



Series PNC710

General Purpose Tension and Compression Pancake Load Cell



Standard Features

- 0.10% Linearity
- Tension and Compression
- 3 mV/V output
- Welded Stainless Steel
- Excellent Off-Axis Capability
- Standard Ranges to 200,000 lbs.
- Shock and Vibration Resistant
- Barometrically Compensated
- 5 Point Tension Calibration Record Traceable to NIST

Optional Features

- Customer Specified Threaded Center Hole
- Customer Specified Electrical Termination
- Metric Versions
- Overload Stops
- Special Calibrations
- Internal Amplifier for High Level Analog and/or Digital Output
- Dual Bridges
- -320°F to 400°F Operating Temperature

Description

The Series PNC710 load cells are high accuracy low profile “pancake” designs for both tension and compression applications. These force sensors incorporate a threaded-through center hole with dual diaphragms welded to the sensing section and the mounting outer section. This design increases rigidity thus reducing both the effects of off-center loading and side loading. The PNC710 series is constructed of welded stainless steel for very demanding application environments. Hermetic stainless steel electrical connectors with gold plated pins are standard. Additional features include shock and vibration protection and barometric compensation. These load cells are configured to be universally interchangeable within the industry. Each unit is shipped with a 5 point calibration record traceable to NIST as standard.

Performance

Standard Ranges

100 lbs. FSO to 200,000 lbs. FSO.

Output

3 mV/V $\pm 0.50\%$ FSO.

Linearity

0.10% FSO*.

Hysteresis

0.08% FSO*.

Temperature Effect on Zero

0.002% FSO/°F.

Temperature Effect on Span

0.002% Reading/°F.

Zero Balance

1% FSO.

**Note: For the 50K lb. unit, values are typical, maximum error is 0.20% FSO BFSL.*

Environmental Characteristics

Operating Temperature Range

-65°F to 250°F.

(-320°F to 400°F optional.)

Compensated Temperature Range

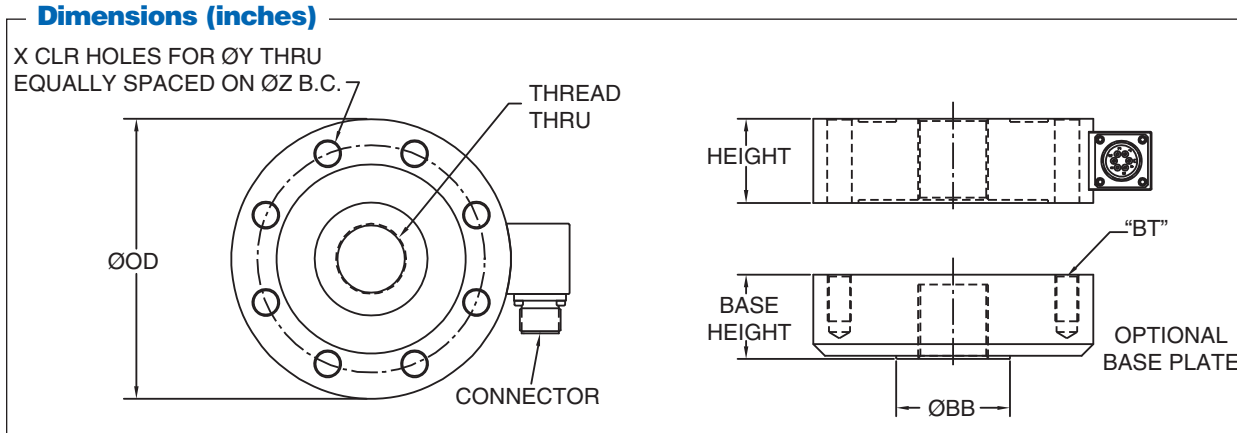
70°F to 170°F.

(-65°F to 400°F optional.)

Series PNC710

Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available



Capacity (lbs.)	ØOD	Thread	Height	X	Y	Z	Base Height	ØBB	Base Thread Depth	Base BT
100, 250, 500, 1000	3.00	3/8-24 UNF	1.00	6	0.28	2.250	1.00	1.00	0.75	1/4-28 x 0.50 deep
Amplified- 100 thru 1000	3.00	3/8-24 UNF	1.38	6	0.28	2.250	1.00	1.00	0.75	1/4-28 x 0.50 deep
2K, 5K	3.50	1/2-20 UNF	1.00	6	0.34	2.625	1.00	1.50	0.75	5/16-24 x 0.50 deep
Amplified- 2K, 5K	3.50	1/2-20 UNF	1.38	6	0.34	2.625	1.00	1.50	0.75	5/16-24 x 0.50 deep
10K, 15K, 20K	5.50	1-14 UN	1.80	8	0.41	4.500	1.50	2.00	0.75	3/8-24 x 0.75 deep
20K, 30K, 50K	6.00	1-1/2-12 UN	1.80	8	0.53	4.875	1.80	2.50	1.00	1/2-13 x 1.00 deep
75K, 100K	9.00	2-12 UN	2.50	12	0.66	7.750	2.50	3.00	1.25	5/8-18 x 1.00 deep
150K, 200K	11.00	2-1/2-12 UN	3.00	12	0.89	9.500	3.00	NA	1.75	7/8-14 x 1.50 deep

Mechanical Characteristics

Static Overload Without Damage

150% Range.

Standard Calibration

Tension only:

5 points (0, 50%, 100%, 50%, 0 of Range).

Optional Calibrations

• Compression only:

5 points (No charge option)

• Tension and Compression:

5 points in each direction

• Special multipoint calibration (customer specified):

in tension or compression or both tension and compression.

Material

Welded stainless steel.

Threads

Female threads (See table).

Metric threads available as option.

Electrical Characteristics

Bridge Resistance

350 Ohms nominal.

Excitation

10 Vdc or Vac.

Insulation Resistance

Greater than 5000 megaohms at 50 Vdc.

Electrical Termination

Ranges Up To 5000 lbs.

Hermetic Welded PTIH-10-6P Stainless

Steel Connector or equivalent.

Ranges Over 5000 lbs.

Bolted Hermetic MS3102-14S-6P

Stainless Steel Connector with

O-ring seal.

For All Ranges

Integral cables, at customer specified lengths, are available.

Electrical Characteristics

Connector Pins (Standard)

A +EXE D - EXE

B +EXE E - SIG

C - EXE F +SIG

Customer specified wiring codes are available.

Options

Load Button

Optional.

Thread Stops

Optional.

Base Plate Kits

Optional - See Table.

Can be installed at factory for calibration.



Modifications and Warranty

MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

WARRANTY: Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.



ISO 9001/AS9100

Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

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