



# PCB® Load Cells

Need to meet a tight testing deadline without breaking the bank? PCB Load & Torque offers a broad selection of competitively priced load cells that will help you meet the most demanding test and measurement requirements. Our load cells provide years of dependable, high performance service in a wide range of applications in automotive and aerospace markets, R&D, and process control.



## Highlights

- Low Deflection; High Accuracy
- Fatigue-rated Versions
- Low Profile
- Temperature and Pressure Compensated
- A2LA Accredited Calibration
- NIST Traceable Calibration

## Applications

- Weighing
- Structural Testing
- Quality Control
- Material Testing
- Component Life Cycle Testing
- Full Vehicle Durability Testing

## Designed to Meet Complex Needs

Our array of general purpose load cells is designed to meet complex and diverse testing needs. The product line covers a wide range of capacities and applications, and individual models can often be used for several different types of testing.

## Great Measurements for 40 Years

PCB Load & Torque is a subsidiary of PCB Piezotronics, Inc. – the industry leader in sensor technology for more than 40 years. With over four decades of success in the industry, we have developed a thorough understanding of industry demands and test requirements.

Our vast industry knowledge has enabled us to design our load cells with increasing industry demands in mind — so our experienced staff of application engineers can provide appropriate product recommendations for your application, and you can be sure our products will help you meet your test requirements.

## Exceptional Service

We offer world-class customer service, provided 24 hours a day by live Customer Service Representatives, so when you call any time of the day or night, you can speak with a real person. As with all PCB instrumentation, our load cells are complemented with toll-free applications assistance and backed by our no risk policy that guarantees your satisfaction or your money back. You can also bring your load cells to us for service and calibration. Our calibration lab is A2LA accredited up to 100 klb.



# Load Cells

Our load cell offering includes competitively priced fatigue rated and general purpose load cells, that are available in a variety of mechanical configurations such as low profile, canister, rod-end, and s-beam load cells— all of which provide excellent accuracy at an affordable price. We also provide a complete line of signal conditioners and accessories to complement our load cells.

## General Purpose Load Cells

General purpose load cells are suitable for a wide range of general force measurement applications such as weighing, dynamometer use, and static material test machines. All offer excellent accuracy and value, and most operate in both tension and compression.

We offer several different general purpose load cell models designed to meet your complex and ever-changing testing needs. Models and capacity ranges are shown in the table on page 3 (right).



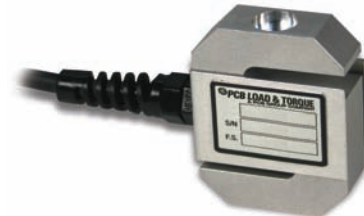
## Rod End Load Cells

Rod end load cells are used in both tension and compression measurement applications such as process automation, quality assurance and production monitoring. Standard 3/4-16 and 1-14 Male/Female threads facilitate installation.



## S-Type Load Cells

S-Type load cells are highly accurate strain gage based sensors used for weighing and general force measurement applications. All models come with a six-foot integral cable with pigtail leads, which are stripped and tinned for electrical interface.



## Fatigue Rated Load Cells

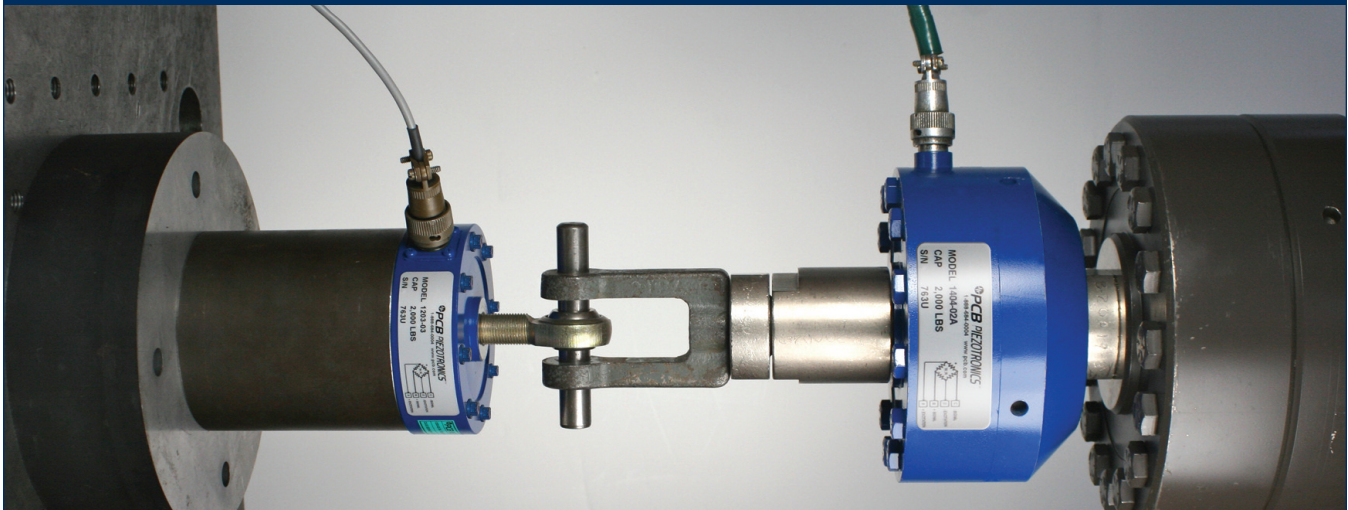
Fatigue rated load cells are specifically designed for component durability and fatigue test machines where highly cyclical loading is present. These rugged load cells are extremely resistant to extraneous bending and side loading forces. They are used for material testing, component life cycle testing and structural testing. All fatigue rated load cells are guaranteed against fatigue failure for 100 million fully reversed cycles.



## Dual Bridge Load Cells

Our dual bridge load cells include a dual output feature that offers sensor redundancy and the ability to provide control feedback from one sensor while the other is used for data acquisition. Additional features include low deflection, high accuracy and repeatability, thermal compensation and moment compensation.





**Load Cells**

	General Purpose Low Profile Load Cells	General Purpose Canister Load Cells	Rod End Load Cells	Fatigue Rated Load Cells	Dual Bridge Load Cells	S-Type Load Cells
Measurement Range	from 500 lb to 200 klb	From 25 lb to 300 lb	from 500 lb to 20 klb	from 250 lb to 100 klb	from 5K lb to 100 klb	from 50 lb to 5 klb
Overload Limit	150% FS	150% FS	150% FS	300% FS	300% FS	from 150% FS
Sensitivity	2 to 4 mV/V	2 mV/V	2 mV/V	1 to 2 mV/V	2 mV/V	2 mV/V
Linearity	0.05% FS	0.05% FS	≤ 0.25% FS	≤ 0.04% to 0.06% FS	≤ 0.04% to 0.06% FS	≤ 0.05% FS
Hysteresis	0.06% FS	0.05% FS	≤ 0.25% FS	≤ 0.03% to 0.6% FS	≤ 0.04% to 0.06% FS	≤ 0.03% FS
Repeatability	0.02% FS	0.02% FS	≤ 0.15% FS	≤ 0.02% to 0.03% FS	≤ 0.02% FS	≤ 0.02% FS
General Dimensions (Diameter x Height)	from 4.12 x 1.37 in to 12.0 x 4.50	2.75 x 1.5 in	Sizes range from 1.50 x 4.25 in to 1.50 x 4.5 in	Sizes range from 4.12 x 1.37 in to 12.0 x 4.50 in.	Sizes range from 4.12 x 2.75 in to 11.0 x 7.00 in.	Sizes range from 2.5 x 0.63 to 3.5 x 1.5 x 2.5 in

**Signal Conditioners and Accessories**

To complement our load cells, we offer a full line of signal conditioners to meet a wide range of test needs. They include:

- **Series 8159** provides 5 or 10 VDC strain gage bridge excitation which delivers ± 10 VDC and 4 to 20 mA output signals and operates from 115 or 230 VAC power.
- **Model 8162** includes an in-line, IP66 enclosure, operates from 12 to 18 VDC, provides 10 VDC sensor excitation, and delivers ± 10 V and 4 to 20 mA outputs.
- **Series 8161** provides 5 or 10 VDC bridge excitation, delivers ± 5 or ± 10 volts and 4-20 mA output signals, and operates from 12 to 28 VDC power. It also includes adjustable zero and span with built-in shunt calibration.
- **Series 920** provides a 5 VDC bridge excitation in a portable hand-held, battery operated, integral 5 digit display, external shunt calibration resistor, and RS232 computer interface.



**Series 8159**



**Series 8162**



**Series 8161**



**Series 920**

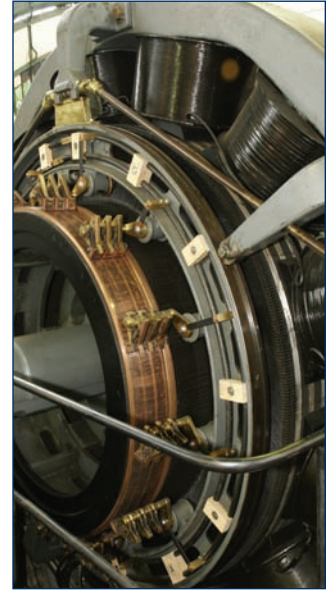
**Available accessories include:**

- Cable assemblies
- Rod end
- Load button
- Connectors
- Mounting base
- Thread pre-tensioners





## PCB Load & Torque Division



**PCB Load & Torque Division**, is a manufacturer of high quality, precision load cells, torque transducers, and telemetry systems, located in Farmington Hills, Michigan, USA. In addition to the quality products produced, the division offers many services including: A2LA Accredited Calibration for torque, force, and related instrumentation; an A2LA Accredited Threaded Fastener Testing Laboratory; and complete and reliable custom stain gaging. PCB Load & Torque products and services fulfill the test and measurement needs of numerous industries including: Aerospace & Defense, Automotive, Medical Rehabilitation, Material Testing, Textile, Process Control, Robotics & Automation, and more. PCB's RS Technologies product line includes test systems and threaded fastener torque/angle/tension systems ideal for use in the Automotive, Aerospace & Defense, Power Generation industries, and for product assembly by manufacturers or processors of threaded fasteners or other companies that use threaded fasteners to assemble their products. The expert team of Design, Engineering, Sales, and Customer Service individuals draw upon vast in-house manufacturing resources to continually provide new, more beneficial sensing solutions. From ready-to-ship stock products, to custom-made specials, PCB proudly stands behind all products with services customers value most, including 24-hour technical support, a global distribution network, and the industry's only commitment to Total Customer Satisfaction. For more information please visit [www.pcb.com](http://www.pcb.com).

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