

1100 ULTRA PRECISION LOAD CELL (U.S. & METRIC)

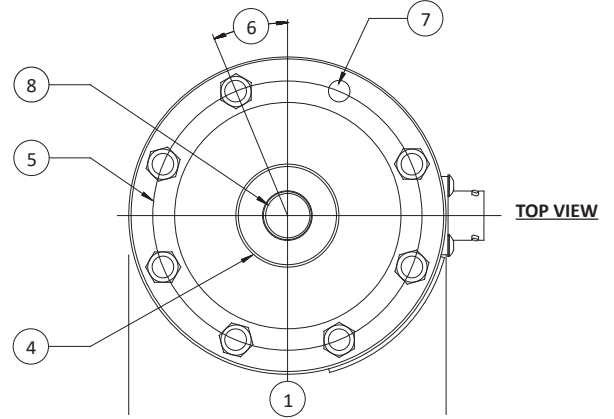
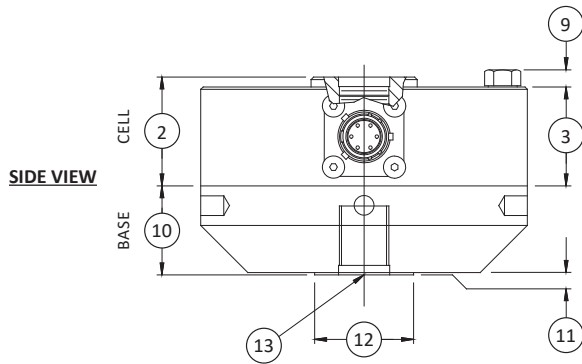
FEATURES & BENEFITS

- Capacities from 300 to 200K lbf (1.5 to 900 kN)
- Proprietary Interface temperature compensated strain gages
- Performance to 0.02%
- High output – to 4 mV/V
- Eccentric load compensated
- Low deflection
- 0.0008%/°F (0.0015%/°C) temp. effect on output
- Shunt calibration
- High precision base included
- Barometric compensation
- Tension and compression

STANDARD CONFIGURATION



Model 1120ACK-50K (Shown)



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 | 15K, 20K, 25K, 50K | 66.7, 89, 100, 250 | 100K | 450 | 200K | 900 |
| in | mm | in | mm | in | mm | in | mm | |
| (1) | Ø4.13 | Ø104.8 | Ø6.06 | Ø153.9 | Ø8.00 | Ø203.2 | Ø11.00 | Ø279.0 |
| (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) | Ø1.34 | Ø34.0 | Ø2.65 | Ø67.3 | Ø3.76 | Ø95.2 | Ø4.81 | Ø122.2 |
| (5) | Ø3.50 | Ø88.9 | Ø5.13 | Ø130.3 | Ø6.50 | Ø165.1 | Ø9.00 | Ø228.6 |
| (6) | 22.5° | | 15.0° | | 11.25° | | 11.25° | |
| (7) | Ø0.28 | Ø7.10 | Ø0.41 | Ø10.4 | Ø0.53 | Ø13.5 | Ø0.65 | Ø16.5 |
| (8) | 8 Places | | 12 Places | | 16 Places | | | |
| (8) | ¾-18 UNF-3B ↓ 1.12 | M16x2-4H ↓ 28.4 | 1 ¼-12 UNF-3B ↓ 1.40 | M33x2-4H ↓ 35.6 | 1 ¾-12 UNF-3B ↓ 2.15 | M42x2-4H ↓ 54.6 | 2 ¾-8 UNF-3B ↓ 3.25 | M72x2-4H ↓ 82.6 |
| (9) | 0.20 | 5.1 | 0.30 | 7.6 | 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 | 0.8 | 0.03 | 0.8 | 0.03 | 0.8 | 0.03 | 0.8 |
| (12) | 1.25 | Ø 31.8 | Ø 2.25 | Ø 57.2 | Ø 3.00 | Ø 76.2 | Ø 4.50 | Ø 114.3 |
| (13) | ¾-18 UNF-3B ↓ 0.87 | M16x2-4H ↓ 22.1 | 1 ¼-12 UNF-3B ↓ 1.40 | M33x2-4H ↓ 35.6 | 1 ¾-12 UNF-3B ↓ 1.75 | M42x2-4H ↓ 44.5 | 2 ¾-8 UNF-3B ↓ 2.75 | M72x2-4H ↓ 69.8 |

1100 v2.602-04-2022

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SPECIFICATIONS

| PARAMETERS | | MODEL | | | | |
|-------------------------------------|-------------|-------------------------|-------------|--------------------|----------------|-----------------|
| | | 1110 | 1110 | 1120 | 1132 | 1140 |
| | | CAPACITY | | | | |
| Measuring Range | U.S. (lbf) | 300, 500, 1K, 2K, 3K | 5K, 10K | 15K, 20K, 25K, 50K | 100K | 200K |
| | Metric (kN) | 1.5, 2.5, 5, 10 | 25, 50 | 66.7, 89, 100, 250 | 450 | 900 |
| ACCURACY – (MAX ERROR) | | | | | | |
| Static Error Band – % FS | | ±0.02 | ±0.025 | ±0.035 | ±0.05 | ±0.06 |
| Nonlinearity – %FS | | ±0.03 | ±0.035 | ±0.035 | ±0.05 | ±0.06 |
| Hysteresis – %FS | | ±0.02 | ±0.035 | ±0.045 | ±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 |
| | °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 |
| | °C | -55 to +90 | -55 to +90 | -55 to +90 | -55 to +90 | -55 to +90 |
| Effect on Zero – %RO / deg | °F | ±0.0004 | ±0.0004 | ±0.0004 | ±0.0004 | ±0.0004 |
| | °C | ±0.0007 | ±0.0007 | ±0.0007 | ±0.0007 | ±0.0007 |
| Effect on Output – % / deg | °F | ±0.0008 | ±0.0008 | ±0.0008 | ±0.0008 | ±0.0008 |
| | °C | ±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 | in | 0.002 | 0.004 | 0.004 | 0.006 | 0.012 |
| | mm | 0.05 | 0.10 | 0.10 | 0.15 | 0.20 |
| Base – P/N (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 | lbs | 1.1 (2.59 w/base) | 1.1 | 9.4 (21.7 w/base) | 24 (53 w/base) | 62 (143 w/base) |
| | kg | 0.49 | 0.49 | 10.9 | 23.6 | 28.1 |
| Calibration | | Tension & Compression | | | | |
| Material | | Aluminum | | Alloy Steel | | |

OPTIONS

- Compression overload protection
- Connector protection
- Standardized output
- Transducer Electronic Data Sheet (TEDS)
- Custom calibration
- Multiple bridge
- Special threads
- Dual diaphragm
- Special temperature range
- Cable length
- Add connector to cable

CONNECTOR OPTIONS

- Integral cable 10ft (3m)
- PT02E-10-6P bayonet connector
- PC04E-10-6P screw-type connector

ACCESSORIES

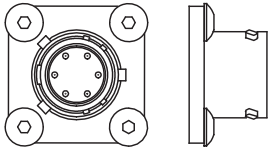
- Mating connector
- Mating cable
- Instrumentation
- Loading hardware

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BAYONET CONNECTOR



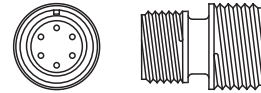
Model 1120ACK-50K (Shown)



SCREW TYPE CONNECTOR



Model 1120AF-50K (Shown)



INTEGRAL 10FT CABLE CONNECTOR



Model 1120AJ-50K (Shown)

