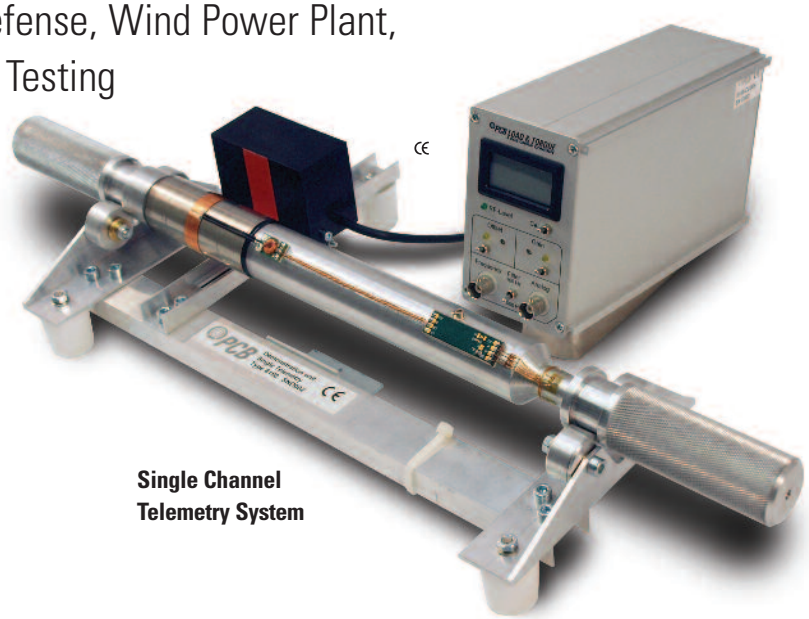
Single Channel Telemetry Systems

For Automotive, Aerospace & Defense, Wind Power Plant, Test Benches, & Other Industrial Testing

Highlights

- Compact size, light weight
- Easy to use, wear and maintenance free
- Extremely robust, dust and water proof
- Contact-free signal transmission and power supply for continuous operation
- Remote shunt calibration
- User configurable for strain, thermo-couple, or voltage inputs (Series 8179)
- Factory configurable for strain, thermocouple, voltage, or ICP® (Series 8180)
- Adjustable output



Single Channel Telemetry System

PCB Load & Torque Division Single Channel Telemetry Systems provide a simple, accurate method of conditioning and transmitting strain, thermocouple, voltage, or ICP® signals on rotating or moving machinery while operating in a completely contactless mode. Power is transferred inductively and the signal is RF-transferred between the moving and static component - no brushes or wires required. This method guarantees an absolute maintenance-free continuous operation and accurate transmission of measured data.

These Single Channel Telemetry Systems are compact in size and light weight which allows for quick and easy installations in areas where space is at a premium without affecting the dynamic properties of the shaft. Power transmission to the rotor electronics and return signal transmission to the stator is accomplished via a transmission band wrapped around the shaft and used as an antenna. The flat antenna structure permits generous axial and radial clearance. Alternatively, power can be derived from an on-shaft battery.

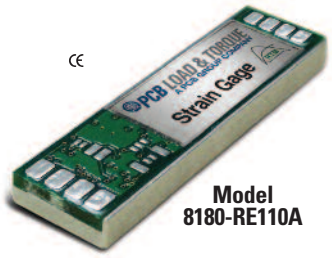
Data is transmitted contact-free from the antenna to the stator and then to the control unit, where it is demodulated and converted back to an analog value. The signals can be read directly on the control unit display or fed into further acquisition equipment.

Series 8179 also includes a remote shunt calibration feature that enables strain gage configurations to be checked, even during measurement. PCB® Series 8180 performs a remote shunt calibration when the unit is powered up.

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

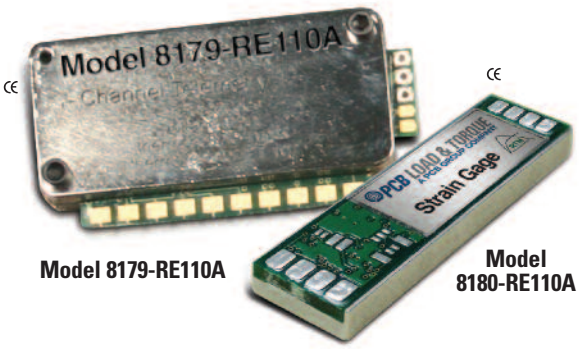
Applications

- Drivetrain Testing & Monitoring
- Steering Column Testing
- Brake Testing
- Bearing Temperature Testing & Monitoring
- Assembly Line Testing
- Industrial Process Monitoring



Model 8180-RE110A

Rotor		
Series Number	**8179-RE1**	**8180-RE1**
Dimensions	1.9 x .9 x .3 in 48 x 24 x 8 mm	1.6 x .5 x .1 in 40 x 12 x 3.5 mm
Weight	0.5 oz 15 gm	0.14 oz 4 gm
Sensors	Strain, Thermocouple, Thermoresistor, Voltage	Strain or Thermocouple or Voltage or ICP® [1]
Strain Gage Configuration	Full Bridge	Full/Half Bridge
Bandwidth	1000 Hz	1000 Hz
Operating Temperature	+32 to +176 °F 0 to +80 °C	+32 to +176 °F 0 to +80 °C
Option	-40 to +248 °F -40 to +120 °C	-40 to +248 °F -40 to +120 °C
Note		
[1] Please specify version at time of order.		



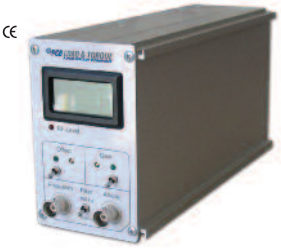
Model 8179-RE110A **Model 8180-RE110A**

Model 8180-SH1

Model 8180-SH2

Model 8180-SH4

Stator			
Model Number	**8180-SH1**	**8180-SH2**	**8180-SH4**
Dimensions	1.4 x 2.0 x 2.8 in 35 x 50 x 70 mm	1.0 x 1.2 x 1.8 in 25 x 30 x 45 mm	2.0 x 2.0 x 1.4 in 50 x 50 x 35 mm
Inductive Power	Yes	Yes	Yes
Distance to shaft	1.5 in 38 mm	.4 in 10 mm	7.9 in 200 mm
Operating Temperature	-40 to +248 °F -40 to +120 °C	-40 to +248 °F -40 to +120 °C	-40 to +248 °F -40 to +120 °C



Model 8180-CUT0

Receiving Unit			
Model Number	**8179-CUT0**	**8179-CUR0 [2]**	**8180-CUT0**
Dimensions	4.1 x 2.5 x 7.2 in 105 x 64.5 x 184 mm	2.8 x 5.0 x 6.7 in 70.8 x 128 x 171 mm	7.9 x 4.1 x 2.5 in 200 x 105 x 64 mm
Note			
[2] An optional 19" housing is available for multiple 8179-CUR0 units.			

Model 8179-CUR0

Model 8179-CUT0

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ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

LT-Series8179-0914 Printed in U.S.A.

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.**

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