Button Load Cell (0-1000kg) – CZL204

A load cell is a force sensing module – a carefully designed metal structure, with small elements called strain gauges mounted in precise locations on the structure. Load cells are designed to measure a specific type of force, and ignore other forces being applied. The electrical signal output by the load cell is very small and requires specialized amplification. Fortunately, the 1046 PhidgetBridge will perform all the amplification and measurement of the electrical output.

This Button Load Cell is used in heavy applications. The bottom of the load cell can be bolted to a surface, and force applied to the button on the top. By loading only the button, which is slightly rounded, the load cell is less sensitive to errors resulting from the load not pushing down exactly straight on the load cell.

Connection

Load cells require a power source and produce a very small voltage differential when under strain. In order to read this signal, an amplifier or a board with a high-precision analog-to-digital converter is required. For more details and a list of Phidgets that will connect to this load cell, see the “Compatible Products” tab.

Product Specifications

Sensor Properties	
Sensor Type	Compression Load Cell
Controlled By	Bridge Input
Weight Capacity Max	1 Mg
Maximum Overload	1.2 Mg
Electrical Properties	
Output Impedance	700 ?©
Supply Voltage Min	5 V DC

Supply Voltage Max	12 V DC
Rated Output	2 mV/V
Rated Output Error Max	40 ?¼V/V
Physical Properties	
Compensated Temperature Min	-10 ?°C
Compensated Temperature Max	40 ?°C
Operating Temperature Min	-35 ?°C
Operating Temperature Max	65 ?°C
Cable Length	3 m
Cable Gauge	5x 22 AWG
Material	Alloy Steel
Screw Thread Size	M5
IP Rating	IP68
Weight	361 g

See the included calibration certificate for precise values.