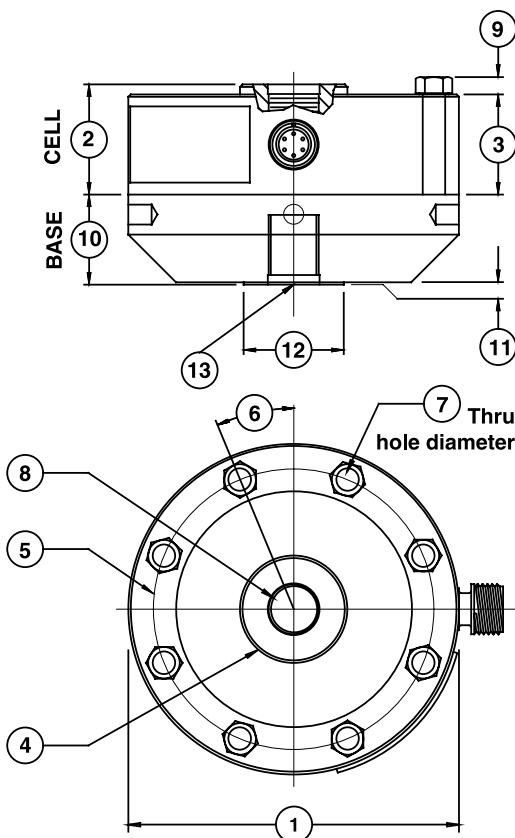


Model 1100 Ultra Precision Load Cell (U.S. & Metric)

Why the Interface model 1100 Ultra Precision Load Cell is the best in class:

- Proprietary Interface temperature compensated strain gages
- Performance to .02%
- High output – to 4 mV/V
- Eccentric load compensated
- Low deflection
- .0008%/°F (.0015%/°C) temp. effect on output
- Shunt calibration
- High precision base included
- Barometric compensation
- Tension and compression



DIMENSIONS

| See Drawing | MODEL | | | | | | | |
|-------------|-------------------------------|-------------------------|-----------------|--------------|-----------------|--------------|----------------|--------------|
| | 1110 | | 1120 | | 1132 | | 1140 | |
| | CAPACITY | | | | | | | |
| | U.S. (lbf) | Metric (kN) | U.S. (lbf) | Metric (kN) | U.S. (lbf) | Metric (kN) | U.S. (lbf) | Metric (kN) |
| | 300, 500, 1K, 2K, 3K, 5K, 10K | 1.5, 2.5, 5, 10, 25, 50 | 25K, 50K | 100, 250 | 100K | 450 | 200K | 900 |
| | inch | mm | inch | mm | inch | mm | inch | mm |
| ① | 4.13 | 104.8 | 6.06 | 153.9 | 8.00 | 203.2 | 11.0 | 279.0 |
| ② | 1.38 | 34.9 | 1.75 | 44.5 | 2.50 | 63.5 | 3.50 | 88.9 |
| ③ | 1.25 | 31.7 | 1.63 | 41.4 | 2.25 | 57.2 | 3.00 | 76.2 |
| ④ | 1.34 | 34.0 | 2.65 | 67.3 | 3.76 | 95.2 | 4.81 | 122.2 |
| ⑤ | 3.50 | 88.9 | 5.13 | 130.3 | 6.50 | 165.1 | 9.00 | 228.6 |
| ⑥ | 22.5° | 22.5° | 15.0° | 15.0° | 11.25° | 11.25° | 11.25° | 11.25° |
| ⑦ | 0.28 | 7.10 | 0.41 | 10.4 | 0.53 | 13.5 | 0.65 | 16.5 |
| ⑧ | 5/8-18 UNF-3B | M-16 X 2-4H | 1 1/4-12 UNF-3B | M33 X 2-4H | 1 3/4-12 UNF-3B | M42 X 2-4H | 2 3/4-8 UNF-3B | M72 X 2-4H |
| | 1.12 in deep | 28.4 mm deep | 1.40 in deep | 35.6 mm deep | 2.15 in deep | 54.6 mm deep | 3.25 in deep | 82.6 mm deep |
| ⑨ | 0.20 | 5.10 | 0.30 | 7.60 | 0.40 | 10.2 | 0.50 | 12.7 |
| ⑩ | 1.13 | 28.6 | 1.75 | 44.5 | 2.00 | 50.8 | 3.00 | 76.2 |
| ⑪ | 0.03 | 0.80 | 0.03 | 0.80 | 0.03 | 0.80 | 0.03 | 0.80 |
| ⑫ | 1.25 | 31.8 | 2.25 | 57.2 | 3.00 | 76.2 | 4.50 | 114.3 |
| ⑬ | 5/8-18 UNF-3B | M-16 X 2-4H | 1 1/4-12 UNF-3B | M33 X 2-4H | 1 3/4-12 UNF-3B | M42 X 2-4H | 2 3/4-8 UNF-3B | M72 X 2-4H |
| | .87 in deep | 22.1 mm deep | 1.40 in deep | 35.6 mm deep | 1.75 in deep | 44.5 mm deep | 2.75 in deep | 69.8 mm deep |

SPECIFICATIONS

| PARAMETERS | MODEL | | | | |
|---------------------------------|----------------------------|-------------|-------------|-------------|-------------|
| | 1110 | 1110 | 1120 | 1132 | 1140 |
| | CAPACITY | | | | |
| U.S. Models (lbf) | 300, 500, 1K, 2K, 3K | 5K, 10K | 25K, 50K | 100K | 200K |
| Metric Models (kN) | 1.5, 2.5, 5, 10 | 25, 50 | 100, 250 | 450 | 900 |
| ACCURACY – (MAX ERROR) | | | | | |
| Static Error Band-% FS | ±0.02 | ±0.03 | ±0.04 | ±0.05 | ±0.06 |
| Nonlinearity-% FS | ±0.03 | ±0.04 | ±0.04 | ±0.05 | ±0.06 |
| Hysteresis-% FS | ±0.02 | ±0.04 | ±0.05 | ±0.05 | ±0.06 |
| Nonrepeatability-% RO | ±0.01 | ±0.01 | ±0.01 | ±0.01 | ±0.01 |
| Creep, in 20 min-% | ±0.025 | ±0.025 | ±0.025 | ±0.025 | ±0.025 |
| Side Load Sensitivity-% | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |
| Eccentric Load Sensitivity-%/in | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |
| TEMPERATURE | | | | | |
| Compensated Range-°F | 15 to 115 | 15 to 115 | 15 to 115 | 15 to 115 | 15 to 115 |
| Compensated Range-°C | -10 to 45 | -10 to 45 | -10 to 45 | -10 to 45 | -10 to 45 |
| Operating Range-°F | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 | -65 to 200 |
| Operating Range-°C | -55 to 90 | -55 to 90 | -55 to 90 | -55 to 90 | -55 to 90 |
| Effect on Zero-%RO/°F – MAX | ±0.0004 | ±0.0004 | ±0.0004 | ±0.0004 | ±0.0004 |
| Effect on Zero-%RO/°C – MAX | ±0.0007 | ±0.0007 | ±0.0007 | ±0.0007 | ±0.0007 |
| Effect on Output-%/°F – MAX | ±0.0008 | ±0.0008 | ±0.0008 | ±0.0008 | ±0.0008 |
| Effect on Output-%/°C – MAX | ±0.0015 | ±0.0015 | ±0.0015 | ±0.0015 | ±0.0015 |
| ELECTRICAL | | | | | |
| Rated Output-mV/V (Nominal) | 2.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Excitation Voltage-VDC MAX | 20 | 20 | 20 | 20 | 20 |
| Bridge Resistance-Ohm (Nominal) | 350 | 350 | 350 | 350 | 350 |
| Zero Balance-% RO | ±1.0 | ±1.0 | ±1.0 | ±1.0 | ±1.0 |
| Insulation Resistance-Megohm | 5000 | 5000 | 5000 | 5000 | 5000 |
| MECHANICAL | | | | | |
| Safe Overload-% CAP | ±150 | ±150 | ±150 | ±150 | ±150 |
| Deflection @ RO-inch | 0.002 | 0.004 | 0.004 | 0.006 | 0.012 |
| Deflection @ RO-mm | 0.05 | 0.10 | 0.10 | 0.15 | 0.20 |
| Base Part Number (Ref) (Metric) | B101 (m) | B102 (m) | B103 (m) | B112 (m) | B105 (m) |
| Natural Frequency-kHz | 2.7, 3.5, 4.9, 7.0, 8.5 | 4.7, 6.6 | 4.6, 5.0 | 4.0 | 3.5 |
| Weight-lb | 3.3 | 7.3 | 21.5 | 52 | 146 |
| Weight-kg | 1.5 | 3.3 | 9.8 | 24 | 66 |
| Connector | PC04E-10-6P | PC04E-10-6P | PC04E-10-6P | PC04E-10-6P | PC04E-10-6P |
| Calibration | T & C | T & C | T & C | T & C | T & C |

OPTIONS*Page 115

Compression Overload Protection
 Integral 10 ft Cable
 Bayonet Connector
 Multiple Bridge
 Standardized Output
 Connector Protection
 See Transducer Electronic Data Sheet (TEDS) Page 118

STANDARD CONFIGURATIONS

10 ft Integral Cable (11xxAJ-nn)
 <or> PC04E-10-6P Connector (11xxAF-nn)
 <or> PTO2E-10-6P Bayonet Connector (11xxACK-nn)

ACCESSORIES*Page 119

Mating Connector
 Instrumentation
 Loading Hardware

*See appendix for more technical information