PRESSURE SENSORS

PDP3 Series 0-2”  
PDP3 Series 0-10”, 0-25”  
PG Gauge Series  
PW Wet-Wet Series (Cable Version)  
PW Wet-Wet Series (Conduit Version)  
PW Series Ordering Guidance

Selectable ranges and an LCD are a technician’s best friend, that’s why we make them standard on every dry media differential pressure sensor!

Three installation friendly packages

Choose from our open frame panel mount, NEMA4 with integral duct probe, or NEMA4 with brass hose barb fittings. Each model offers the standard LCD and selectable range selector for ease of installation.

Dual outputs on every device save time when ordering and all low pressure models offer uni/bi-directional modes. Available in inches of water column or pascals models.
**Probe, duct, panel**

**Low Differential Pressure**

0-2” W.C., 0-500Pa version All-in-one
Zero-drift sensing technology
Standard LCD display
Dual 0-5/10VDC and 4-20mA outputs

**DESCRIPTION**

This PDP series dry media pressure sensors cover up to 0-2” (0-500Pa) and offers industry-leading long-term stability thanks to a fully calibrated and temperature compensated application specific integrated circuit (ASIC) in the piezoresistive silicon pressure sensor. The sensor features five field selectable ranges in both inches of WC and pascals, dual 0-5/0-10VDC and 4-20mA outputs, uni/bi-directional modes, and LCD readout for ease of installation.

**APPLICATIONS**

- Ideal for clean rooms, hospitals, fume hoods, computer rooms, and other very low differential pressure applications
- Static pressure in duct or room, variable air volume system control, and filter status monitoring

**FEATURES**

**Industry-leading long-term stability**
- On-board application specific integrated circuit (ASIC)
- Fully calibrated and temperature compensated for sensor offset, sensitivity, temperature effects, and non-linearity

**Easy to install and maintain**
- Mount in any position. No gravity effect
- LCD display for easy setup and commissioning

**Push button selectable ranges, outputs, and modes**
- One model with five ranges: 0-2” (0.1, 0.25, 0.5, 1.0, 2.0) and 0-500Pa (.025, .062, .125, .250, .500kPa)
- Jumper selectable uni- or bi-directional
- Dual outputs 4-20mA and jumper selectable 0-5V or 0-10V

**Three Versatile package styles:**
- Open Frame: Panel mount DIN or screw-mount model
- Probe: NEMA 4 with integral duct probe
- Duct: NEMA 4 with brass hose barb fittings
ORDERING

PDP3 [ ]-002-A

**Package**
- 0 = Open Frame
- 1 = NEMA 4
- 2 = NEMA 4 / duct probe

(Write your selected Package number in the box above)

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>12-30VDC/24VAC(1), 30mA max.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-30VDC/24VAC Required for 10V F.S. Output</td>
</tr>
<tr>
<td>Output Type</td>
<td>Dual</td>
</tr>
<tr>
<td></td>
<td>3-wire 0-5/10VDC and 3-wire 4-20mA</td>
</tr>
<tr>
<td>Output scaling</td>
<td>Model PDP3X-002-A, selectable ranges</td>
</tr>
<tr>
<td></td>
<td>0-500Pa (.025/.062/.125/.250/.500kPa)</td>
</tr>
<tr>
<td></td>
<td>uni or bi-directional (jumper selectable)</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>Temperature range 32 to 122 F (0-50C)</td>
</tr>
<tr>
<td></td>
<td>Humidity range 0-95% RH</td>
</tr>
<tr>
<td>Media compatibility</td>
<td>Dry, oil-free air. Nitrogen</td>
</tr>
<tr>
<td>Sensor Type</td>
<td>Silicon Ceramic Diaphragm</td>
</tr>
</tbody>
</table>

Sensor Performance

- Position effects: None - position insensitive
- Zero Drift: None
- Accuracy: +/-0.25% of full scale BFSL
- Total Band Error: +/-2.5% of full scale

Other Performance

- Maximum Working Pressure: 135” W.C.
- Maximum Over Pressure: 270” W.C.
- Burst Pressure: 415” W.C.
- Maximum Common Mode Pressure: 1400” W.C.

Enclosure

- PDP30-002-A (Panel Mount): Open frame, 35mm DIN rail or screw mount
- PDP31-002-A (Duct or Panel Mount): IP65, screw mount, brass hose barb fittings
- PDP32-002-A (Duct Mount w/pickup tube): IP65, screw mount, brass hose barb fitting and static pickup tube

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.

TYPICAL WIRING

**WIRING:**

PWR = Power Supply +
GND = Common (power & signal)
0-10V = Voltage output 5v/10vdc
4-20mA = Current output 4-20mA

(PWR and GND required for both Voltage and Current output operation)
** Probe, duct, panel  
** Static - Differential Pressure  

0-25”, 0-7000 Pa versions  
Accurate silicon piezoresistive sensor  
LCD display (WC or pascal models)  
Dual 0-5/10VDC and 4-20mA outputs  

** DESCRIPTION  
This PDP series dry media pressure sensors cover up to 0-25” (0-7000pA). The transmitter features field selectable pressure ranges LCD readout for ease of installation. Piezoresistive sensor chip provides accurate and reliable sensing.

** APPLICATIONS  
- Static pressure in duct or room, variable air volume system control, and filter status monitoring

** FEATURES  

Integrated, micromachined silicon piezoresistive sensor
- Outstanding sensitivity, linearity, and hysteresis

Switch-selectable ranges
- Three WC models with three ranges each: 0-10” (Selectable 2.5, 5.0, 10.0”WC) or 0-25” (Selectable 10, 15, 25”WC)
- Three Pa models with three ranges each: 0-2500Pa (0-2500/1250/250”Pa uni-directional only) or 0-7000Pa (Selectable 0-7000 (7000/5000/2500 Pa uni-directional)
- Dual outputs 4-20mA and jumper selectable 0-5V or 0-10V

Easy to install and maintain
- LCD display for easy setup and commissioning
- Auto zero push button input and auto zero control contact for system accuracy
- Dual outputs: 4-20mA and jumper selectable 0-5V or 0-10V

Three Versatile package styles:
- Open Frame: Panel mount DIN or screw-mount model
- Probe: NEMA 4 with integral duct probe
- Duct: NEMA 4 with brass hose barb fittings
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>12-30VDC/24VAC(^1), 30mA max. (13VDC min for 10V f.s. output)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output type</td>
<td>Dual outputs 3-wire 0-5/10VDC and 3-wire 4-20mA</td>
</tr>
<tr>
<td>Output scaling</td>
<td>Model PDP(XX)-010 0-10&quot; (Selectable 2.5, 5, 10&quot;WC)</td>
</tr>
<tr>
<td></td>
<td>Model PDP(XX)-025 0-25&quot; (Selectable 10, 15, 25&quot;WC)</td>
</tr>
<tr>
<td></td>
<td>PDP(XX)-2500Pa 0-2500Pa (Selectable 2500, 1250, 250 Pa)</td>
</tr>
<tr>
<td></td>
<td>PDP(XX)-7000Pa 0-7000Pa (Selectable 7000, 5000, 2500 Pa)</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>Calibrated temperature range 50 to 140 F (10-60C)</td>
</tr>
<tr>
<td></td>
<td>Humidity range 0-90% RH</td>
</tr>
<tr>
<td>Media compatibility</td>
<td>Dry, oil-free air, N2</td>
</tr>
<tr>
<td>Sensor Type</td>
<td>Integrated, micromachined silicon piezoresistive</td>
</tr>
<tr>
<td>Sensor Performance</td>
<td>Accuracy (Linearity, hysteresis, temperature) 2.5% f.s.</td>
</tr>
<tr>
<td></td>
<td>Auto-zero input Push-button and contact closure input provided</td>
</tr>
<tr>
<td></td>
<td>PDP30-XXX (Duct or Panel Mount) IP65, screw mount, brass hose barb fittings</td>
</tr>
<tr>
<td></td>
<td>PDP31-XXX (Duct or Panel Mount) IP65, screw mount, brass hose barb fittings</td>
</tr>
<tr>
<td></td>
<td>PDP32-XXX (Duct Mount w/pickup tube) IP65, screw mount, brass hose barb fitting and static pickup tube</td>
</tr>
</tbody>
</table>

*(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.*

### ORDERING

**Package**
- 0 = Panel Mount
- 1 = NEMA 4
- 2 = NEMA 4 with duct probe

**Pressure Range**
- -010 = 0-10" (Selectable 2.5, 5, 10"WC)
- -025 = 0-25" (Selectable 10, 15, 25"WC)
- -2500Pa (Selectable 2500, 1250, 250 Pa)
- -7000Pa (Selectable 7000, 5000, 2500 Pa)

*(Write your selected Package and Pressure Range numbers in the boxes above)*

### Typical Wiring

- **WIRING**: POWER = Power Supply +
  GND/COM = Common (power & signal)
  0-10V OUT = Voltage output 5v/10vdc
  4-20mA OUT = Current output 4-20mA
  ZERO = Contact closure input

*(PWR and GND required for both Vdc and mA operation)*
Stainless thread mount
Gauge Pressure Transducer
Stainless Steel Wet Media
1/4” MNPT
0-5VDC or 4-20mA outputs

DESCRIPTION
This PG Series is a rugged and accurate gauge pressure sensor. It is compatible with a wide variety of liquids and gases. The MEMS technology gives the PG series flexibility to be used in virtually any OEM application. Whether measuring hydraulic pressure in a manifold or corrosive liquids and gases such as sea water or hydrogen, the PG series industrial pressure sensor provides a thick diaphragm to maintain long-term stability.

APPLICATIONS
▪ Refrigeration Pump Controls
▪ Chillers
▪ Freon and Ammonia Cooling Systems
▪ CO2 Systems
▪ Building Controls
▪ Water Pressure Systems
▪ Boiler Controls
▪ Environmental Test Chambers

FEATURES

Versatile
▪ Compact, Robust Package
▪ 48” wire leads; 1/4” MNPT
▪ Chemical Compatibilities: Any gas or liquid compatible with 17-4 stainless steel.

High Reliability...fewer call backs
▪ Burst pressure 5X full scale
▪ Reverse voltage protected
▪ Rugged stainless steel construction
▪ UL508 Certified
▪ No oil, welds or internal o-rings

Superb Accuracy
▪ < ±0.5% BFSL @ room temperature (Accuracy includes non-linearity, hysteresis & non-repeatability)
ORDERING

**PG-** **-S-**

**Pressure Range**
15 = 15 PSI  
50 = 50 PSI  
75 = 75 PSI  
100 = 100 PSI  
200 = 200 PSI  
300 = 300 PSI  
500 = 500 PSI

**Output Type**
B = 0-5 VDC  
C = 4-20 mA

**ELECTRICAL DATA**

<table>
<thead>
<tr>
<th>Output</th>
<th>4-20mA</th>
<th>0-5VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>10-28VDC</td>
<td>10-28VDC</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>&gt;10k Ohms</td>
<td>&lt;100 Ohms, Nominal</td>
</tr>
<tr>
<td>Current Consumption</td>
<td>20mA, typical</td>
<td>&lt;10mA</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>(-3dB): DC to 250 Hz</td>
<td>(-3dB): DC to 1kHz</td>
</tr>
<tr>
<td>Output Noise</td>
<td>-</td>
<td>&lt;2mV RMS</td>
</tr>
<tr>
<td>Zero Offset</td>
<td>&lt;±1% of FS</td>
<td>&lt;±1% of FS</td>
</tr>
<tr>
<td>Span Tolerance</td>
<td>&lt;±1.5% of FS</td>
<td>&lt;±1.5% of FS</td>
</tr>
<tr>
<td>Output Load</td>
<td>0-800 Ohms @ 10-28VDC</td>
<td>10k Ohms, min</td>
</tr>
<tr>
<td>Reverse Polarity Protection</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL DATA**

**Temperature**
- Operating: -40 to 85°C (-40 to 185°F)
- Storage: -40 to 100°C (-40 to 212°F)

**Thermal Limits**
- Compensated Range: 0 to 55°C (32 to 132°F)
- TC Zero: <±1.5% of FS
- TC Span: <±1.5% of FS

**Other**
- Shock: EN 60068-2-27
- Vibration: EN 60068-2-6, 60068-2-64, and IEC 68-2-32
- EMI/RFI Protection: Yes
- Rating: IP-66 (housing only)

**PERFORMANCE @ 25°C (77°F)**

- Accuracy (1) <±0.5% BFSL
- Stability (1 year): ±0.25% FS, typical
- Over Range Protection: 2X Rated Pressure
- Burst Pressure: 5X or 20,000 PSI (whichever is less)
- Pressure Cycles: > 100 Million

(1) Accuracy includes non-linearity, hysteresis & non-repeatability

**WIRING CONNECTIONS**

- 0-5 VDC Models: 3-wire voltage
- 4-20mA Models: 2-wire loop powered
Remote cable mounted sensors

**Wet-wet Differential Pressure**

Prefabricated cables design
0 to 5~500 PSID (0 to 273~3447 kPa)
Revolutionary design eliminates plumbing
LCD display (PSID or kPa jumper selectable)
Dual 0-5/10VDC and 4-20mA outputs

**DESCRIPTION**

The PW Cable Wet-Wet series remote sensors are installed directly into the pipe and electrical connection is made between the PWS remote sensors and the PW transmitter via cables. This dramatically reduces labor cost by eliminating plumbing/piping to a traditional transducer. Startup time is reduced since purging air out of the lines is not necessary. Traditional plumbed bypass assemblies are no longer required. Choose between the PW10 and PW20 model based on your anticipated PSID range.

**APPLICATIONS**

- Ideal for monitoring pumps and load differential pressures in HVAC systems and processes where local indication is needed.
- Process control systems
- Flow measurement of various gases or liquids
- Liquid level measurement of pressurized vessels

**FEATURES**

**Versatile Universal Transmitter**

- Three selectable PSID ranges per sensing element
- Low and standard PSID range transmitter models
- 500 PSIG is ideal for high rise applications
- User friendly LCD displays in PSID or kPa

**Jumper selectable features for easy installation**

- Absolute mode outputs absolute value of difference
- Port swap corrects plumbing errors
- Fast/slow to select desired response time
- Uni/bi directional
- Display units in PSI/kPa
- Test mode—forces full-scale output
- Over range icon flashes if differential pressure is over-range, alerting technician to move range switch to next higher dp setting and rescale panel
- Switch selectable outputs: 2-wire 4-20mA, 3-wire 0-5V or 0-10V

**High Reliability**

- Standard built-in snubbers protect sensing elements from water hammer damage
- MEMS sensor technology

**Snap on deutsch sensor connection**

- Allows for mounting sensor and quick connection of wire later
- Eliminates wire twisting when tightening sensors in pipe fitting
**UNIVERSAL TRANSMITTER: PW**

**Transmitter Ranges**
- 10 = Low PSID selectable ranges
- 20 = Standard PSID selectable ranges

**Sensor Cable Length (feet)**
- A = 3’
- B = 6’
- C = 9’
- D = 15’
- E = 20’
- F = 25’
- G = 30’
- H = 40’
- I = 40’
- J = 45’
- K = 50’
- L = 75’
- M = 100’

**Sensor Cable Type**
- A = Armored plenum cable
- Blank = Standard plenum cable

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage output mode 0-5V</td>
<td>12-30VDC/24VAC(1), 20mA max.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltage output mode 0-10V</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-30VDC/24VAC required for 10V full scale output</td>
<td>12-30VDC, 20mA max.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current (4-20 mA) output mode</th>
<th>Specification</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Output type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch selectable</td>
<td>3-wire 0-5/10VDC and 2-wire 4-20mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pressure Ranges</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model PW5025</td>
<td>25 PSIG (Select 5/10/25 PSID)</td>
</tr>
<tr>
<td>Model PW5050</td>
<td>50 PSIG (Select 5/10/25 or 10/25/50 PSID based on PW Model)</td>
</tr>
<tr>
<td>Model PW5100</td>
<td>100 PSIG (Select 10/20/40 or 50/75/100 PSID based on PW Model)</td>
</tr>
<tr>
<td>Model PW5250</td>
<td>250 PSIG (Select 25/50/100 or 75/150/250 PSID based on PW Model)</td>
</tr>
<tr>
<td>Model PW5500</td>
<td>500 PSIG (Select 50/100/150 or 100/250/500 PSID based on PW Model)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter</td>
<td>32 to 140°F (0-60°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Media compatibility</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Water; other 17-4 SS compatible media</td>
</tr>
<tr>
<td>Temperature</td>
<td>32 to 250°F (0-125°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zero Adjustment</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic</td>
<td>Push-button, terminal block switch input, Push button for 5-seconds to re-zero. Hold for 10-seconds to restore factory settings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmitter Performance</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW10 Accuracy</td>
<td>Range A ±2% FS B/C ±1% FS</td>
</tr>
<tr>
<td>PW20 Accuracy</td>
<td>Range A ±4% FS B/C ±2% FS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-machined silicon strain gauge</td>
<td></td>
</tr>
</tbody>
</table>

**REMOTE SENSORS: PWS**

<table>
<thead>
<tr>
<th>Element Number</th>
<th>Element Range</th>
<th>PW10 Selectable Ranges</th>
<th>PW20 Selectable Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>25 PSIG</td>
<td>5/10/25 PSID</td>
<td>5/10/25 PSID</td>
</tr>
<tr>
<td>050</td>
<td>50 PSIG</td>
<td>5/10/25 PSID</td>
<td>10/25/50 PSID</td>
</tr>
<tr>
<td>100</td>
<td>100 PSIG</td>
<td>10/20/40 PSID</td>
<td>50/75/100 PSID</td>
</tr>
<tr>
<td>250</td>
<td>250 PSIG</td>
<td>25/50/100 PSID</td>
<td>75/150/250 PSID</td>
</tr>
<tr>
<td>500</td>
<td>500 PSIG</td>
<td>50/100/150 PSID</td>
<td>100/250/500 PSID</td>
</tr>
</tbody>
</table>

**PRESSURE SENSOR SERVICE VALVE: PWBV**

Optional service valve PWBV for live sensor swap

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(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.
(2) FS is defined as the full scale of the selected range in bi-directional mode.
Remote conduit mounted sensors

**Wet-wet Differential Pressure**

Conduit adapter design
0 to 5−500 PSID (0 to 273−3447 kPa)
Revolutionary design eliminates plumbing
LCD display (PSID or kPa jumper selectable)
Dual 0-5/10VDC and 4-20mA outputs

**DESCRIPTION**

The PW Conduit Wet-Wet series remote sensors are installed directly into the pipe and electrical connection is made between the PWC remote sensors and PW transmitter via 4-conductor shielded cable run through conduit. This dramatically reduces labor cost by eliminating plumbing/piping to a traditional transducer. Startup time is reduced since purging air out of the lines is not necessary. Traditional plumbed bypass assemblies are no longer required. Choose between the PW10 and PW20 model based on your anticipated PSID range.

**APPLICATIONS**

- Ideal for monitoring pumps and load differential pressures in HVAC systems and processes where local indication is needed.
- Process control systems
- Flow measurement of various gases or liquids

**FEATURES**

**Conduit ports on transmitter and elements**
- Run conduit and 4-conductor shielded cable from transmitter to elements to wire in the field
- Eliminates costly plumbing and by-pass manifolds

**Versatile Universal Transmitter**
- Three selectable PSID ranges per sensing element
- Low and standard PSID range transmitter models
- 500 PSIG is ideal for high rise applications
- User friendly LCD displays in PSID or kPa

**Jumper selectable features for easy installation**
- Absolute mode outputs absolute value of difference
- Port swap corrects plumbing errors
- Fast/slow to select desired response time
- Uni/bi directional
- Test mode—forces full-scale output
- Over range icon flashes if differential pressure is over-range, alerting technician to move range switch to next higher dp setting and rescale panel
- Switch selectable outputs: 2-wire 4-20mA, 3-wire 0-5V or 0-10V

**High Reliability**
- Standard built-in snubbers protect sensing elements from water hammer damage
- MEMS sensor technology

**Save time and money - pull wires, not pipe!**
- Run 4-conductor shielded cable in conduit from PW transmitter to PWC elements

**Don’t waste time and money on plumbing like this ever again!**
- Revolutionary design eliminates costly field plumbing. Simply run wires to sensors instead of costly copper tubing! Also eliminates the need for expensive bypass assemblies.
ORDERING

**Ordering sensors:** Order elements based on expected maximum PSIG. Order quantity of (2) PWCxxx sensors of same pressure range per (1) PW transmitter. Conduit, conduit connectors and 4-conductor shielded cable not provided.

*Need further explanation: Turn to page 43*

**PRESSURE SENSOR SERVICE VALVE: PWBV**

Optional service valve PWBV for live sensor swap. Order 1 PWBV service valve for each PWCxxx element.

**UNIVERSAL TRANSMITTER: PW**

**Transmitter Ranges**

10 = Low PSID selectable ranges

20 = Standard PSID selectable ranges

**REMOTE SENSORS: PWC**

Element Number

<table>
<thead>
<tr>
<th>Element Number</th>
<th>PW Selectable Ranges</th>
<th>PW20 Selectable Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>25 PSIG</td>
<td>5/10/25 PSID</td>
</tr>
<tr>
<td>050</td>
<td>50 PSIG</td>
<td>5/10/25 PSID</td>
</tr>
<tr>
<td>100</td>
<td>100 PSIG</td>
<td>10/20/40 PSID</td>
</tr>
<tr>
<td>250</td>
<td>250 PSIG</td>
<td>25/50/100 PSID</td>
</tr>
<tr>
<td>500</td>
<td>500 PSIG</td>
<td>50/100/150 PSID</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- **Power Supply**
  - Voltage output mode 0-5V: 12-30VDC/24VAC(1), 20mA max.
  - Voltage output mode 0-10V: 15-30VDC/24VAC required for 10V full scale output
  - Current (4-20 mA) output mode: 12-30VDC, 20mA max.

- **Output type**
  - Switch selectable
  - 3-wire 0-5/10VDC and 2-wire 4-20mA

- **Pressure Ranges**
  - Model PW02S: 25 PSIG (Select 5/10/25 PSID)
  - Model PW050: 50 PSIG (Select 5/10/25 or 10/25/50 PSID based on PW Model)
  - Model PW100: 100 PSIG (Select 10/20/40 or 50/75/100 PSID based on PW Model)
  - Model PW250: 250 PSIG (Select 25/50/100 or 75/150/250 PSID based on PW Model)
  - Model PW500: 500 PSIG (Select 50/100/150 or 100/250/500 PSID based on PW Model)

- **Operating Temperature**
  - Transmitter: 32 to 140°F (0-60°C)
  - Media compatibility:
    - Type: Water; other 17-4 SS compatible media
    - Temperature: 32 to 250°F (0-125°C)

- **Zero Adjustment**
  - Automatic: Push-button, terminal block switch input, Push button for 5-seconds to re-zero. Hold for 10-seconds to restore factory settings

- **Transmitter Performance**
  - PW10 Accuracy
    - Range A: ±2% FS
    - Range B/C: ±1% FS

- **Sensor Performance**
  - Accuracy: < ±0.5% BFSL
  - Zero Offset: < ±2%
  - Span Tolerance: < ±2%
  - Stability (1 Year): ±0.25%FS, typ
  - Overrange Protection: 2X Rated Pressure
  - Burst Pressure: 5X or 20,000 psi (whichever is less)
  - Pressure Cycles: > 100 Million
  - Compensated Range: 0 to 55°C (30 to 130°F)
  - Temperature Compensation: Zero, <±1.5% of FS
  - Span, <±1.5% of FS
  - Shock: 100G, 11 msec, 1/2 sine
  - Vibration: 10G peak, 20 to 2000 Hz
  - EMI/RFI Protection: Yes

- **Enclosure, PW20 Transmitter**
  - Construction: Powdered coated steel
  - Sealing: IP65 (when installed with water-tight fittings)

- **Enclosure, PWC (xxx) Sensor**
  - Construction: Stainless Steel 17-4, 1/4” MNPT, 1/2” Conduit Fitting
  - Sealing: IP65 (when installed with water tight fittings)

- **Enclosure, PWBV Service Valve**
  - Construction: Chrome-plated brass, 1/4” NPT Female x Male

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(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.

(2) FS is defined as the full scale of the selected range in bi-directional mode.
First time ordering our PW cable series? Let us help step by step!

What do I need?

**PW Cable Wet-Wet Series**

**PWS Sensing Elements**
Order (2) PWS sensing elements for every (1) PW transmitter. Each PWS element connects to the PW transmitter cables via snap-on Deutsch connectors.

**PW Transmitter**
The configuration of the unit including powering the device, output jumpers and PSID range selection is done inside of the PW transmitter. Cable length and type must be specified upon ordering.

**On/Off Service Valve**
Optional service valve (PWBV) for live sensor swap. Order 1 PWBV service valve for each PWS element.

ORDERING SENSING ELEMENTS

**Step 1**
**Element connection type**
This guide is for units that include prefabricated cables with Deutsch connectors cut to a custom length at the factory. (If running your own 4-conductor shielded cable through conduit is desired, see page 37 of the catalog)

**Step 2**
**Element pressure (PSIG) range**
Each sensing element has a maximum PSIG rating. Ensure that your system will not exceed this rating to avoid clipping any readings before the device calculates the differential pressure.

REMOTE SENSORS: PWS

<table>
<thead>
<tr>
<th>Element Number</th>
<th>PSIG Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>25</td>
</tr>
<tr>
<td>050</td>
<td>50</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>500</td>
<td>500</td>
</tr>
</tbody>
</table>

**Step 3**
**How many PWS sensing elements do I need?**
It takes a pair (2) of PWS elements with the same PSIG rating per (1) PW transmitter.

ORDERING TRANSMITTER

**Step 5**
**Transmitter range**
After selecting the proper pair of PWS elements, select the PW10 or PW20 transmitter based on the PSID selectable range scale that best fits your application. (Use the cross reference table below)

<table>
<thead>
<tr>
<th>Element Number</th>
<th>PW10 Selectable Ranges</th>
<th>PW20 Selectable Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>5/10/25 PSID</td>
<td>5/10/25 PSID</td>
</tr>
<tr>
<td>050</td>
<td>5/10/25 PSID</td>
<td>10/25/50 PSID</td>
</tr>
<tr>
<td>100</td>
<td>10/20/40 PSID</td>
<td>50/75/100 PSID</td>
</tr>
<tr>
<td>250</td>
<td>25/50/100 PSID</td>
<td>75/150/250 PSID</td>
</tr>
<tr>
<td>500</td>
<td>50/100/150 PSID</td>
<td>100/250/500 PSID</td>
</tr>
</tbody>
</table>

**Step 6**
**Cable length and type**
The PW cables are prefabricated and cut to custom lengths at the factory. (Tip: For outdoor installations order the armored plenum cable)

**UNIVERSAL TRANSMITTER: PW**

<table>
<thead>
<tr>
<th>Transmitter Ranges</th>
<th>Sensor Cable Length (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 = Low PSID selectables</td>
<td>A = 3’ E = 20’ I = 40’ M = 100’</td>
</tr>
<tr>
<td>20 = Standard PSID selectables</td>
<td>B = 6’ F = 25’ J = 45’</td>
</tr>
<tr>
<td></td>
<td>C = 9’ G = 30’ K = 50’</td>
</tr>
<tr>
<td></td>
<td>D = 15’ H = 35’ L = 75’</td>
</tr>
</tbody>
</table>

**Cable Type**
- A = Armored plenum cable
- Blank = Standard plenum cable

FURTHER ASSISTANCE

Call us at (866) 660-8864 or email sales@senvainc.com
First time ordering our PW conduit series? Let us help step by step!

What do I need?

PW Conduit Wet-Wet Series

Order (2) PWC sensing elements for every (1) PW transmitter. Each PWC element has a 1/2” conduit adapter on top.

PW Transmitter
The configuration of the unit including powering the device, output, jumpers and PSID range selection is done inside of the PW transmitter.

On/Off Service Valve
Optional service valve (PWBV) for live sensor swap. Order 1 PWBV service valve for each PWC element.

ORDERING SENSING ELEMENTS

Step 1
Element connection type
This guide is for units that will require the installer to provide conduit and 4-conductor shielded cable. (If prefabricated cables are desired, please see page 36 of the catalog)

Step 2
Element pressure (PSIG) range
Each sensing element has a maximum PSIG rating. Ensure that your system will not exceed this rating to avoid clipping any readings before the device calculates the differential pressure.

REMOTE SENSORS: PWC

Element Number

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>25 PSIG</td>
</tr>
<tr>
<td>050</td>
<td>50 PSIG</td>
</tr>
<tr>
<td>100</td>
<td>100 PSIG</td>
</tr>
<tr>
<td>250</td>
<td>250 PSIG</td>
</tr>
<tr>
<td>500</td>
<td>500 PSIG</td>
</tr>
</tbody>
</table>

Step 3
How many PWC sensing elements do I need?
It takes a pair (2) of PWC elements with the same PSIG rating per (1) PW transmitter.

ORDERING TRANSMITTER

Step 4
Do you need optional on/off service valves?
Optional service valves (PWBV) are recommended for live sensor swap and also protecting the sensing elements from debris if the system needs to be flushed.

Order (2) PWBV service valves for each (1) PW transmitter.

UNIVERSAL TRANSMITTER: PW
Transmitter Ranges
10 = Low PSID selectable ranges
20 = Standard PSID selectable ranges

Transmitter PSID selectable ranges

<table>
<thead>
<tr>
<th>Element Number</th>
<th>Element Range</th>
<th>PW10 Selectable Ranges</th>
<th>PW20 Selectable Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>025</td>
<td>25 PSIG</td>
<td>5/10/25 PSID</td>
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<td>10/25/50 PSID</td>
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<tr>
<td>250</td>
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<td>75/150/250 PSID</td>
</tr>
<tr>
<td>500</td>
<td>500 PSIG</td>
<td>50/100/150 PSID</td>
<td>100/250/500 PSID</td>
</tr>
</tbody>
</table>

FURTHER ASSISTANCE

Still have questions?
Don’t hesitate to call us at (866) 660-8864 or email sales@senvainc.com