



Single Channel Telemetry Systems

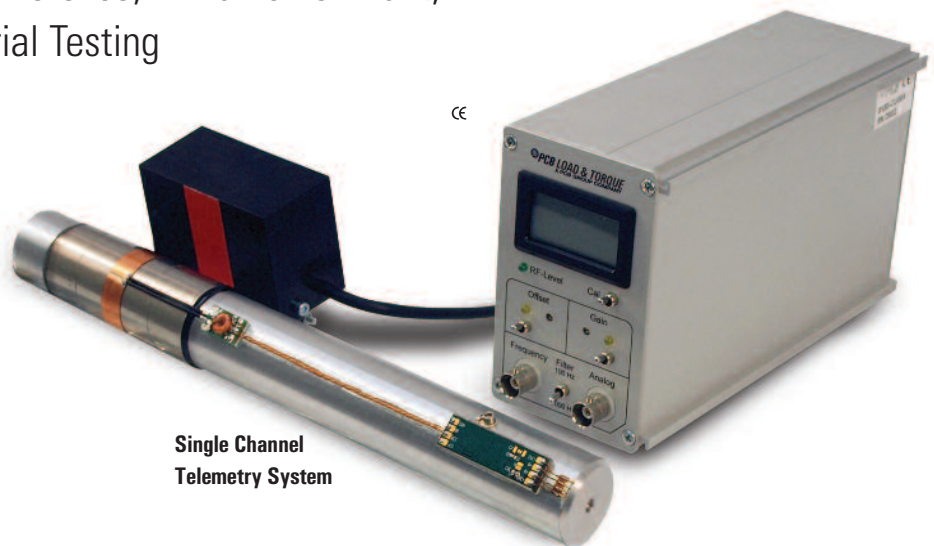
For Automotive, Aerospace & Defense, Wind Power Plant, Test Benches, & Other Industrial Testing

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, thermocouple, or voltage inputs (Series 8179)
- Factory configurable for strain, thermocouple, voltage, or ICP® (Series 8180)
- Adjustable output

Applications

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



PCB Load & Torque, Inc. 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.

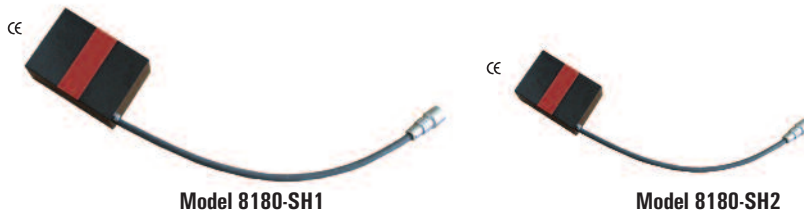
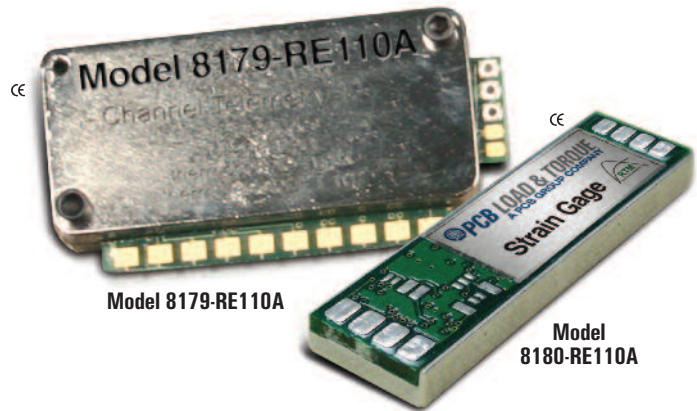


Rotor

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.



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-SH4

Receiving Unit

Model Number	8179-CUTO	8179-CURO [2]	8180-CUTO
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-CURO units.



Model 8179-CURO



Model 8179-CUTO

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ISO 9001 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

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