FATIGUE RATED (FR) SERIES LOAD CELLS

FEATURES

- First Choice for Fatigue Testing Applications
- Guaranteed for 100 Million Fully Reversed Cycles
- Low Height
- Guaranteed Maximum Off-Center Load & Moment Error
- Low Creep
- Low Susceptibility to Magnetic Fields
- Barometric Pressure Compensation
- 5pt Tension & Compression Calibration
- Proprietary Modulus Compensated Strain Gages

SPECIFICATIONS

Model / Capacity U.S. lbf.	FR10 150, 250, 500, 1K	FR10 2.5K, 5K	FR20 12.5K, 25K	FR22 30K	FR30 50K
PARAMETERS Metric kN	.75, 1.25, 2.5, 5	12.5, 25	50, 125	135	150, 250
ACCURACY					
Static Error Band, % Rated Output	+/-0.030	+/-0.040	+/-0.040	+/-0.050	+/-0.050
Nonlinearity, % Rated Output	+/-0.040	+/-0.040	+/-0.040	+/-0.050	+/-0.050
Hysteresis, % Rated Output	+/-0.030	+/-0.040	+/-0.050	+/-0.050	+/-0.050
Nonrepeatability, % Rated Output	+/-0.010	+/-0.010	+/-0.010	+/-0.010	+/-0.010
Creep, % in 20 minutes	+/-0.025	+/-0.025	+/-0.025	+/-0.025	+/-0.025
Off-Center Load Sensitivity, %/inch	+/-0.100	+/-0.100	+/-0.100	+/-0.100	+/-0.100
Side Load Sensitivity, %	+/-0.100	+/-0.100	+/-0.100	+/-0.100	+/-0.100
Zero Balance, % Rated Output	+/-1.0	+/-1.0	+/-1.0	+/-1.0	+/-1.0
TEMPERATURE					
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
ELECTRICAL					
Rated Output, mV/V, Nominal	1	2	2	2	2
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)				
MECHANICAL					
Safe Overload Range, % Rated Capacity	+/- 300	+/- 300	+/- 300	+/- 300	+/- 300
Weight lb	1.0	2.9	9.1	9.1	23.5
Weight kg	0.5	1.3	4.1	4.1	10.7
Weight w/base lb	2.5	6.5	21.5	21.5	52.5
Weight w/base kg	1.1	3.0	9.8	9.8	23.8
Flexure Material	Aluminum	Steel	Steel	Steel	Steel

TOVEY ENGINEERING INNOVATION

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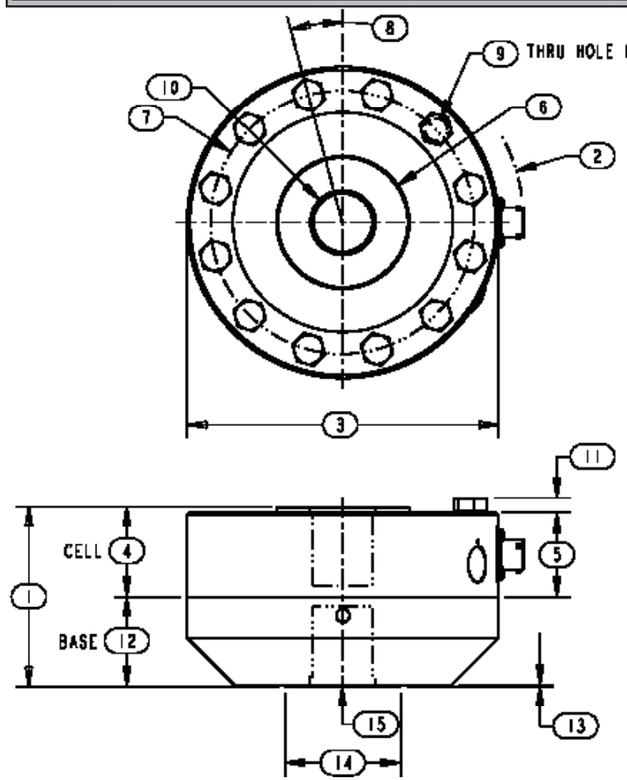
DIMENSIONS

Model / Capacity	FR10 150, 250, 500,1K lbf	FR10M .75, 1.25, 2.5, 5 kN	FR10 2.5K, 5K lbf	FR10M 12.5, 25 kN	FR20 12.5K, 25K lbf	FR20M 50, 125 kN	FR22 30K	FR22M 135kN	FR30 50K lbf	FR30M 150, 250 kN
Dimensions	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1.	2.51	63.5	2.51	63.5	3.51	88.9	4.50	114.3	4.50	114.3
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	154.0	6.06	154.0	8.00	203.2
4.	1.38	34.9	1.38	34.9	1.75	44.5	2.25	57.2	2.50	63.5
5.	1.25	31.8	1.25	31.8	1.63	41.3	2.13	54.1	2.25	57.2
6.	1.29	32.8	1.29	32.8	2.34 12.5K 2.58 25K	59.4 50kN 65.6 125kN	2.58	65.6	3.76	95.6
7.	3.50	88.9	3.50	88.9	5.13	130.3	5.13	130.3	6.50	165.1
8.	22.5°	22.5°	22.5°	22.5°	15°	15°	15°	15°	11.25°	11.25°
9.	.28 8 Places	7.1 8 Places	.28 8 Places	7.1 8 Places	.41 12 Places	10.3 12 Places	.47 12 Places	11.9 12 Places	.53 16 Places	13.5 16 Places
10.	1/2-20 1.12 Deep	M12 x 1.25 28.5 Deep	5/8 - 18 1.12 Deep	M16 x 2 28.5 Deep.	1 1/4 - 12 1.50 Deep	M33x 2 38.1 Deep	1 1/2 - 12 2.00 Deep	M36x 2 50.8 Deep	1 3/4-12 2.20 Deep	M42 x 2 55.9 Deep
11.	0.18	4.7	0.18	4.7	0.29	7.5	0.31	7.9	.40	10.2
12.	1.13	28.6	1.13	28.6	1.75	44.5	2.25	57.2	2.00	50.8
13.	0.03	0.8	0.03	0.8	0.03	0.8	0.03	0.8	0.03	0.8
14.	1.25	31.8	1.25	31.8	2.25	57.2	3.00	76.2	3.00	76.2
15.	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 2.00 Deep	M36 x 2 50.8 Deep	1 3/4-12 1.75 Deep	M42 x 2 44.5 Deep



OPTIONS

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

ACCESSORIES

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

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