



S-Type Load Cell

For Automotive Component & System Performance Testing

Highlights

- 500% FS overload protection
- Detachable cable with an industry standard 6-pin PT style connector
- Extremely rugged stainless steel housing
- Tension and compression measurement range of 1k lb (4.45 kN)
- Operating temperature range from -65 to +200 °F (-54 to +93 °C)
- Overall accuracy 0.07% of rated capacity
- Cost-effective way to measure both compression & tension forces

Applications

- Automotive
 - Structural Performance Testing on Systems such as:
 - Doors
 - Hoods
 - Trunks
 - Life Cycle Testing on Components such as:
 - Hinges, Latches & Handles
 - Bushings and Springs
 - Seat Backs
- Other Applications:
 - Weighing
 - Material Testing
 - Tensile Test Machines
 - Assembly Forces



PCB® Model 1621-02A S-Type Load Cell sensor is designed for precision measurement in multi-cycle, high repetition automotive component and system test applications. Housed in stainless steel, this extremely rugged sensor offers a measurement range of 1,000 lb (4.45 kN); 500% full scale overload protection in both compression and tension; and a 6-pin PT style connector. With an operating temperature range from -65 to +200 °F (-54 to +93 °C) and overall accuracy of 0.07%, this sensor is engineered to ensure high repeatability and over-range protection, and is an extremely cost-effective way to measure both compression and tension forces. The detachable cable ensures easy set-up and minimizes down time due to damaged cables, and the available mounting accessories make this a versatile sensor for any test environment.

As with all PCB® instrumentation, these sensors are complemented with toll-free applications assistance, 24-hour customer service, and are backed by a no-risk policy that guarantees total customer satisfaction or your money refunded.



Model 1621-02A



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Performance

Measurement Range (Full Scale Capacity)	1000 lb 4.45 kN
Sensitivity ($\pm 10\%$) (I output at rated capacity)	2 mV/V
Non-Linearity	$\leq 0.05\%$ FS
Hysteresis	$\leq 0.05\%$ FS
Non-Repeatability	$\leq 0.02\%$ FS
Creep (in 20 minutes)	$\leq 0.3\%$

Environmental

Overload Limit	5000 lb 22.3 kN
Load Limit (Side Force, FX or FY)	250 lb 1.3 kN
Load Limit (Bending Moment, MX or MY)	700 in-lb 79 N-m
Load Limit (Axial Torque, MZ)	700 in-lb 79 N-m
Temperature Range (Operating)	-65 to +200 °F -54 to +93 °C
Temperature Range (Compensated)	+70 to +170 °F +21 to +77 °C
Temperature Effect on Output (Maximum)	$\pm 0.008\%$ / °F $\pm 0.0014\%$ / °C
Temperature Effect on Zero Balance (Maximum)	$\pm 0.0015\%$ FS / °F $\pm 0.027\%$ FS / °C

Electrical

Bridge Resistance	350 ohm
Excitation Voltage (Recommended)	10 VDC
Insulation Resistance	$> 5 \times 10^9$ ohm
Zero Balance	$\leq 1\%$ FS

Physical

Size	2.25 x 1.00 x 2.75 in 5.72 x 25.4 x 69.9 mm
Weight	0.454 kg
Mounting	1/2 - 20 Thread
Deflection at Full Scale Capacity	.01 in 0.254 mm
Sensing Element	Strain Gage
Housing Material	Stainless Steel
Electrical Connector	PT02E-10-6P
Electrical Connector Position	Side

Additional Accessories

Rod Ends	A-20357-3A
Load Button	C-20099-3A
Cable	8311-01-XXA

Note

All specifications are at room temperature unless otherwise specified.

Recommended Signal Conditioners for Model 1621-02A S-Type Gage Load Cell



8159 Series:

Operates from 115 or 230 VAC power, provides 5 or 10 VDC strain gauge bridge excitation, delivers ± 10 VDC and 4-20 mA output signals, 4 programmable set points with LED status indicators, optional RS-232 output



8161 Series:

DIN rail, 35 mm, operates from 12 to 28 VDC, provides 5 or 10 VDC bridge excitation, and delivers ± 5 or ± 10 volts and 4-20 mA. Adjustable zero and span with built-in shunt calibration.



8162 Series:

IP66 (NEMA 4X) enclosure operates from 12 to 28 VDC and provides 5 or 10 VDC bridge excitation, and delivers ± 5 or ± 10 volts and 4-20 mA output via screw terminal connections. Adjustable zero and span with built-in shunt calibration.

Accessories



Rod End, Model A-20357-3A:

Rod ends are designed to maintain tension loading alignment between a load cell and mounting surface.



Load Button, Model C-20099-3A:

Load buttons are designed to direct applied forces to the measuring axis of a load cell used in compression.



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AS9100 CERTIFIED ■ ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

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