MODEL 411, 411X/P

FEATURES:
- 4-20 mA with digital HART protocol
- 0-15 PSI thru 0-100K PSI (0-1 thru 6,895 BAR)
- 5:1 turndown ratio
- Secondary containment for oil services
- Submersible version
- FM, CSA explosion-proof versions

APPLICATIONS:
- Offshore rigs and pumping platforms
- Oil and gas/chemical pipeline and processing
- Marine and shipboard service
- Submersible level

PRODUCT OVERVIEW:
The Model 411, 411X/P from GP:50 is a SMART rangeable pressure transmitter incorporating a 4-20 mA output with digital HART protocol. Units are offered with both CSA and FM approval options, as well as a variety of process and electrical connections. Improved accuracy provides for a stable measurement throughout the total compensated temperature range.

FIELD OPTIONS:
- 5:1 turndown ratio for most ranges
- Multiple pressure and temperature outputs
- Exotic wetted materials
- Submersible level option
- Alternate process connections
- Optional 4-20 mA temperature output
### ELECTRICAL

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage</td>
<td>12-36 Vdc</td>
</tr>
<tr>
<td>Output Signal</td>
<td>Two wire 4-20 mA with digital HART protocol</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>250 Ω at 17 Vdc</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>Better than 10 MΩ at 50 Vdc</td>
</tr>
<tr>
<td>Circuit Protection</td>
<td>RFI/EMI, reverse polarity</td>
</tr>
<tr>
<td>(voltage transients above 45 V to 20 A at 0.02 milliseconds)</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>12-bit</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>From 0.07 to 40 sec (software adjustable)</td>
</tr>
<tr>
<td>Connection</td>
<td>1/2” NPT M conduit with 6-ft 18 AWG multi-conductor cable</td>
</tr>
</tbody>
</table>

### MATERIALS OF CONSTRUCTION

- **Wetted Parts**: 17-4 PH stainless steel (Optional Inconel 718, K12X, or 13-8 Monel)
- **Housing**: 316 stainless steel

### STATIC ACCURACY (BFSL)

- **Standard**: ±0.25% FSO
- **Improved**: ±0.1% FSO
- **Zero Balance and FSO**: ±0.5% FSO at +70 °F

### PRESSURE RANGES

- **0-15 PSI thru 0-100K PSI, PSIA, PSIV, PSIG (1 BAR Y thru 6,895 BAR)**
- **Range Adjustments**: 5:1 for ranges 0-5 PSI thru 0-100K PSI (0.3 BAR thru 6,895 BAR)

### MECHANICAL

- **Process Connection**: 0-5 thru 0-15K PSI (0-0.3 thru 0-1,035 BAR), PSIV: 1/4” NPT (F)
- **0-20K thru 0-50K PSI (0-1,380 thru 0-3,450 BAR)**: Autoclave type F-250-C
- **0-60K thru 0-75K PSI (0-4,135 thru 0-5,170 BAR)**: Autoclave type F-312-C150
- **Proof Pressure**: 0-15K (1,035 BAR) PSI 1.5X FSO
- **Burst Pressure**: 0-15K 3X FSO
- **20K-100K (6,894 BAR) PSIG 1.5X FSO**
- **20K-100K (6,894 BAR) PSIG 1.5X FSO or 125K PSIG (8,618 BAR)**, whichever is less
- **Long-term Stability**: 0.25% FSPR over six months
- **Approximate Weight**: <24 oz (0.7 kg)
- **Enclosure**: IP67

### THERMAL SPECIFICATIONS

- **Compensated**: 0 to +170 °F (-18 °C to +77 °C)
- **Operating Ambient**: -40 °F to +185 °F (-40 °C to +85 °C)
- **Effect on Zero/Span (1:1)**: ±0.25% FSO/100 °F
- **At 5:1 Ranging**: ±0.50% FSO/100 °F

All specifications are for reference purposes only. In the interests of continuous product improvement, all specifications are subject to change without notice. Please contact GP:50 for assistance with your application.