

Loadcell Model 510

Product Specification



For use in: Fertiliser Spreaders, Rigid Body Vehicles and
Special Applications

PROUDLY AUSTRALIAN



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Assembly Numbers

29/BBB0510VB Loadcell only (shown)

29/BBB0510VU Loadcell, unitised with bearing plates

Structural Configuration

Single ended, rigid-mount bending beam

Compression loading

Bare Weight

5.2kg

Static Capacity**Unitised Weight**

8kg

4,500kg

Dynamic Capacity

3,175kg

Safe Overload

150% of Static Capacity

Ultimate Overload

Minimum of 300% of Static Capacity

Loadcell Body Material

4340 Alloy Steel, heat treated to 180,000psi yield strength

Bearing Plate

21/63-00040, Single piece weld-down ASTM A514 Steel

Top Mounting Bolts(4)

$\frac{3}{4}$ "-16TPI x (Length dependent on mountings) Grade 8,
Recommended Torque: 470Nm(350ft/lb)

Tie Down Bolts(2)

90/882520 1- $\frac{1}{4}$ "-16TPI x 2- $\frac{1}{2}$ " Grade 8
Recommended Torque:1,370Nm(1,000ft/lb)

Connector

4 pin Military style, injection moulded

Cable

Custom 4 core with polyurethane jacket

Electrical

Excitation:

15 volts (AC or DC)

5-10 volts recommended

Output:

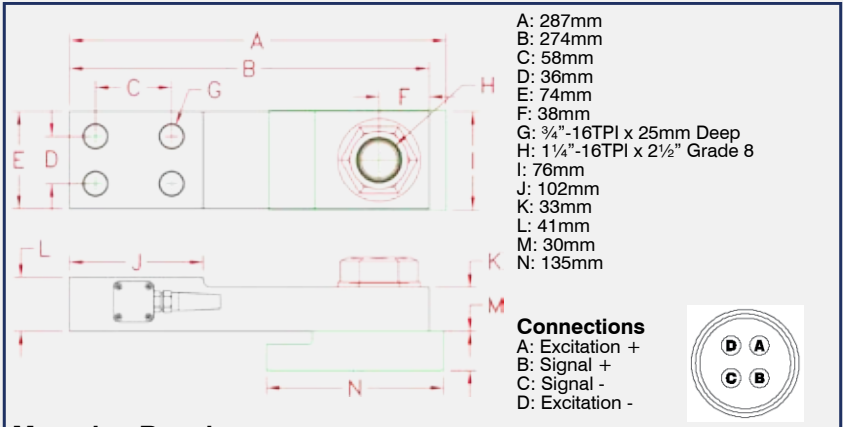
0.49.mv/v @ 3,175kg

Impedence:

350 Ω +/- 1.0 Ω

Isolation:

500M Ω at 50 volts



Mounting Requirements

Top Plate must be dead stiff and machined flat after welding.
 Bottom Mounting must be dead stiff.
 Bearing plate must be welded using 12mm fillet.
 Across ends and 100mm down each side (Both bearing plates must be parallel).

Capacity

Maximum Dynamic Load	3,175 kg (7,000 lb)
Maximum Static Load	4,500 kg (10,000 lb)
Top bolt thread engagement into loadcell	Min: 16mm Max: 22mm

Bolt Tensions

3/4" Top mounting bolts = 470Nm(350ft/lb)
 1-1/4" End mounting bolt = 1,370Nm(1,000ft/lb)
 Coat all bolts with anti-seize

Precautions

Do not strike an Arc on the loadcell body with a welder. It is OK to use the loadcell to position the Mounting Bushes for tack welding only. Remove the loadcell to complete the welding procedure.
 Do not damage the cover plate as this protects delicate strain gauges.
 Take care to protect the loadcell connector/cable as this can not be replaced in the field.
 Fit protection for the loadcell connector from stones and foreign objects which may damage it.
 Do not damage or paint over the Part/Serial Number identification tag.

IMPORTANT

Loadcell must be mounted in accordance with Elphinstone instructions. Failure to do so may void warranty. Specifications subject to change without notice. These specifications supercede all previous specifications as of October 2006.

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