

Amber Instruments Ltd

S-Type Load Cells



Features

- ◆ Capacities: 50 - 100 kg (110.23 - 220.46 lbs)
- ◆ Stainless steel (616) or aluminum (601)
- ◆ Tension or compression applications
- ◆ Suitable for hanging scales
- ◆ Ideal for conversion of mechanical to electronic scales
- ◆ Meets Handbook 44, OIML R60 and other international standards

Model TC01 and TC16 tension compression load cells are available in aluminum alloy (TC01) or stainless steel

(TC16). Model TC16 features stainless steel construction, IP67 environmental protection, 6 wire (sense) circuit, and a unique humidity-resistant protective coating. It is ideal for harsh environmental, high accuracy applications.

Ideally suited for lever conversions, hopper/tanks and vibratory feeders general process weighing and force measurement applications.

Model TC01 features aluminum alloy construction, IP 65 environmental protection and 4 wire circuit. It is ideal for lower cost, high accuracy applications.



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Torque Transducers, Load Cells (general purpose, weighing & fatigue rated). Multi-Axis Force/Torque, Weighing Instruments, Process Instruments, Portable Data Loggers, Pressure Sensors, Proximity Sensors, Laser (Distance Measuring) Sensors, & more.

Model TC01 - TC16

S-Type Load Cells

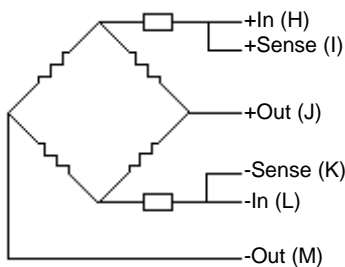
GRADE	E	F	G*	UNITS
Accuracy Class	50, 100, 250, 500			kg
Rated Capacity	100, 150, 200, 300, 500, 750, 1000			kg
Rated Output**	2 ± 0.10%			mV/V
Total Error***	1500	2000	3000	Divisions
Total Error	0.050	0.030	0.020	±% of Load
Creep at Rated Capacity / Zero Return After 30 Minutes	0.050	0.030	0.016	±% of Load
Zero Balance	10			±% of Rated Output
Temperature Range: Operating	-30 to +70			°C
Temperature Range: Compensated	-10 to +45			°C
Temperature Effect: On Output	0.0040	0.0015	0.0012	±% of Load / °C
Temperature Effect: On Zero	0.0080	0.0030	0.0027	±% of Rated Output / °C
Maximum Overload at the Center Loading Point	150			
Ultimate Overload at the Center Loading Point	300			
Excitation: Recommended	10			Volts AC or DC
Excitation: Maximum	15			Volts AC or DC
Input Impedance : 601 / 616	415 ± 15 / 385 ± 15			Ohms
Output Impedance	350 ± 3			Ohms
Insulation Resistance : 601 / 616	>1000 / >5000			Mega Ohms
Deflection at Rated Capacity	<0.4			mm
Weight: 601 / 616	0.41 / 0.58			kg
Construction: 601 / 616	Aluminum / Stainless Steel			
Cable: 601	3 Meter, 4 Conductor, PVC Jacket, Floating Shield			
Cable: 616	3 Meter, 6 Conductor, Polyurethane Jacket, Dual Floating Shield			
Environmental Protection	IP 65 / IP 67			
Approvals	OIML R60			

* G Class available on Model 616 > 300 kg only

** All accuracy specifications maintained when 150% of nominal load is applied for 3 mV/V output

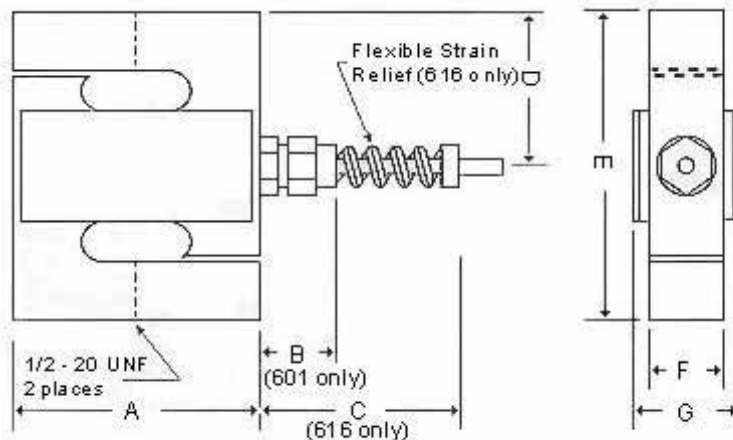
*** Nonlinearity, hysteresis, repeatability, and output temperature effect according to OIML R60 and NIST H-44

Balanced Temperature Compensation



The two "sense" wires (616 only) sample the bridge supply voltage at the load cell. Complete compensation of change in the lead wire resistance, due to temperature change and/or cable extension, is achieved by feeding this voltage into appropriate electronics.

Outline Dimensions All Capacities (in mm)



Dimensions

Model	601	616
A	2.75	2.50
B	0.80	--
C	--	2.04
D	1.50	1.57
E	3.00	3.15
F	1.00	0.75
G	1.35	1.08

Wiring Diagram

Model	601	616
H	Red	Green
I	--	Blue
J	Green	Red
K	--	Brown
L	Blue	Black
M	Yellow	White