

# DYNISCO MODEL PT290

## Button-Seal Mounting Pressure Transmitters for Process Control in Hazardous Areas

### Description

The PT290 transmitters were developed as a lower cost replacement for button - seal transmitters. The PT290 is built to use existing mounting hardware and in locations where similar Taylor units had been installed. Models are available with Factory Mutual (FM) explosion - proof or FM intrinsically safe (SIRA) approvals. Both models are approved for Class I, Division I, Groups A, B, C and D. The 290 Series is the ideal choice for low pressure applications.

### Features

- Accuracy of better than  $\pm 0.5\%$  full scale
- 0 - 25 psi (0 - 2 bar) to 0 - 10,000 psi (0 - 700 bar)
- Replacement for traditional "button - seal" units
- New diaphragm design
- 4 to 20 mA loop powered output
- New side - mounted zero and span adjustments
- Various configurations
- New amplifier
- Heavy - duty welded electronics housing
- Thermocouple or RTD option available

### Benefits

- Improves process optimization
- Proper range choice improves performance
- Installs in "button" seal holes
- Improved stability
- Industry standard
- Reduces set - up time
- Easy to install
- Superior resistance to electromagnetic noise
- Environmental protection
- Temperature measurement from same process connection



Taylor replacement model shown

## Specifications



### Performance Characteristics

#### Ranges:

psi: 0 - 25, 0 - 50, 0 - 100, 0 - 250, 0 - 500, 0 - 750,  
0 - 1,000, 0 - 1,500, 0 - 3,000, 0 - 5,000, 0 - 7,500, 0 - 10,000  
bar: 0 - 2, 0 - 3, 0 - 7, 0 - 15, 0 - 30, 0 - 50, 0 - 100, 0 - 200,  
0 - 350, 0 - 500, 0 - 700

**Accuracy:**  $\pm 0.5\%$  FSO

**Repeatability:**  $\pm 0.1\%$  FSO

**Maximum pressure:** 2 x full range below 7,500 psi, 1.5 x full range for 10,000 psi

**Material in contact with pressure media:** DyMax™ coated 15 - 5 PH stainless steel

**Weight:** 2 lbs. (.9 kg)

### Electrical Characteristics

**Input voltage:** 12 to 36 Vdc

**Output:** 4 to 20 mA (2 - wire)

**Maximum load resistance:** 600 Ohms at 24 Vdc, 1,200 Ohms at 36 volts

**Gain (span) adjustment range:**  $\pm 25\%$  FSO minimum, factory set to within  $\pm 0.5\%$

**Load regulation:** At operating voltage of 24 Vdc, current output will vary  $< 0.25\%$  full scale for a change of 10 to 600 Ohms

**Zero balance adjustment range:**  $\pm 40\%$  FSO up to 100 psi,  $\pm 25\%$  FSO

at higher ranges (positive output indicated only). Factory set to within  $\pm 0.5\%$

### Temperature Characteristics

#### Transducer diaphragm:

Maximum transducer diaphragm temperature: 750°F (400°C)

Zero shift due to temperature change:

1.0 psi/100°F typical (from 75°F to 450°F)

2.0 psi/100°F typical (from 450°F to 600°F)

.07 bar/38°C typical (from 24°C to 232°C)

.14 bar/38°C typical (from 232°C to 315°C)

#### Electronics housing:

Operating temperature range: -20°F to +140°F (-28° to +60°C)

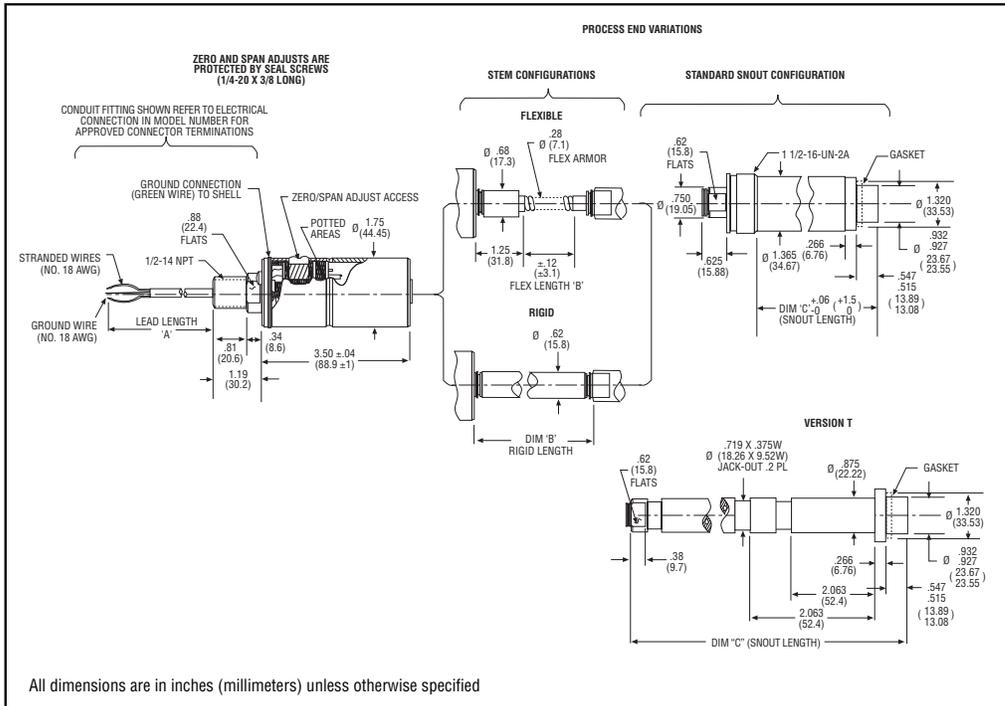
Temperature effects over a compensated range of 0°F to 140°F (-18°C to +60°C):

Zero: 0.01% full scale/°F maximum (0.02% full scale/°C maximum)

Span: 0.01% full scale/°F maximum (0.02% full scale/°C maximum)

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## Ordering Guide

Model	Diaphragm Material/Coating		Approvals		Pressure Range		Snout		
	Code	Material/Coating	Code	Description	Code	psi	Code	bar	
PT290		15 - 5 PH SST with DyMax™ coating		No approval	25	0 - 25	2B	(0 - 2)	Specify length from 1.2 to 10.0 decimal inches (3.05 to 25.4 cm)
	B	15 - 5 PH SST with Borofuse Coating	E	FM Explosion - proof	50	0 - 50	3B	(0 - 3)	
	H	Hastelloy	S	FM intrinsically safe	1C	0 - 100	7B	(0 - 7)	
	I	Inconel			2.5C	0 - 250	15B	(0 - 15)	
	T	15 - 5 PH SST with Titanium Nitride Coating			5C	0 - 500	30B	(0 - 30)	
					7.5C	0 - 750	50B	(0 - 50)	
					1M	0 - 1,000	70B	(0 - 70)	
					1.5M	0 - 1,500	1CB	(0 - 100)	
					3M	0 - 3,000	2CB	(0 - 200)	
					5M	0 - 5,000	3.5CB	(0 - 350)	
				7.5M	0 - 7,500	5CB	(0 - 500)		
				10M	0 - 10,000	7CB	(0 - 700)		

Stem Lengths		Electrical Connection		Thermocouple/RTD
Rigid	Flexible	Conduit Fitting with Cable	Connectors	Options
Specify length from 0 to 36 inches (0 to 91.4 cm) and add "R" after number	30"	42" standard Additional lengths available up to 999"	C6 = PT02A - 10 - 6P C6G = PT02H - 10 - 6P C6H = PT1H - 10 - 6P C7D = DIN 7 pins C7T = TAJIMI C8 = PC02E - 12 - 8P	Please consult factory. Not available on explosion - proof approved models

**Note:** Consult factory for available options and alternate full scale settings

Ordering Examples: PT290S - 3M - 6/60; PT290H - 5M - 4.8/60 - C6 - TC