



## P700

### SPECIFICATIONS

- ◆ **Rugged Design for Harsh Environments**
- ◆ **Versatile Packaging Design**
- ◆ **Low and High Level Output Signals**
- ◆ **Intrinsic Safety Approval to Ex ia IIc T4**
- ◆ **High Overpressure Capability**

P700 series pressure transducers are designed for high reliability and stability. The all welded construction incorporates a double cantilever beam with bonded foil strain gauges. Coupling to the pressure diaphragm via a force rod, gives excellent thermal isolation from the fluid or gas being measured. High overload protection is an integral part of the design. These units are capable of sensing extremely small changes of applied pressure and are relatively insensitive to vibration, altitude and shock.

For parts requiring RoHS compliance, please contact factory.

## FEATURES

- ◆ Low and High Level Output
- ◆ All Welded Construction
- ◆ High Pressure Overload Protection
- ◆ Pressure Ranges 0-10,000 PSI (0.7 to 700 bars)
- ◆ 2 Wire 4-20 mA Option BASEEFA and Cenelec Approval Class Ex ia IIc T4

## APPLICATIONS

- ◆ Hydraulic Pressure Monitoring
- ◆ Torpedo Depth Sensing
- ◆ Vehicle Brake System Monitoring
- ◆ Military and Commercial Aircraft

## PERFORMANCE SPECS

<b>Low Level Output</b>			
<b>Model Number</b>	P711/9	P721/4	P701/9
<b>Input Supply</b>	10VDC/AC RMS	10VDC/AC RMS	10VDC/AC RMS
Voltage (Max)	12V	12V	12 V
Impedance (ohms)	350	350	350
Current	±5%	±5%	±5%
	-	-	-
<b>Output at +25°C</b>			
Full Range Output with 1 metre cable	25mV, ±2%	25mV, ±2%	25mV, ±1%
Impedance (ohm)	350, ±5%	350, ±5%	350, ±5%
Current (mA max)	-	-	-
Residual Unbalance % F.R.O.	< ± 2	< ± 2	< ± 1
<b>Accuracy</b>			
Combined Non-Linearity (Typical)	± 0.2	± 0.2	± 0.18
Hysteresis and Non Repeatability % F.R.O. (Max)	± 0.2	± 0.5	± 0.3
Combined Thermal M.R.	± 0.03	± 0.03	± 0.02
Zero and Sensitivity Error %F.R.O./ °C H.R.	± 0.03	± 0.03	± 0.015
<b>Physical</b>			
Max. Height (L/mm)	64.4	64.4	64.4
Cable version (mm/in.)	83/3.27	83/3.27	83/3.27
Connector version (mm/in.)	83/3.27	83/3.27	83/3.27
Weight (gm)	230	230	230

**PERFORMANCE SPECS (CONT)**

<b>High Level Output</b>					
<b>Model Number</b>	P741/9	P751/9	P761/9	P781/9	P791/9
<b>Input Supply</b>					
Voltage (Max)	10VDC/AC RMS	11-18VDC	18-32VDC	10-36VDC	15VDC
Impedance (ohms)	12 V max	-	-	-	-
Current	30-35mA	20-40mA	30-40mA	-	30mA
<b>Output at +25°C</b>					
Full Range Output with 1 metre cable	5V ±1%	2.5V ±1%	5V ±1%	4-20 mA	5.0 ±1%
Impedance (ohm)	<10 ohm	<10 ohm	<10 ohm	Load Resist. 1.0 k max. at 36VDC	<10 ohm
Current (mA max)	5	5	5	-	5
Residual Unbalance % F.R.O.	< ± 1	< ± 2	< ± 1	1 < ± 1	< ± 1
<b>Accuracy</b>					
Combined Non-Linearity (Typical)	± 0.18	± 0.18	± 0.18	± 0.18	± 0.18
Hysteresis and Non Repeatability % F.R.O. (Max)	± 0.25	± 0.25	± 0.25	± 0.25	± 0.25
Combined Thermal M.R.	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Zero and Sensitivity Error %F.R.O./°C H.R.	± 0.015	± 0.015	± 0.015	± 0.015	± 0.015
<b>Physical</b>					
Max. Height (L/mm)	91.6	91.6	91.6	91.6	91.6
Cable version (mm/in.)	99/3.90	114/4.49	114/4.49	129/5.07	99/3.90
Connector version (mm/in.)	99/3.90	114/4.49	114/4.49	129/5.07	99/3.90
Weight (gm)	250 gm	250 gm	250 gm	250 gm	250 gm

**COMMON SPECIFICATIONS**

- Pressure Ranges** Gauge or absolute reference
- High (psi)** 0-75, 100, 150, 200, 250, 350, 500, 750, 1000, 1500, 2000, 2500, 3500, 5000, 7500, 10,000
- (bar)** 0-5, 0, 7, 10, 15, 20, 25, 35, 50, 70, 100, 150, 200, 250, 350, 500, 700
- Medium (psi)** 0-10, 15, 20, 25, 35, 50
- (bar)** 0-0.7, 1.0, 1.5, 2.0, 2.5, 3.5
- DIN (bar)** 0.6, 1, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600
- Pressure Limit** <5x full range pressure or 12,000 psi whichever is less
- Burst Pressure** >10x full range pressure or 20,000 psi whichever is less
- Pressure Media** Liquids or gases compatible with 17-4 PH and 17-7 PH stainless steel or Inconel 625
- Shunt Calibration** 80% ±5% full range pressure
- Residual Unbalance** <±1% F.R.O. P700  
<±2% F.R.O. P720
  
- Temperature Range**
- Operable** -65°F to 250°F (-54°C to 120°C)
- Compensated** 32°F to 212°F (0°C to 100°C)
- Humidity**
- Plug Outlet** 95% Relative humidity
- Cable Outlet** Immersible to 1000 feet
- Acceleration Response** < 0.10% F.R.O./g (Medium range)  
<0.02% F.R.O./g (High range)
- Natural Frequency** Approx 2.5 kHz for 10 psi to approx 40 kHz for 10,000 psi
- Insulation Resistance** 500 MOhm at 50 VDC

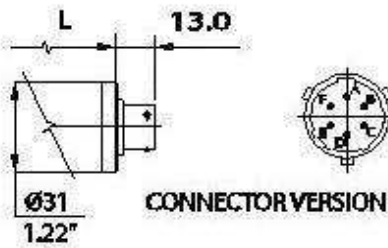
1. A low current consumption version is available (1000 ohm bridge) at extra cost.

## CONNECTIONS

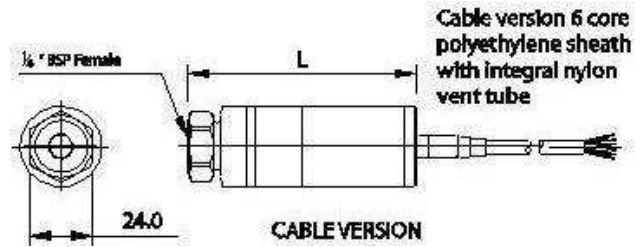
### CONNECTIONS:

CABLE CONNECTIONS  
RED\* PIN A\* EXCITATION (+)  
WHITE PIN D EXCITATION (-)  
YELLOW PIN B OUTPUT (+)  
BLUE\* PIN C\* OUTPUT (-)  
VIOLET PIN E } 80% Shunt calibration  
GREY PIN F }

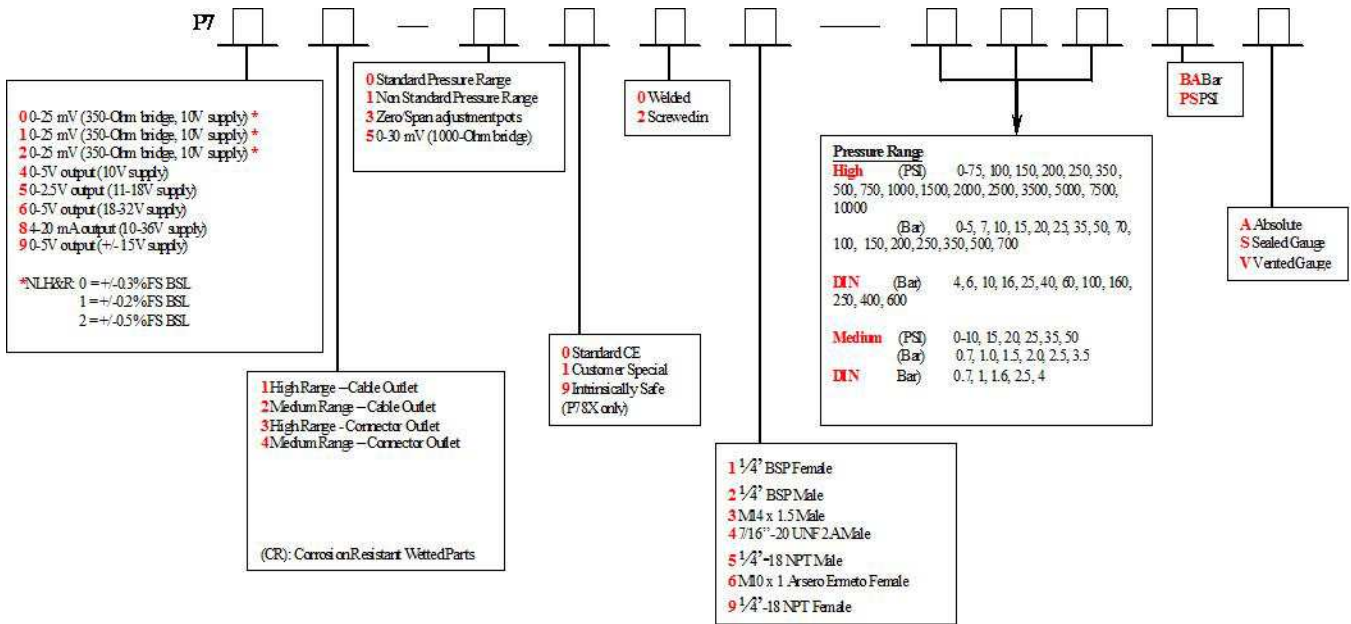
\* 2 - Wire transmitter connections  
0 Volt P791/4



6 way bayonet  
hermetically sealed  
MII - C 26482  
shell size 10



## ORDERING INFORMATION



**NOTE:** Unit comes standard with 1 meter of cable.

For a different cable length, add 2 digits "xx" to the end of the configuration above indicating the length desired. Max 20 meters.

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