

# Remote Cable Mounted Sensors Wet-Wet Differential Pressure

- Prefabricated cables design
- 0 to 10~500 PSID
- 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

- Industry's only standard built-in t-shaped 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

### Save time and money--pull wires, not pipe!

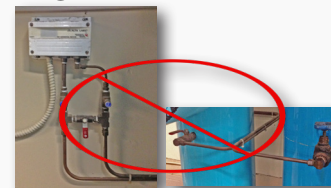


*Pre-wired leads for fast snap connection to sensors*



*Revolutionary design eliminates costly field plumbing. Simply run wires to sensors instead of costly plumbing! Also eliminates the need for costly bypass assemblies.*

### Don't waste time and money on plumbing like this ever again!



*Cables are prefabricated and snap onto sensors with industrial deutsch connectors. This eliminates wire twisting when tightening sensors. IP65 rated for outdoor use when*

ORDERING

**Ordering sensors:** Order elements based on expected maximum PSIG. Order quantity of (2) PWSxxx sensors of same pressure range per (1) PW transmitter. The PW cables are prefabricated and cut to custom lengths at the factory.

**UNIVERSAL TRANSMITTER: PW**

**Transmitter Ranges**

10 = Low PSID selectable ranges  
20 = Standard PSID selectable ranges

**Sensor Cable Length (feet)**

A = 3'    E = 20'    I = 40'    M = 100'  
B = 6'    F = 25'    J = 45"  
C = 9'    G = 30'    K = 50'  
D = 15'    H = 35'    L = 75'

**Sensor Cable Type**

A = Armored plenum cable    Blank = Standard plenum cable

**REMOTE SENSORS: PWS**

Element Number

Element Number	Element Range	PW10 Selectable Ranges	PW20 Selectable Ranges
050	50 PSI	5/10/25 PSID	10/25/50 PSID
100	100 PSIG	10/20/40 PSID	50/75/100 PSID
250	250 PSIG	25/50/100 PSID	75/150/250 PSID
500	500 PSIG	50/100/150 PSID	100/250/500 PSID

**PRESSURE SENSOR SERVICE VALVE: PWBV**



Optional service valve PWBV for live sensor swap

SPECIFICATIONS

Power Supply	Voltage output mode 0-5V	12-30VDC/24VAC <sup>(1)</sup> , 20mA max.	
	Voltage output mode 0-10V	15-30VDC/24VAC required for 10V full scale output	
Output type	Current (4-20 mA) output mode	12-30VDC, 20mA max.	
	Switch selectable	3-wire 0-5/10VDC and 2-wire 4-20mA	
Pressure Ranges	Model PWS050	50 PSIG (Select 5/10/25 or 10/25/50 PSID Based on PW Model)	
	Model PWS100	100 PSIG (Select 10/20/40 or 50/75/100 PSID based on PW Model)	
	Model PWS250	250 PSIG (Select 25/50/100 or 75/150/250 PSID based on PW Model)	
	Model PWS500	500 PSIG (Select 50/100/150 or 100/250/500 PSID based on PW Model)	
Operating Temperature	Transmitter	32 to 140F (0-60°C)	
	Type	Water; other 17-4 SS compatible media	
Media compatibility	Media Temperature	-40 to 248°F (-40-120°C)	
	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 <sup>(2)</sup>	PW10 Accuracy	Range	A    B/C
	PW20 Accuracy	All PSIG Elements	±4% FS    ±2% FS
Sensor Type	Range	A	B/C
	All PSIG Elements	±2% FS	±1% FS
	Micro-machined silicon strain gauge		
	Accuracy	< ±0.25% BFSL	
	Zero Offset	< ±1%	
	Span Tolerance	< ±1%	
	Stability (1 Year)	±0.25%FS, typ	
	Overrange Protection	2X Rated Pressure	
	Burst Pressure	5X or 60,000 psi (whichever is less)	
	Pressure Cycles	> 100 Million	
	Compensated Range	0 to 60°C (30 to 140°F)	
	Temperature Compensation	Zero, <±1% of FS Span, <±1% of FS	
	Shock	100G, 11 msec, 1/2 sine	
	Vibration	10G peak, 20 to 2000 Hz.	
	EMI/RFI Protection	Yes	
Enclosure, PW Transmitter	Construction	Powdered coated steel	
	Sealing	IP65 (when installed with water-tight fittings)	
Enclosure, PWS (xxx) Sensor	Construction	Stainless Steel 316L 1/4" MNPT, Deutsch DT series connector	
	Sealing	IP65 (when installed with armored cable option)	

(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.