

Load Cell Sensor Data Sheet

LC 19112015

SPECIFICATIONS

- > **Range:** up to $\pm 110\text{Kg}$
- > **Operation:** Tension-Compression
- > **Type:** Strain gage
- > **Total Error:** $\pm 0.25\%$ (of full scale)
- > **Creep & Zero Return:** $\pm 0.1\%$ (of load)
- > **Maximum Overload:** 150% (of full scale)
- > **Temperature Effect:** $\pm 0.005\%$ (of load/ $^{\circ}\text{C}$)
- > **Input Impedance:** $415 \pm 30\ \Omega$
- > **Output Impedance:** $350 \pm 3\ \Omega$
- > **Insulation Resistance:** $> 2000\ \text{M}\Omega$
- > **Circuit:** Wheatstone Bridge

FEATURES

- > Compact form factor
- > Usable in tension or compression
- > Pre-conditioned analog output
- > High signal-to-noise ratio
- > Shielded miniaturized cables
- > Medical-grade raw data output
- > Ready-to-use form factor

RESEARCH APPLICATIONS

- > Biomechanics
- > Kinematics
- > Ergonomics
- > Reaction time measurement
- > Handgrip assessment
- > Human-Computer Interaction
- > Robotics & Cybernetics

GENERAL DESCRIPTION

From reaction time measurement to traction or compression force, our low profile force load cells offer uncompromised performance in the most demanding applications. The compact form factor and miniaturized signal conditioning circuitry are ideal for minimally intrusive setups. Multiple measurement ranges are available, enabling forces up to $\pm 225\text{Kg}$, although other options are also available upon request. A suite of accessories is also available to enable you to make the most out of this sensor.



Fig. 1. Load cell sensor.



Fig. 2. Typical raw load cell data (acquired with biosignals).

biosignalsplux
wearable body sensing platform

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REV A

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OPTIONAL ACCESSORIES



Fig. 3. Load cell complete with the full suite of accessories.



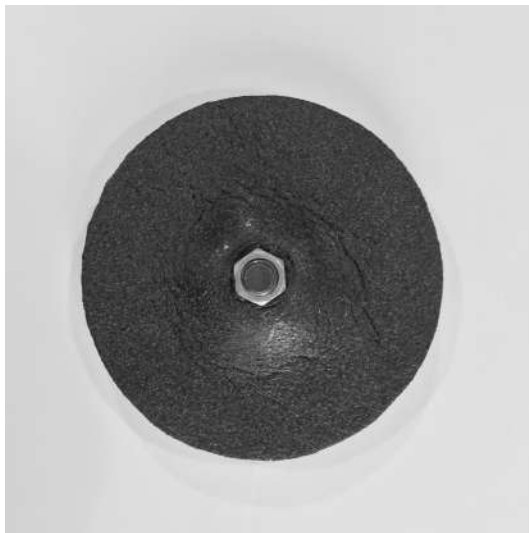
a. Side view



b. Top view

Fig. 4. Hollow curved accessory with padding for limb application (e.g. forearm, tibia).

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a. Top view



b. Pad view

Fig. 5. Flat padded disks (e.g. hand palm, foot floor, forehead, etc.).



Fig. 6. Hand grip for traction.



Fig. 7. Load pin with bearing (e.g. to connect to gym machines carabiner).