

Cardinal LOAD CELLS

SERIES "Z" LOAD CELLS FOR TENSION APPLICATIONS



- **Capacities: 22.68 kg to 453.6 kg**
- **Waterproof construction**
- **Aluminum alloy models for economy**
- **9 m integral shielded cable**
- **2 year warranty**

The Series "Z" tension load cells are ideally suited for single load cell tension applications. Simplicity of design permits their use in a wide variety of configurations. These load cells are available in capacities of 22.68 kg to 453.6 kg.

The Series "Z" load cell is fabricated from aircraft-quality aluminum alloy, and offers a cost-effective solution to many tension applications.

Load cells (except Z-50 and Z-100) are potted with a proprietary sealant that provides for superior water protection and, at the same time, remains flexible over the life of the load cell. This special compound protects the load cell strain gages, and over a broad temperature range, has no effect on the load cell's precision accuracy.

Each load cell has threaded holes on each end for hanger assemblies, and a 9 m integral multiconductor cable secured by a compression and strain relief seal.

SPECIFICATIONS

Mechanical Data

Rated Capacity, (R.C.)E _{max}	22.68, 45.36, 113.4, 226.8 & 453.6 kg
Minimum Dead Load	2.27 (Z-50 & Z-100 only) & 4.5 kg
Safe Load Limit	150% R.C.
Ultimate Load	300% R.C.
Deflection at R.C.	0.2 to 0.8 mm
Spring Element Material	Aluminum
Net Weight	0.091 to 0.4 kg

Certificate Data

Issuing Body	NTEP
Certificate Number	88-166A1
Accuracy Class	III
Single/Multiple	S
Maximum Number of Load	
Cell Intervals, n _{max}	5,000 22.68 & 45.36 kg 3,000 all others
Accuracy Class	IIIL
Maximum Number of Load	
Cell Intervals, n _{max}	10,000
Single/Multiple	S
Minimum Load Cell	
Verification Interval V _{min}	
III	2.3, 4.6, 15.9, 31.8 & 63.5 g
IIIL	1.1, 2.3, 11.3, 22.7 & 45.4 g

Electrical Data

Rated Output	2±5% mV/V
Excitation Voltage, Recommended	12 VDC
Excitation Voltage, Maximum	20 VDC
Cable Length	9 m
Terminal Resistance	
Excitation	415 ± 12 ohms
Signal	350 ± 5 ohms
Zero Load Output	± 1% R.C.
Insulation Resistance	>5000 meg ohms @ 50 VDC

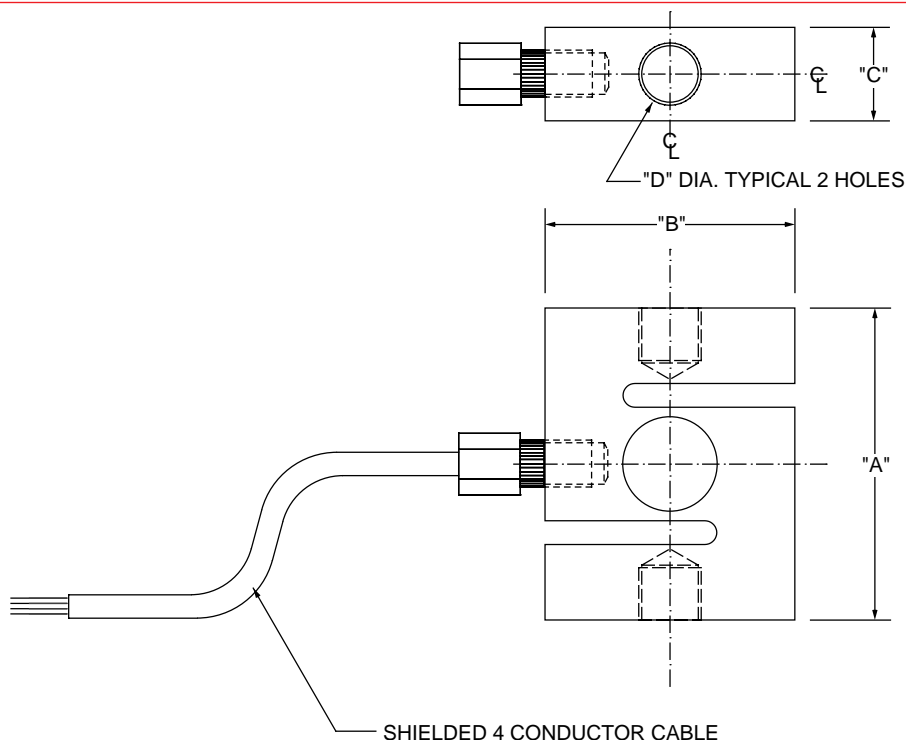
Environmental Data

Temperature Compensation	
Range	-10° to 40°C
Operating Temperature Range	-25° to 50°C
Construction & Protection	
Code	CP-55 AU
Barometric Pressure Effect	
on Zero Load Output	<1 v (min)/1kPa

Color Code

+ Excitation	Green	- Excitation	Black
- Signal	White	+ Signal	Red

Cardinal TENSION LOAD CELLS



DIMENSIONAL INFORMATION

SERIES "Z" LOAD CELLS

MODEL	CAPACITY	"A"	"B"	"C"	"D"
Z-50	22.68 kg	7.62	38.1	12.7	#10 - 32 NF
Z-100	45.36 kg	7.62	38.1	12.7	#10 - 32 NF
Z-250	113.4 kg	7.62	50.8	25.4	1/4" - 28 NF
Z-500	226.8 kg	69.8	50.8	25.4	1/2" - 20 NF
Z-1000	453.6 kg	69.8	50.8	25.4	1/2" - 20 NF

Series "Z" load cells are constructed of aluminum alloy and supplied with 9 m of cable.

All dimensions in mm unless otherwise noted.

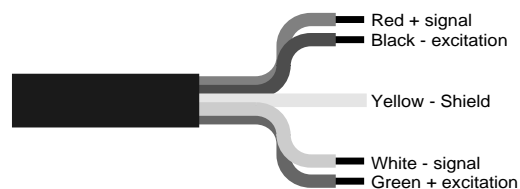


This load cell meets all requirements of Handbook 44, issued by the National Institute of Standards and Technology and have been issued the NTEP Certificate of Conformance No. 88-166A1.



Cardinal Scale reserves the right to improve, enhance and modify features and specifications without prior notice.

ELECTRICAL INFORMATION



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