



Structural Solutions Private Limited

Sensors for Road Load Measurements

Accelerometers, Pressure Sensors, Force Sensors, Strain Sensors, Load Cells, and Signal Conditioners

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PCB® Piezotronics Inc., USA is uniquely positioned in sensor industry to satisfy a wide range of research, test, measurement and monitoring.

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 Road Load Measurements.

Road Load Measurements:

Road load tests measure the transient and steady state inputs of a vehicle as it operates over a road surface in the anticipated market region of use or over a replicated drive profile on a test track. Road load measurements take into account all projected vehicle and driving parameters such as mass, inertia, air and rolling resistance, road characteristics, engine loads, and vehicle speed.

Application:

- Heavy brake testing
- Wheel Force Measurement
- Durability Testing
- Strain Measurement
- Load Testing
- Driveability and Ride & Handling
- Brake & Steering Development



Sensors for Road Load Measurements

PCB® Series 3741 DC response accelerometers are offered in a variety of full-scale ranges, from ± 2 to ± 200 g, to accommodate vehicle and component durability testing requirements. The units feature silicon MEMS sensing elements for uniform, repeatable performance. Gas damping, mechanical over range stops, and a low profile, hard-anodized, aluminum housing are utilized for added durability.

High Lights:

- Measurement capability to 0 Hz
- Full-scale ranges from ± 2 to ± 200 g
- Lightweight titanium or aluminum housings
- Constant & low frequency acceleration measurements
- Single-ended or differential output signal
- High frequency overload protection



3713 - Triaxial
10 mV/g, 200 g, 78 gm



3741 - Single Axis
10 mV/g, 200 g, 10 gm



3711 - Triaxial
100 mV/g, 20 g, 14 gm

Sensors for Road Load Measurements

Triaxial ICP® Accelerometers for Road Load Applications:



356A01 - Triaxial
± 1000 g pk, Sensitivity 5 mV/g



356A32 - Triaxial
± 50 g pk, Sensitivity 100 mV/g



Low Profile Load Cell Sensors for Road Load Applications:



Manufactured with an unique thin-film process to "atomically fuse" sensitive resistive material behind a recessed diaphragm, PCB® Series 1500 Pressure Transducers achieve high accuracy repeatability, and stability expected of today's measurement and control requirements. Series 1500 sensors are used for shock absorber, struts, and brake systems studies, as well as for DC line pressure with response time up to 1 msec, and intake manifold pressure.



1203-01A - Load Cell
500 lb, 2 mV/V, 1.3 1kg



Strain Sensor for Road Load Applications:



740B02 - Strain Sensor
100 pk $\mu\epsilon$, 50 mV/ $\mu\epsilon$



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