



Instrumented Steering Wheel System

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PCB® Load & Torque, Inc., USA is uniquely positioned in sensor industry to satisfy a wide range of research, test, measurement for Ride and Handling Test Applications.

Structural Solutions Private Limited, the exclusive representative of PCB® group in India is a professional engineering company engaged in offering high-end technology intensive products and system solutions to Indian industry for Automotive Testing.

Highlight

- Telemetry provides friction-free wireless transmission
- Inertial moment and weight comparable to OEM steering wheels
- Two ranges of each measurement available at all times (steering moment, angle, and angle velocity)
- Fast, easy, and backlash-free mounting
- Automated adjustment of all components
- Highly accurate and reliable
- Integrated wireless power supply
- Small, compact display system



Application

- Ride and Handling
- Legislative Testing
- Steering System Development
- Brake Pull Testing



Model 5610-10A

PCB® Load & Torque, Inc., Model 5610-10A Instrumented Steering Wheel Systems for vehicles are developed from a standard steering wheel to enable true-to-life data measurements. The telemetry-based steering wheel with supplied adaptors can be installed in the same position as the OEM steering wheel to provide similar ergonomic feel and driving dynamics. The unit is equipped with integrated sensors to measure angle, angular rate, and torque. The vehicle's active Electronic Stability Program (ESP) is fully supported and not compromised. Model 5610-10A units provide advanced integrated function keys, which include autozero for both steering angle and steering torque, shunt calibration, and function lock. Four switches allow the unit multiple user-programmable controlling options. Equipped with an integrated inductive power supply, Model 5610-10A Instrumented Steering Wheel Systems provide continuous running wireless operation.

The accompanying compact signal conditioning unit is designed for use where space is at a premium. Measured signals are retrieved directly from the signal conditioner via electrically isolated connectors. An optional CAN interface, for integration with data acquisition systems, or a USB interface used with computers, are available for further data recording and analysis.

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Model Number	5610-10A
Torque	
Range	$\pm 88.5, \pm 885$ in-lb $\pm 10, \pm 100$ N-m
Accuracy	0.2% FS
Bandwidth	DC to 800 Hz
Angle	
Range	$\pm 100, \pm 1000^\circ$
Resolution	0.05, 0.5°
Bandwidth	DC to 800 Hz
Rate	
Range	$\pm 500, \pm 1000$ °/s
Resolution	0.5, 1 °/s
Bandwidth	DC to 800 Hz
Excessive Torque	> 100% of Nominal Torque
Mechanical Overstress (Mechanical Locking)	> 4425 in-lb > 500 N-m
Outer Diameter	15 in 380 mm
Overall Height	5.8 in 147.5 mm
Weight	7.3 lb 3.3 kg
Mass Inertia	639 lb in ² 290 kg cm ²
Standard Operating Temperature	-4 to +176 °F -20 to +80 °C
User Programmable Functions	4



Signal Conditioner

Torque [1]	$\pm 88.5, \pm 885$ in-lb $\pm 10, \pm 100$ N-m
Angle [1]	$\pm 100, \pm 1000^\circ$
Rate [1]	$\pm 500, \pm 1000$ °/s
Output Filter	800 Hz
Power Supply	9 to 32 VDC ~10 W
Dimensions (L x W x H)	7.9 x 4.1 x 3.3 in 200 x 105 x 85 mm
Weight	2.6 lb 1.2 kg
Note	
[1] Signal Output ± 10 V	



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