



# Dual Bridge Load Cells

For Aerospace, Automotive, Industrial, & Process Control Applications

### Highlights

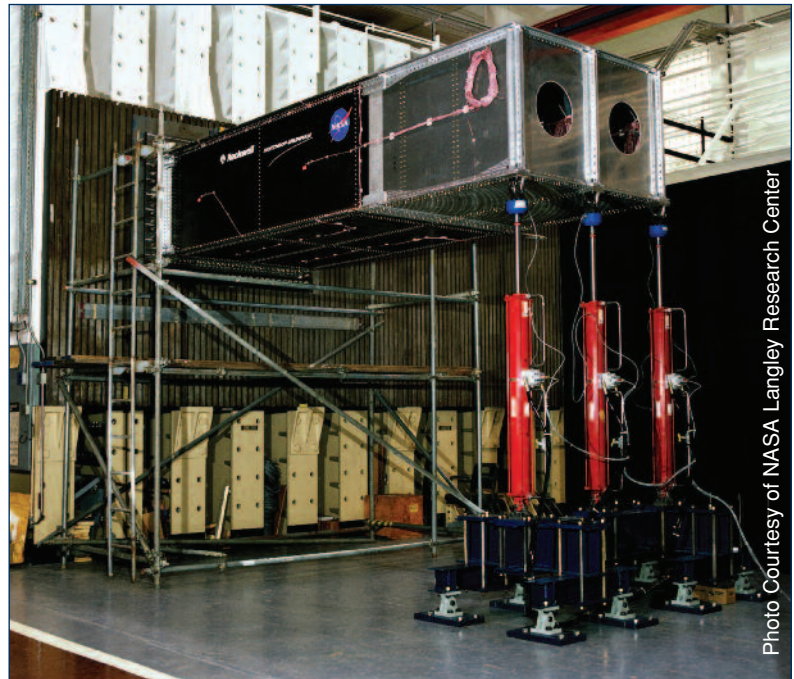
- Dual Bridge Output
- Low Deflection; High Accuracy
- Low Profile
- Fatigue-rated
- Temperature & Pressure Compensated
- NIST Traceable, A2LA Accredited Calibration to ISO 17025

### Applications

- Airframe Structural Test Applications
- Fatigue Testing
- Material Testing
- Rocket Thrust
- Weighing
- Process Monitoring



**PCB Load & Torque Series 1400  
Dual Bridge Load Cell**  
(Shown with Optional Base)



PCB Load & Torque, Inc., a wholly-owned subsidiary of PCB Piezotronics, manufactures a wide range of high-accuracy, strain gage load cells for aerospace, automotive, industrial, and process control applications.

Series 1400 includes 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. These load cells are available in multiple ranges and have a NIST traceable, A2LA accredited calibration to ISO 17025, in both tension and compression directions. Additional features include low deflection, high accuracy and repeatability, thermal compensation and barometric compensation.

Fatigue-rated load cells are specifically designed for durability testing machine manufacturers and users, or any application where high cyclic loads are present. Applications include 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.

As with all PCB Load & Torque manufactured instrumentation, this equipment is complimented with toll-free application assistance, 24-hour customer support, and the industry's only commitment to Total Customer Satisfaction.



# Dual Bridge Load Cell



**PCB Load & Torque Series 1400  
Dual Bridge Load Cell**

Dual Bridge Load Cells						
Model Number	1403-05ADB	1404-02ADB	1404-03ADB	1408-02ADB	1411-02ADB	1414-02ADB
Measurement Range	5k lb 22k N	12.5k lb 56k N	25k lb 111k N	50k lb 222k N	100k lb 445k N	200k lb 890k N
Sensitivity	2 mV/V	2 mV/V	2 mV/V	2 mV/V	2 mV/V	2 mV/V
Non-Linearity	≤ 0.05 % FS	≤ 0.05 % FS	≤ 0.05 % FS	≤ 0.10 % FS	≤ 0.20 % FS	≤ 0.20 % FS
Hysteresis	≤ 0.05 % FS	≤ 0.05 % FS	≤ 0.05 % FS	≤ 0.10 % FS	≤ 0.20 % FS	≤ 0.20 % FS
Non-Repeatability	≤ 0.02 % RO	≤ 0.02 % RO	≤ 0.02 % RO	≤ 0.05 % RO	≤ 0.05 % RO	≤ 0.05 % RO
Temperature Range	-65 to +200 °F -54 to +93 °C	-65 to +200 °F -54 to +93 °C	-65 to +200 °F -54 to +93 °C	-65 to +200 °F -54 to +93 °C	-65 to +200 °F -54 to +93 °C	-65 to +200 °F -54 to +93 °C
Bridge Resistance	350 ohm	350 ohm	350 ohm	350 ohm	350 ohm	350 ohm
Excitation Voltage	10 VDC	10 VDC	10 VDC	10 VDC	10 VDC	10 VDC
Mounting	5/8-18 Thread	1 1/4-12 Thread	1 1/4-12 Thread	1 3/4-12 Thread	2 3/4-8 Thread	2 3/4-8 Thread
Electrical Connector	PT02E-10-6P	PT02E-10-6P	PT02E-10-6P	PT02E-10-6P	PT02E-10-6P	PT02E-10-6P
Additional Versions						
Alternate Electrical Connector (PC04E-10-6P)	1403-05BDB	1404-02BDB	1404-03BDB	1408-02BDB	1411-02BDB	1414-02BDB
Alternate Mounting	M16	M33	M33	M42	M72	M72
Additional Accessories						
Mounting Bases	084A100 M084A100	084A101 M084A101	084A101 M084A101	084A103 M084A103	084A104 M084A104	084A104 M084A104

## Recommended Signal Conditioners for Load Cells



**PCB Piezotronics Model 482C27**

4-channel line powered, bridge, incremental gain, digital control interface, RS-232 and ethernet.



**PCB Load & Torque Series 8161**

Provides 5 or 10 VDC bridge excitation, and delivers ± 5 or ± 10 volts and 4 to 20 mA output signals, and operates from 12 to 28 VDC power. Adjustable zero and span with built-in shunt calibration.



**PCB Load & Torque Series 8159**

1-channel provides 5 or 10 VDC strain gage bridge excitation which delivers ± 10 VDC and 4 to 20 mA output signals with display, and operates from 115 to 230 VAC power.

## Accessories



**Cable Assemblies**



**Mounting Base**

**Call today or visit**  
**www.pcbloadtorque.com**  
for a complete line  
of Load Cell products.



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**24-hour SensorLine™ 716-684-0001**

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**Web Site www.pcb.com**

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

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