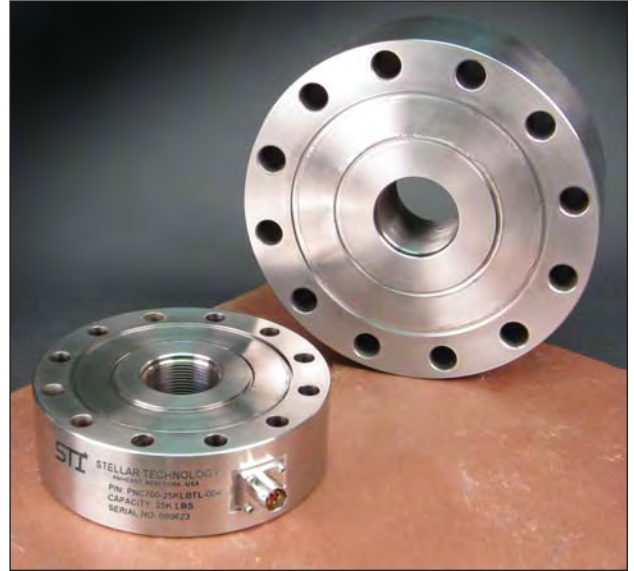


# Series PNC700

General Purpose, Rugged Pancake Load Cell

## Standard Features

- **Low Profile  
Tension / Compression  
Pancake**
- **All Welded Stainless Steel**
- **High Accuracy 0.05%**
- **-65° to 250° F Operation**
- **Barometrically  
Compensated**
- **High Off-Axis Capability**
- **3 mV/V Operation  
and Amplified**



## Standard Specifications

### Performance

|                                      |  |
|--------------------------------------|--|
| <b>Capacities</b>                    | From 100 to 100,000 lbs FSO (see table). |
| <b>Output</b>                        | 3 mV/V nominal.                          |
| <b>Accuracy</b>                      | 0.05% FSO BFSL.                          |
| <b>Linearity</b>                     | 0.05% FSO TYP.                           |
| <b>Hysteresis</b>                    | 0.05% FSO TYP.                           |
| <b>Repeatability</b>                 | 0.02% FSO.                               |
| <b>Compensated Temperature Range</b> | 70°F to 170°F.                           |
| <b>Operating Temperature Range</b>   | -65° to 250° F.                          |
| <b>Temperature Effect on Zero</b>    | 0.002% FSO/°F.                           |
| <b>Temperature Effect on Span</b>    | 0.002% Reading/°F.                       |
| <b>Zero Balance</b>                  | 1% FSO.                                  |
| <b>Bridge Resistance</b>             | 350 Ohms nominal.                        |

### Mechanical Characteristics

|                                 |  |
|---------------------------------|--|
| <b>Calibration</b>              | 5 Points (0, 50%, 100%, 50%, 0) Tension. |
| <b>Static Overload Capacity</b> | 150% FSO.                                |
| <b>Construction</b>             | Welded stainless steel.                  |

### Electrical Characteristics

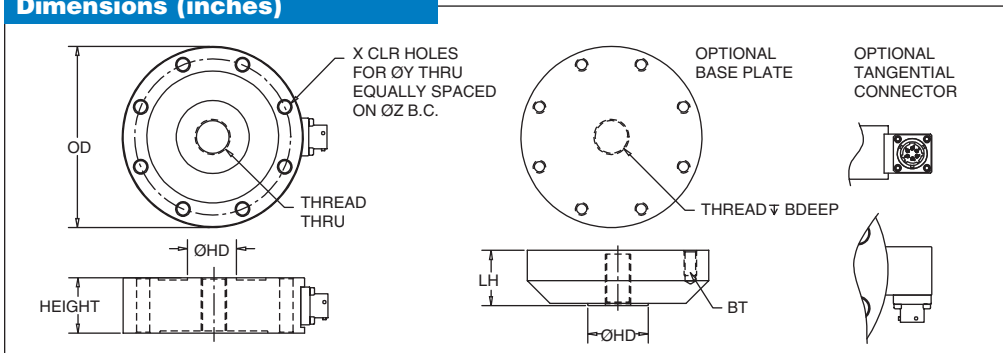
|                               |  |
|-------------------------------|--|
| <b>Excitation</b>             | 10 Vdc or Vac.   |
| <b>Insulation Resistance</b>  | Greater than 5000 megaohms at 50 Vdc at 70°F.                |
| <b>Electrical Termination</b> | PTIH-10-6P, Stainless steel connector with<br>O-ring Seal    |
| <b>Connector Pins</b>         | A +EXE      D - EXE<br>B +SIG      E NC<br>C - SIG      F NC |

PNC700

# Series PNC700 Specifications

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

## Dimensions (inches)



### NOTES:

1. 100 LB THRU 5000 LB UNITS ARE COUNTER-BORED FOR SOCKET HEAD CAP SCREWS.
2. OPTIONAL THREAD STOPS ADDED IN LOAD CELL WHEN ORDERED WITH BASE KIT.

| Capacity (lbs.) | ØOD  | Thread      | Height | HD   | X  | Y    | Z     | Base LH | Base BDEEP | Base BT             |
|-----------------|------|-------------|--------|------|----|------|-------|---------|------------|---------------------|
| 100, 250        | 3.00 | 3/8-24 UNF  | 1.00   | 0.75 | 6  | 0.28 | 2.500 | 1.00    | 0.50       | 1/4-28 X 0.50 DEEP  |
| 500, 1000       | 3.00 | 1/2-20 UNF  | 1.00   | 0.75 | 6  | 0.28 | 2.500 | 1.00    | 0.68       | 1/4-28 X 0.50 DEEP  |
| 2.5K, 5K        | 3.50 | 5/8-18 UNF  | 1.00   | 0.91 | 6  | 0.34 | 2.875 | 1.00    | 0.90       | 5/16-24 X 0.50 DEEP |
| 10K, 15K        | 4.50 | 1-14 UN     | 1.38   | 1.76 | 8  | 0.34 | 3.875 | 1.38    | 1.25       | 5/16-24 X 0.63 DEEP |
| 25k, 50K        | 6.50 | 1-3/4-12 UN | 2.00   | 3.00 | 12 | 0.47 | 5.625 | 2.00    | 1.75       | 7/16-20 X 0.88 DEEP |
| 75K, 100K       | 8.50 | 2-1/4-12 UN | 2.50   | 3.75 | 12 | 0.66 | 7.375 | 2.50    | 2.25       | 5/8-18 X 1.00 DEEP  |

## Available Options

|                                       |   |
|---------------------------------------|---|
| <b>Threads</b>                        | Metric or Custom.   |
| <b>Output</b>                         | Standardized output.  |
| <b>Off-Axis Compensation</b>          | Customer specified.   |
| <b>Dimensions</b>                     | Custom dimensions welcome.  |
| <b>Compensated Temperature Ranges</b> | From -65° to 400° F.  |
| <b>Operating Temperature Ranges</b>   | From -65° to 400° F.  |
| <b>Calibration</b>                    | Additional calibration points (in addition to standard points).<br>Special and custom calibrations.   |
| <b>Amplifiers</b>                     | Internal and/or In-Line.<br>• Analog (4-20 mA; 0-5 Vdc; 0-10 Vdc).<br>• Digital (RS-232; RS-485; CANbus; MODbus).   |
| <b>Multiple Bridges</b>               | Dual and Triple bridges.  |
| <b>Calibration Range</b>              | Special full scale ranges (Example: 740 lb).  |
| <b>Cables and Cable Length</b>        | Various cable types. Specify Cable length.  |
| <b>Cable Connector</b>                | Add a connector to the end of the cable.  |
| <b>Connectors</b>                     | Mounting Styles. Bolt on: Radial, tangential, axial or custom with O-ring<br>Welded hermetic.<br>Bolt on with back-up hermetic seal.<br>Connectors (PT04, MS3102, etc.).<br>Connector guards. |
| <b>Hermetically Sealed</b>            | Hermetic seal, O-ring Seal and combinations.  |
| <b>Overload Protection</b>            | Compression. Overload stops take up to 10X FSO.   |
| <b>Shock and Vibration</b>            | All Stellar load cells come standard with shock and vibration protection.   |
| <b>Submersible</b>                    | Submersible option to depths of 16,000 feet deep (sea water).   |
| <b>Custom Options</b>                 | Other customer requested options welcome.   |

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NOTES: When using a load cell the user must consider load ratings and fatigue life for long term use and structural integrity. Critical loading applications, especially overhead loading, must always be designed with safety redundant load paths. MODIFICATIONS: We realize load cell applications vary greatly and as such our designs are flexible. 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.

Find More Information at:  
[stellartech.com](http://stellartech.com)

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

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# Series PNC700

## Supplemental Technical Details

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

*The PNC700 was designed to be the best combination of compact, rugged, stainless steel and cost effective in a pancake load cell.*

### The load cell includes:

- Large center threads
- All welded stainless steel construction
- Compact size, low profile

### Standard features include:

- Shock and Vibration rated
- Stainless steel connector with glass to metal seal for pins. Pins are gold plated.
- Connector is sealed to the sensor with an O-Ring seal. Hermetic Optional
- All bolts holes for connector connection, regardless of connector orientation are Blind Holes that won't allow water or fluids to seep past the seals.
- Full calibration report - never a charge for a full certified data report.

The table listing Maximum extraneous loads pertain to the load cell only.

The user supplied mechanical engagement to the inner hub (typicall a threaded rod) will generally not be as strong as the load cell. We would be glad to help with any questions in determining the best sizes for your application.

### MAXIMUM EXTRANEIOUS LOADS (%FS LOAD)

*Loads listed may not be applied in combination. For combination loading, please consult factory.*

| Capacity (lbs.) | Thread      | Bending (In-Lb) | Side Load (Lbs) | Torque ( In-Lb) |
|-----------------|-------------|-----------------|-----------------|-----------------|
| 100, 250        | 3/8-24 UNF  | 40%             | 100%            | 50%             |
| 500, 1000       | 1/2-20 UNF  | 40%             | 100%            | 50%             |
| 2.5K, 5K        | 5/8-18 UNF  | 35%             | 50%             | 50%             |
| 10K, 15K        | 7/8-14 UN   | 40%             | 50%             | 50%             |
| 25k, 50K        | 1-1/2-12 UN | 40%             | 50%             | 50%             |
| 75K, 100K       | 2-12 UN     | 50%             | 50%             | 50%             |

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NOTES: When using a load cell the user must consider load ratings and fatigue life for long term use and structural integrity. Critical loading applications, especially overhead loading, must always be designed with safety redundant load paths.

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