

# CALIBRATION STANDARD (CS) SERIES LOAD CELLS

## FEATURES

- Designed for Metrology Lab Use
- Meets ASTM E74 Class A to 2% of Range, Class AA to 10% of Range (When Calibrated with Primary Standards)
- Lowest Creep
- Lowest Reproducibility Errors
- Includes ASTM E74 Transfer Standard Tension & Compression Calibration
- Temperature Compensated
- Proprietary Modulus Compensated Strain Gages
- Low Sensitivity to Rotation Error



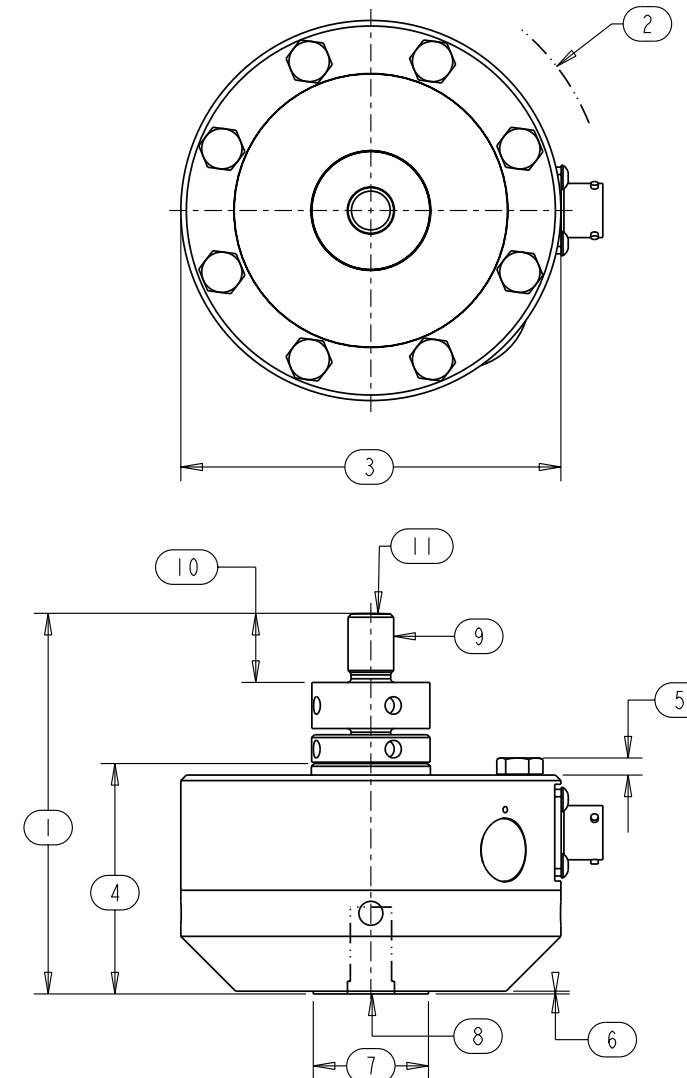
## SPECIFICATIONS

Model	CS10 300, 500 1K, 2K	CS10 5K, 10K	CS20 25K, 50K	CS22 60K	CS30 100K
Capacity U.S. lbf.	300, 500, 1K, 2K	5K, 10K	25K, 50K	60K	100K
PARAMETERS Metric kN	1.5, 2.5, 5, 10	25, 50	100, 250	270	300
<b>ACCURACY</b>					
Lower Load Limit % Rated Output	2.000	2.000	2.000	2.000	2.000
Static Error Band, % Rated Output	+/-0.020	+/-0.030	+/-0.030	+/-0.030	+/-0.030
Nonlinearity, % Rated Output	+/-0.020	+/-0.030	+/-0.030	+/-0.030	+/-0.030
Hysteresis, % Rated Output	+/-0.020	+/-0.040	+/-0.040	+/-0.040	+/-0.040
Nonrepeatability, % Rated Output	+/-0.005	+/-0.005	+/-0.005	+/-0.005	+/-0.005
Creep, % in 20 minutes	+/-0.010	+/-0.010	+/-0.010	+/-0.010	+/-0.010
Off-Center Load Sensitivity, %/inch	+/-0.050	+/-0.050	+/-0.050	+/-0.050	+/-0.050
Side Load Sensitivity, %	+/-0.050	+/-0.050	+/-0.050	+/-0.050	+/-0.050
Zero Balance, % Rated Output	+/-1.0	+/-1.0	+/-1.0	+/-1.0	+/-1.0
<b>TEMPERATURE</b>					
Range, Compensated, °F	+15 to +115	+15 to +115	+15 to +115	+15 to +115	+15 to +115
Range, Compensated, °C	-10 to +45	-10 to +45	-10 to +45	-10 to +45	-10 to +45
Range, Operating, °F	-65 to +200	-65 to +200	-65 to +200	-65 to +200	-65 to +200
Range, Operating, °C	-55 to +90	-55 to +90	-55 to +90	-55 to +90	-55 to +90
Effect on Sensitivity, % Rdg/ °F	+/-0.0008	+/-0.0008	+/-0.0008	+/-0.0008	+/-0.0008
Effect on Sensitivity, % Rdg/ °C	+/-0.0015	+/-0.0015	+/-0.0015	+/-0.0015	+/-0.0015
Effect on Zero, % Rated Output/ ° F	+/-0.0008	+/-0.0008	+/-0.0008	+/-0.0008	+/-0.0008
Effect on Zero, % Rated Output/ ° C	+/-0.0015	+/-0.0015	+/-0.0015	+/-0.0015	+/-0.0015
<b>ELECTRICAL</b>					
Rated Output, mV/V, Nominal	2	4	4	4	4
Excitation Voltage, VDC Maximum	20	20	20	20	20
Input Resistance, Ohms	350	350	350	350	350
Output Resistance, Ohms	350	350	350	350	350
Insulation Resistance, Megohm	5000	5000	5000	5000	5000
Bayonet Connector	PT02E-10-6P (MS3112E-10-6P)				
<b>MECHANICAL</b>					
Safe Overload Range, % Rated Capacity	+/-150	+/-150	+/-150	+/-150	+/-150
Weight lb	2.8	6.9	23.6	29.6	57.8
Weight kg	1.3	3.1	10.8	13.4	26.2
Flexure Material	Aluminum	Steel	Steel	Steel	Steel

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## DIMENSIONS

Model	CS10 300, 500 1K, 2K lbf	CS10M 1.5, 2.5, 5, 10 kN	CS10 5K, 10K lbf	CS10M 25, 50 kN	CS20 25K, 50K lbf	CS20M 100, 250 kN	CS22 60K lbf	CS22M 270 kN	CS30 100K lbf	CS30M 300 kN
Dimensions	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
1.	4.13	104.9	4.13	106.7	6.32	160.5	7.50	190.5	7.85	199.4
2.	R 2.53	R 64.3	R 2.53	R 64.3	R 3.50	R 88.9	R 3.50	R 88.9	R 4.50	R 114.3
3.	4.12	104.8	4.12	104.8	6.06	154	6.06	154.0	8.00	203.2
4.	2.50	63.5	2.50	63.5	3.50	88.9	4.50	114.3	4.50	114.3
5.	0.19	4.7	0.19	4.7	0.30	7.5	0.31	7.9	0.40	10.2
6.	0.03	0.8	0.03	0.8	0.03	0.8	0.03	0.8	0.03	0.8
7.	1.25	31.8	1.25	31.8	2.25	57.2	3.00	76.2	3.00	76.2
8.	1/2 - 20 .88 Deep	M12 x 1.25 22.4 Deep	5/8 - 18 .88 Deep	M16 x 2 22.4 Deep	1 1/4 - 12 1.50 Deep	M33 x 2 38.1 Deep	1 1/2 - 12 2.0 Deep	M36 x 2 30.8 Deep	1 3/4 - 12 1.75 Deep	M42 x 2 44.5 Deep
9.	1/2 - 20	M12 x 1.25	5/8 - 18	M16 x 2	1 1/4 - 12	M33 x 2	1 1/2 - 12	M36 x 2	1 3/4 - 12	M42 x 2
10.	0.75	19.0	0.75	19.0	1.50	38.1	1.50	38.1	1.75	44.5
11.	R 4.00	R 101.6	R 4.00	R 101.6	R 6.00	R 152.4	R 6.00	R 152.4	R 12.00	R 304.8



## OPTIONS

- Additional bridges
- Output adjustment to standard
- Compression overload protection
- Integral cable
- Custom connectors
- Connector Protectors

## ACCESSORIES

- Mating connector
- Loading fixtures
- Interconnect cable
- Shunt calibration resistor
- Instrumentation