

INSTRUCTION MANUAL CL CANTILEVER LOAD CELLS

Models: CL1-5, CL1-15, CL1-50, CL2-50, CL2-150, CL2-500

(NOTE: DO NOT HAMMER ON CL LOAD CELLS OR TAMPER WITH THE INTERNAL COMPONENTS)

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Periodically there will be updates to this manual. The latest version is available at www.magpowr.com or by calling 1-800-MAGPOWR (624-7697).

Remove envelope containing 4 setscrews from bore and install into sensor as shown below.

INTRODUCTION

The CL load cells are designed to be mounted on the vertical face of a machine side frame and to incorporate the customer's cantilever shaft and roll assembly. The CL load cell can be mounted on either the inside or outside of the machine side frame as shown in Figure 1.

MOUNTING

Select a clean flat surface where the wrap angle of the web does not change. Locate the centerline of the CL load cell mounting holes, so that it bisects the wrap angle of the web. Fasten with two capscrews making sure the capscrew penetration does not exceed dimension "N" shown on the outline dimension drawing. The force direction arrow should also bisect the wrap angle of the web and point in the same direction as the resultant tension force as shown in Figure 2.

NOTE: If the orientation of the load cell requires the force direction arrow to be pointed opposite the resultant tension force direction, then the black (s-) and white (s+) sensor leads to the MAGPOWR control terminal block must be reversed. (Figure 3)

SHAFT AND ROLL ASSEMBLY (SUPPLIED BY CUSTOMER)

Insert the customer's shaft and roll assembly into the CL load cell as shown below. Make sure that neither the shaft nor the roll will interfere with the CL load cell housing or the machine side frame (for outside frame mountings as shown below, the clearance hole in the machine side frame should be a minimum of .69 inch (17.5 mm) diameter for CL1 models and a minimum of 1.06 inch (26.9 mm) diameter for CL2 models). Tighten all four setscrews securely against the shaft. Connect the CL load cell to the control with shielded cable.

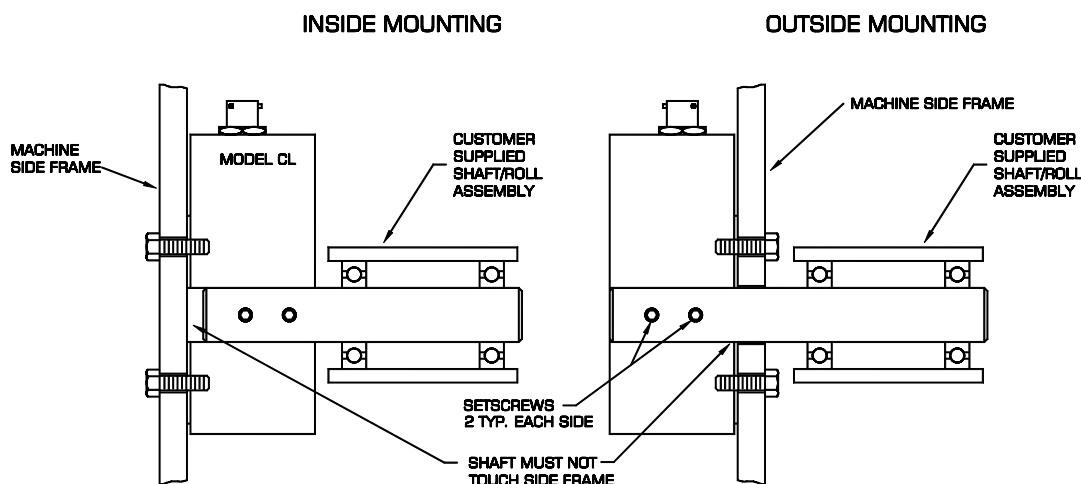


Figure 1

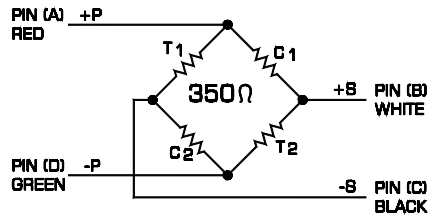


Figure 3
Wiring Diagram

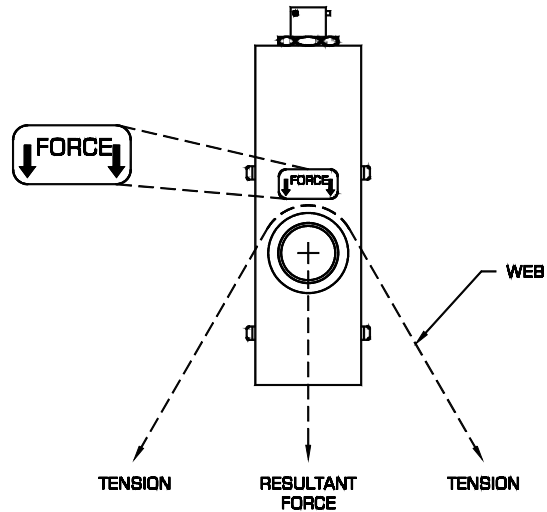


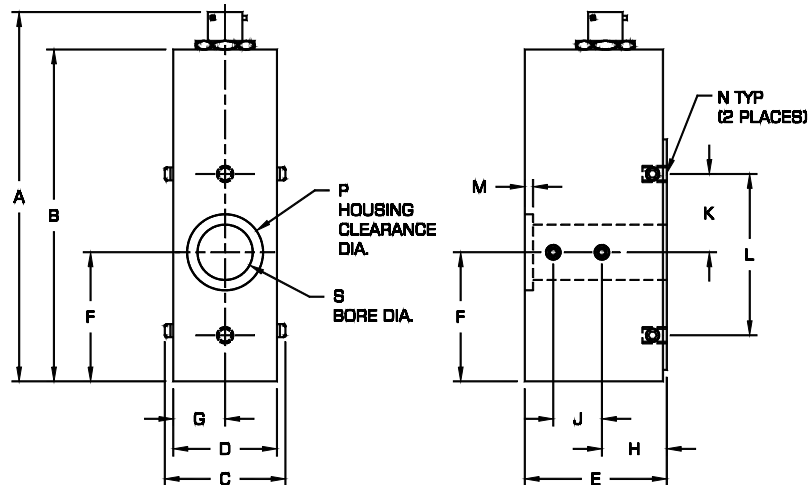
Figure 2

SPECIFICATIONS

Gage resistance	350 ohms
Excitation voltage	10 vdc nominal
Output Signal	21 mvdc nominal per sensor at full load rating
Operating Temperature	-30°C to 95°C
Combined Non-Linearity & Hysteresis	0.5% of full scale maximum (1.5% for CL2-500)
Repeatability	0.2% of full scale maximum
Deflection at full load	0.011" maximum
Electrical Connector	Magpower Part #12A97-1
Temperature Effect on Zero	0.02% of rating per °C
Climate Class	3K4 (EN60721)
IP Protection Classification	IP67 (EN60529)

DIMENSIONS

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	S ^{+0.002} _{-.000}
CL1-5 CL1-15 CL1-50	5.11	4.45	1.49	1.22	2.15	1.63	0.61	1.00	0.75	1.000	2.000	0.15	1/4-20 X .38 DP	0.88	0.625
CL2-50 CL2-150 CL2-500	6.27	5.61	2.03	1.72	2.40	2.22	0.86	1.13	0.75	1.375	2.750	0.15	3/8-16 X .50 DP	1.25	1.000



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