

# Multi-Component Sensors

## 50012 Series

### ROLLING RESISTANCE LOAD CELL

This multi-component force transducer was originally designed to measure "rolling resistance" or Fx, a common measurement needed in the automotive tire manufacturing and test industry. It is still used primarily for this purpose, and has also been adapted to other applications where Fy and Fz need to be measured. Various ranges and sizes are available up to a 20:1 ratio of capacities (consult our application engineers). The sensor can be cross talk compensated eliminating off axis loading effects.



### SPECIFICATIONS

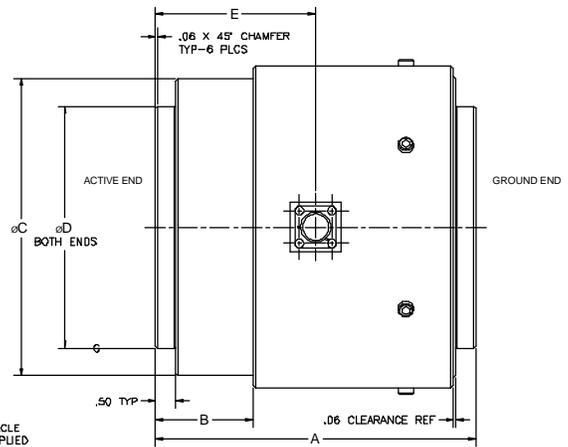
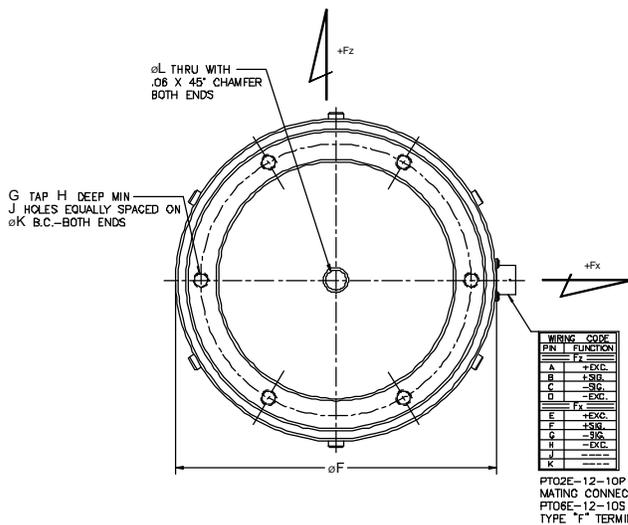
Capacity..... See chart  
 Overload capacity..... 150% of F.S.(In either direction)  
 Output at full scale load ..... 0.5 to 2mV/V (load dependant)  
 Non-linearity..... 0.10% of F.S.  
 Hysteresis..... 0.10% of F.S.  
 Zero balance..... 1% of F.S.  
 Compensated temperature..... 70 to 170°F  
 Useable temperature..... -65 to +250°F  
 Temperature effect on zero..... 0.002% of F.S./°F  
 Temperature effect on span..... 0.002% of Rdg./°F  
 Bridge resistance..... 700/350 Ohms  
 Excitation voltage, maximum..... 20 Vdc  
 Material..... Alloy steel

### DIMENSIONS

MODEL	CAPACITY		A	B	C	D	E	F	G	H	J	K
	Fx	Fz										
50012-00A	200	2000	8	2.43	7.5	6.000 5.999	4	8.00	3/8-24	.75	6	6.75
50012-00B	1000	15000	12	3.43	12.38	9.000 8.999	6	12.88	3/4-16	1.0	8	10.75
50012-00C	300	3000	8	2.43	7.5	6.000 5.999	4	8.00	3/8-24	.75	6	6.75
50012-00D	1000	10000	12	3.43	12.38	9.000 8.999	6	12.88	3/4-16	1.0	8	10.75
50012-00E	500	10000	12	3.43	12.38	9.000 8.999	6	12.88	3/4-16	1.0	8	10.75

### AXIAL LOAD CONFIGURATIONS

MODEL	CAPACITY			A	B	C	D	E	F	G	H	J	K
	Fx	Fy	Fz										
30003-00A	-	5000	7500	10	2.31	-	6.499	2.87	14	3/4-16	1.25	8	5.0
30004-00A	-	5000	5000	8	2.43	7.5	6.000 5.999	3.5	8	3/8-24	.75	6	6.75
70055-00A	350	5000	3000	8	2.43	7.5	6.000 5.999	4.0	8	3/8-24	.75	6	6.75



50012



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