealing rating of IP67 (thoroughly sealed against airborne particles and the effects of immersion up to 1 meter.) proprietary, multi-redundant environmental barriers are incorporated, including sealed stainless steel covers to protect the strain gage area. Optional cable assemblies are available with mating connectors, including durable polyurethane or Teflon® jacketed cables that feature braided, tinned-copper shielding for mechanical protection and to minimize the effects of common industrial electrical noise, e.g. RFI and EMI. Other options include shunt calibration. The attributes of the PG make it ideal for measurements in the laboratory, structures testing, materials testing, and for general force measurements where a compact, low profile precision load cell solution is needed.

Innovative Measurement Solutions





performance

Rated capacities ⁽¹⁾ (lbs.)	1K, 2K, 3K, 4K, 5K, 7.5K, 10K, 20K, 30K, 50K, 75K, 100K, 150K, 200K, 300K, 400K & 500K
⁽¹⁾ ("K" = thousand)	
Rated output (FSO)	3 mV/V (nominal); 4 mV/V (optional)
Combined error	≤ 0.1
Non-linearity	≤ 0.1
Hysteresis	≤ 0.1
Non-repeatability	≤ 0.03
Creep (30 minutes)	≤ 0.03 % of load
Zero balance	≤ 1 % FSO
Zero Return (30 minutes)	Better than 0.03 % FSO
Allowable side Load	30% FSO
Eccentric Load Sensitivity	≤ 0.25 % FSO

mechanical

Material:	Stainless steel; Heat-treated
Finish:	Electro-polished
Safe overload	Compression: 150% FSO Side load: 30% FSO
Ultimate overload	Compression: 300% FSO Side load: 50% FSO
Deflection	≤ .003" (.076mm)
Weight	See table below

electrical

Input impedance	350 ohms (nominal)
Output impedance	350 ohms (nominal)
Insulation resistance	>1000 Megohms @ 50VDC
Excitation voltage	10 V AC/DC (15 V maximum)
Cable color code	+ Excitation: Red (Pin A) + Sense: Blue (Pin B) - Excitation: Black (Pin C) - Sense: Brown (Pin D) + Output: White (Pin F) - Output: Green (Pin E) Shield: Natural (Pin G)
Connector type	MS3104-14S-6S or equivalent

environmental

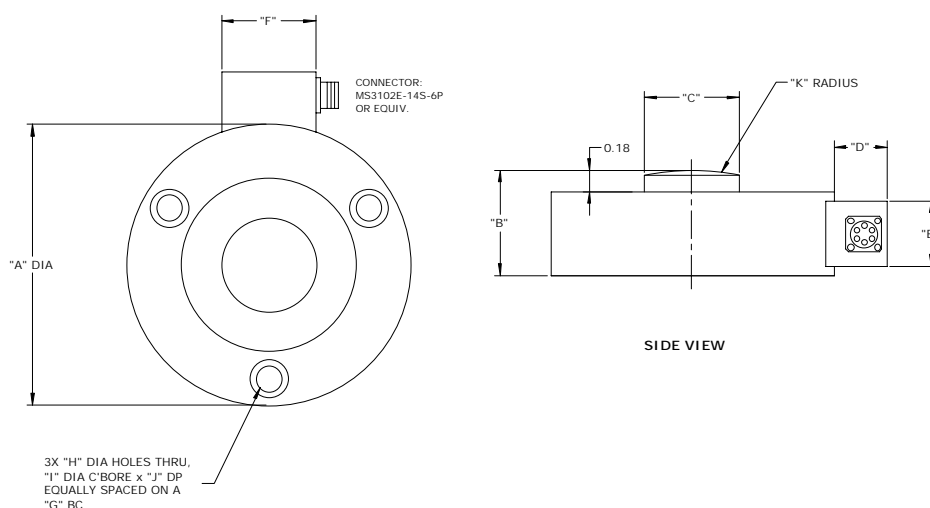
Temperature, operating	-65 to +250 °F (-54 to +121°C)
Temperature, compensated	0 to +150 °F (-18 to +66°C)
Temperature effects:	Zero < 0.0015% FSO/°F < 0.0027% FSO/°C Output < 0.0015% of Rdg./°F < 0.0027% Rdg./°C
Sealing	IP67; Multi-redundant

options

Dual Bridge Configuration, Shunt Calibration, Mating MS Connectors, Polyurethane or Teflon® Cable and Multi-Point Calibration.

dimensions

100%
CUSTOMER
SATISFACTION
GUARANTEED



DIMENSIONAL TAB BLOCK

CAPACITY (LB)	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"
1K - 5K	3.50	1.18	0.69	0.82	0.75	1.25	2.625	0.328	0.485	0.34	2.5
7.5K - 100K	4.50	2.00	1.50	1.25	1.50	2.00	3.790	0.390	0.578	0.40	6.0
150K - 200K	5.50	2.18	2.00	1.25	1.50	2.00	4.812	0.390	0.578	0.40	17.0
300K	7.00	2.68	2.50	1.25	1.50	2.00	6.000	0.390	0.578	0.40	17.0
400K	7.50	2.68	2.50	1.25	1.50	2.00	6.750	0.390	0.578	0.40	17.0
500K	11.00	4.50	4.75	1.25	1.50	2.00	9.500	0.781	1.188	0.78	24.0

When ordering, please specify
PG3-"Capacity"-000-A.