DYNISCO MODEL PT291
Flange Mounting Button-Seal Pressure Transmitters for Process Control in Hazardous Areas

Description
The PT291 transmitters were designed for applications where an adjustable flange configuration is required. 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 ±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

Specifications

Performance Characteristics
Ranges: Accuracy: ±0.5% FSO
- 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

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
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: ±40% FSO up to 100 psi, ±25% FSO at higher ranges (positive output indicated only). Factory set to within ±0.5%

Output: 4 to 20 mA (2-wire)
Gain (span) adjustment range: ±25% FSO minimum, factory set to within ±0.5%

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

Temperature Characteristics
Temperature diaphragm:
Maximum temperature range: 750°F (400°C)
Zero shift due to temperature change:
1.0 psi/100°F typical (from 73°F to 450°F)
2.0 psi/100°F typical (from 450°F to 800°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

<table>
<thead>
<tr>
<th>Model</th>
<th>Diaphragm Material/Coating</th>
<th>Approvals</th>
<th>Pressure Range</th>
<th>Snout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Code</td>
<td>Material/Coating</td>
<td>Description</td>
<td>Code</td>
</tr>
<tr>
<td>PT291</td>
<td>15 - 5 PH SST with DyMax™ coating</td>
<td>No approval</td>
<td>25</td>
<td>0 - 25</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>15 - 5 PH SST</td>
<td>FM Explosion - proof</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>with Borofuse Coating</td>
<td>FM intrinsically safe</td>
<td>1C</td>
<td>0 - 100</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>Hastelloy</td>
<td>Flange</td>
<td>5C</td>
</tr>
<tr>
<td></td>
<td>I</td>
<td>Inconel</td>
<td>Standard flange (SI)</td>
<td>7.5C</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>15 - 5 PH SST with Titanium</td>
<td>as shown in outline</td>
<td>1M</td>
</tr>
<tr>
<td></td>
<td>with Nitride Coating</td>
<td>drawing, Consult factory for optional flange configurations</td>
<td>1.5M</td>
<td>0 - 1,500</td>
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<tr>
<td></td>
<td>3M</td>
<td>0 - 3,000</td>
<td>3CB (0 - 200)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5M</td>
<td>0 - 5,000</td>
<td>3.5CB (0 - 350)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.5M</td>
<td>0 - 7,500</td>
<td>5CB (0 - 500)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10M</td>
<td>0 - 10,000</td>
<td>7CB (0 - 700)</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Rigid Stem Lengths</th>
<th>Flexible Stem Lengths</th>
<th>Conduit Fitting with Cable</th>
<th>Electrical Connection</th>
<th>Thermocouple/RTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify length from 0 to 36 inches (0 to 91.4 cm) and add “R” after number</td>
<td>36”</td>
<td>42° standard</td>
<td>C6 = PT02A - 10 - 6P</td>
<td>Please consult factory. Not available on explosion - proof approved models</td>
</tr>
<tr>
<td>Additional lengths available up to 999”</td>
<td></td>
<td>C6G = PT02H - 10 - 6P</td>
<td></td>
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<tr>
<td>C6H = PT1H - 10 - 6P</td>
<td></td>
<td>C7D = DIN 7 pins</td>
<td></td>
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<tr>
<td>C7T = TAJIMI</td>
<td></td>
<td>C8 = PC02E - 12 - 8P</td>
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</tbody>
</table>

Note: Consult factory for optional flange configurations, alternate full scale settings and other options.

Ordering Examples: PT291S - 1M - 6/60; PT291H - 5M - 4.8/60 - C6 - TC; PT291HS - 1C - 2/3.5R - 72