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## ДАТЧИКИ ДАВЛЕНИЯ

Технические характеристики

STDW810 STDW820, STDW830,  
STDW870



# SmartLine Wireless Differential Pressure Transmitter Specification

34-SW-03-01, August 2019

## Models:

STDW810	0 to 10 in H <sub>2</sub> O	0 to 25 mbar
STDW820	0 to 400 in H <sub>2</sub> O	0 to 1,000 mbar
STDW830	0 to 100 psi	0 to 7,000 mbar
STDW870	0 to 3,000 psi	0 to 210,000 mbar

## Introduction

SmartLine Wireless Pressure continues the evolution of Honeywell's wireless transmitter product offering and provides the latest critical advancements to support wireless use for monitoring and control.

With over 14 years of industrial wireless experience, the SmartLine Wireless Pressure builds upon the current XYR 6000 product portfolio while also being able to operate seamlessly in the same wireless network. Similar to the XYR 6000 wireless transmitter, the SmartLine Wireless product line is part of the Honeywell OneWireless™ system and is ISA100 - ready.

SmartLine Wireless Pressure transmitters also leverage SmartLine technology in the incorporation of the enhanced SmartLine Pressure meter body. By utilizing the same meter body as in the non-wireless pressure product offering, users get the best-in-class performance, and a reduction in spares inventory while also taking advantage of existing familiarity and knowledge.

Of course, SmartLine Wireless Pressure transmitters feature all the advantages of wireless transmitters like easy access of data from remote and hazardous thus safeguarding plant personnel from unnecessary exposure, or where running wire is cost prohibitive. Without wires, transmitters can be installed and operational in minutes, quickly providing information back to your system and thus start delivering on project ROI.



**Figure 1 — SmartLine Wireless Differential Pressure Transmitters**

Previous generation transmitters primarily were applied to monitoring applications but experienced users know that Honeywell's wireless products are as reliable, secure, and safe as their wired counterparts. With this knowledge, users are now looking for wireless transmitters for use in specific control applications.

SmartLine Wireless introduces a step change in performance and most notably, performance suitable for control. SmartLine Wireless performance is improved in these ways:

- Fast ½ second publication rate
- Built-in additional noise reduction
- More powerful 4 dBi integral antenna
- Good battery life performance even at ½ second publication rate.

SmartLine Wireless Pressure retains the following desirable features from the XYR 6000 product offering:

- Mesh or non-mesh configuration within each transmitter
- Generic, off-the-shelf lithium ion battery.
- Two “D” size batteries for longer life.
- Choice of over-the-air or local provisioning (network security join key)
- Over-the-air firmware upgrade capability
- Unique, encrypted provisioning key for better security
- Remote and integral antenna options
- 24 VDC power option
- Publication rates of 1, 5, 10, or 30 seconds, plus new selections of ½ sec, and 1, 5, 15, 30, 60 minutes
- Transmitter range (integral antenna) of 1150 feet (350m) under ideal conditions.

The STDW800 differential pressure series can be used with any primary flow element to provide proven, repeatable flow measurement.

**Span & Range Limits:**

Model	URL “H <sub>2</sub> O (mbar)	LRL “H <sub>2</sub> O (mbar)	Max Span “H <sub>2</sub> O (mbar)	Min Span “H <sub>2</sub> O (mbar)
STDW810	10 (25)	-10 (-25)	10 (25)	0.1 (0.25)
STDW820	400 (1000)	-400 (-1000)	400 (1000)	1.0 (2.5)
Model	psi (bar)	psi (bar)	psi (bar)	psi (bar)
STDW830	100 (7.0)	-100 (-7.0)	100 (7.0)	1 (0.07)
STDW870	3000 (210)	-100 (-7.0)	3000 (210)	30 (2.1)

**SmartLine Wireless Features**

**Local and over-the-air provisioning capability.** All Honeywell wireless devices feature a secure method to join the local wireless network, also known as provisioning. SmartLine Wireless transmitters feature two methods to provision a transmitter onto the network which are either by using a handheld device to locally communicate through the IR interface or remotely using the over-the-air function. Over-the-air provisioning is managed by the OneWireless gateway, Wireless Device Manager (WDM).

In either method, the communication of secure, unique provisioning keys is one of the main factors to prevent against unintended access. Honeywell’s security keys are unique for each device from the factory, never made visible, always encrypted, and uniquely generated from the gateway that manages the deployed network.

**Over-the-air firmware updates.** Once joined as a member of your OneWireless network, the WDM can download new transmitter firmware releases to each SmartLine Wireless transmitter over the wireless network. Locating and accessing the transmitter locally is not required thus saving time and keeping your personnel in a safe environment.

**Mesh and non-mesh capability.** All SmartLine Wireless transmitters can be configured to operate in either a mesh network or a star (non-mesh) network. The configuration is specific for each wireless transmitter and thus the network can consist of a mixture of meshing and non-meshing devices. Non-meshing is typically desirable for deterministic communications which is preferred for control.

**Transmission power setting.** To comply with local and regional requirements, SmartLine Wireless transmitters are set at the factory to the maximum transmission power setting allowed for the country of use.

**Non-proprietary battery.** Sourcing lithium thionyl chloride batteries is much simpler since SmartLine Wireless utilizes commercial off-the-shelf batteries. Please see the list of approved battery manufacturers later in this specification. Batteries are housed in an IS-approved battery compartment making battery changes safe and easy.

**Backward compatibility.** SmartLine Wireless transmitters can join existing OneWireless networks and interoperate with existing XYR 6000 wireless transmitters or other ISA100 Wireless compliant transmitters or networks.

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## OneWireless Network Features

The core of the Honeywell wireless solution is the OneWireless Network which consists a gateway, access point(s), and field routers.

The Wireless Device Manager (WDM) serves as the gateway function and in this role, manages the communication from the wireless field devices to the process control application. Typically, the WDM connects logically to the process control network at Level 2 (Purdue model) or the wireless DMZ. As the wireless network manager, the WDM provides easy access to the entire wireless network through a browser-based user interface. The Honeywell WDM can manage devices communicating over the ISA100 Wireless protocol and the Wireless HART™ protocol, with both types of devices operating in real-time under a single network.

The ability to deploy redundant WDMs improves reliability and ensures no loss of process data, which is a fundamental requirement for control applications.

The Field Device Access Point (FDAP) serves in two roles in the OneWireless network infrastructure: 1) an access point, and as 2) a field router. As an access point, the FDAP connects directly to the WDM via Ethernet LAN cable. More than one access point is permitted and, when more than one is present, it ensures dual path for communications into the WDM from the field devices. As a field router, the FDAP located in the field would communicate to the FDAP acting as an access point. Using the FDAP as a router is more efficient than using field devices as routers since FDAPs are line powered devices requiring no battery changes, and the FDAP offers greater range.

FDAPs can also mesh and thus allows additional flexibility in the setup of the wireless network to fit wireless network performance requirements (typically in terms of reliable communications, performance, and future growth). The choice of a non-meshing network may be desirable for decreased communication latency which a FDAP serving as a field router helps ensures.

## Wireless Specifications

Parameter	Description
<b>Wireless Communication</b>	2,400 to 2,483.5 MHz (2.4 GHz) Industrial, Scientific and Medical (ISM) band DSSS - Direct Sequential Spread Spectrum per FCC 15.247 / IEEE 802.15.4 2006 Every data packet transmitted in either direction is verified (CRC check) and acknowledged by the receiving device. USA – FCC Certified Canada – IC Certified European Union – Radio Equipment Directive compliant
<b>DSSS RF Transmitter Power</b>	NA Selection –100 mW (20.0 dBm) maximum EIRP including antenna for USA and Canadian locations. EU Selection – 63 mW (18.0 dBm) maximum EIRP including antenna per RTTE / ETSI for EU locations. Compliant to ETSI EN 300 328 wireless standard
<b>Data</b>	PV Publish Cycle Time: Configurable as 0.5, 1, 5, 10, 30 seconds, plus 1, 5, 15, 30, 60 minutes Rate: 250 Kbps
<b>Antennas</b>	Integral – 4 dBi omnidirectional monopole (default selection) Remote – 8 dBi omnidirectional monopole with up to two 10 m cables and lightning surge arrester Remote – 14 dBi directional parabolic with up to two 10 m cables and lightning surge arrester.
<b>Signal Range</b>	Nominal 350 m (1,150 ft) between field transmitter and infrastructure unit (e.g. FDAP) when using 4 dBi Integral antenna with a clear line of sight*

\*Actual range will vary depending on antennas, cables and site topography.

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## Specifications

### Operating Conditions – All Models

Parameter	Reference Condition (at zero static)		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature <sup>5</sup>	25 ±1	77 ±2	-40 to 85	-40 to 185	-40 to 85	-40 to 185	-55 to 120	-67 to 248
Ambient Temperature LCD Display visible range	25 ±1	77 ±2	-40 to 85	-40 to 185				
Meter Body Temperature	25 ±1	77 ±2	-40 to 110 <sup>1</sup>	-40 to 230 <sup>1</sup>	-40 to 125	-40 to 257	-55 to 120	-67 to 248
Humidity %RH	10 to 55		0 to 100		0 to 100		0 to 100	
Vacuum Region - Minimum Pressure All Models (except STDW810) mmHg absolute in H <sub>2</sub> O absolute	Atmospheric Atmospheric		25 13		2 (short term <sup>2</sup> ) 1 (short term <sup>2</sup> )			
Maximum Allowable Working Pressure (MAWP) <sup>3,4</sup> (STDW800 products are rated to Maximum Allowable Working Pressure. MAWP depends on approval agency and transmitter materials of construction.)	<p><b>Standard:</b> STDW810 = 50 psi, 3.45 bar STDW820, STDW830, and STDW870 = 4,500 psi, 310.2 bar</p> <p><b>Optional:</b> STDW820, STDW830, and STDW870 = 6,000 psi, 413.7 bar</p> <p>Static Pressure Limit = Maximum Allowable Working Pressure (MAWP) = Overpressure Limit</p>							
Vibration	Maximum of 4g over 15 to 200Hz.							
Shock	Maximum of 40g.							
Power	<p>Commercially available, non-proprietary 3.6V Lithium thionyl chloride (LiSOCl<sub>2</sub>) batteries, non-rechargeable, size D.</p> <p>Approved list of the manufacturer models:</p> <ol style="list-style-type: none"> <li>1. Xeno Energy XL-205F</li> <li>2. Eagle Picher PT-2300H</li> <li>3. Tadiran TL-5930/s</li> </ol> <p>Battery pack-only option is available.</p> <hr/> <p>24 VDC power option.</p> <p>For Non I.S. application: 16 to 28 VDC Input range, max input current 100mA.</p> <p>For I.S. application: Barrier in accordance with the control drawing required, entity parameters 30V, 120mA, 0.9W.</p>							

<sup>1</sup> For CTFE fill fluid, the rating is -15°C to 110°C (5°F to 230°F); for the STDW820 model at temperatures below -15°C (5°F) the URL is reduced to 100" H<sub>2</sub>O.

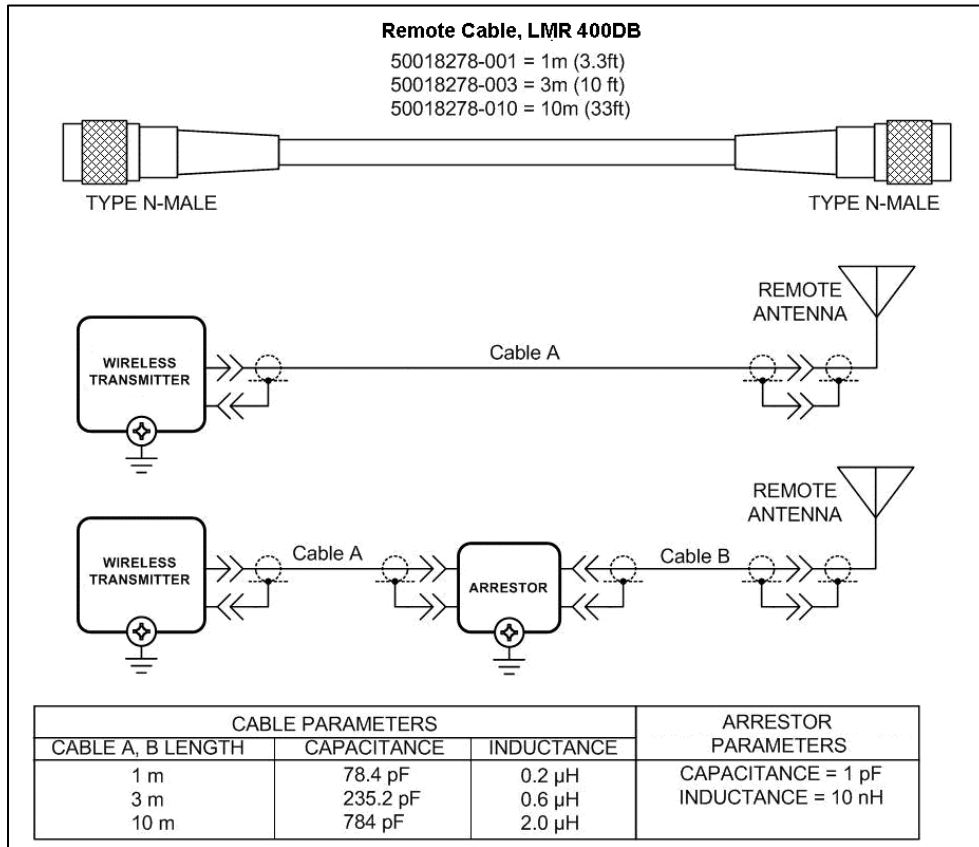
<sup>2</sup> Short term equals 2 hours at 70°C (158°F)

<sup>3</sup> MAWP applies for temperature range -40 to 125°C. However Static Pressure Limit is de-rated to 3000 psi from -26°C to -40°C. Use of graphite o-rings de-rates transmitter to 3625 psi. Use of Adapter with graphite o-rings de-rates transmitter to 3000 psi.

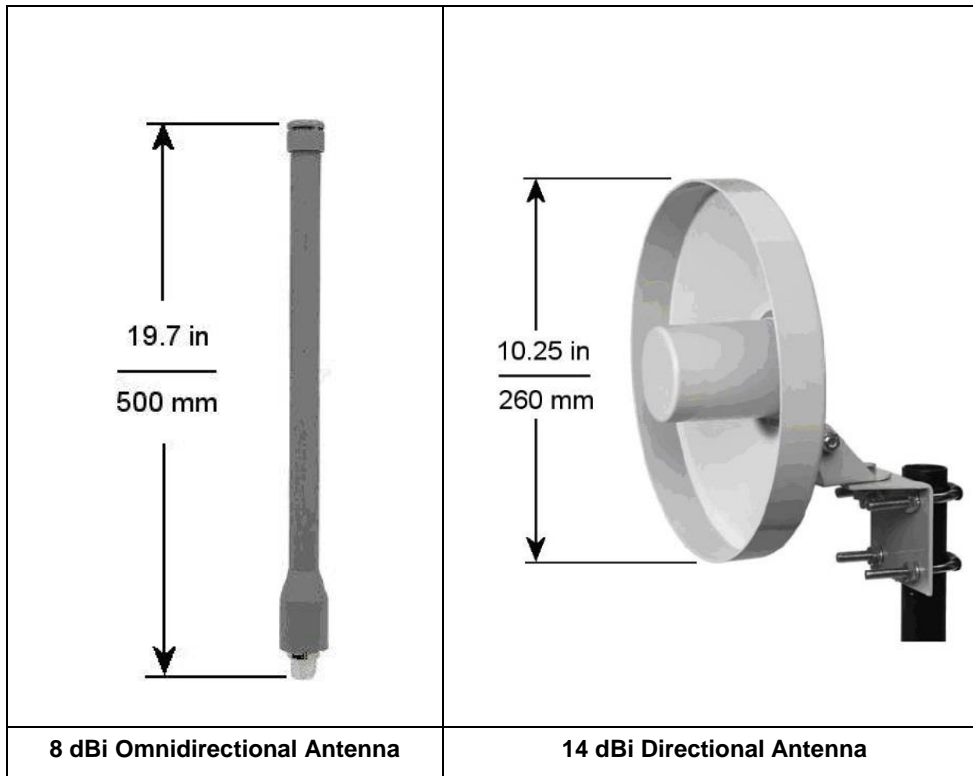
<sup>4</sup> Consult factory for MAWP of SmartLine Wireless transmitters with CRN approval.

<sup>5</sup> The Ambient Limits shown are for Ordinary Non-Hazardous locations only. Refer to the Hazardous Locations Approvals section for the Ambient Limits when installed in Hazardous Locations.

## Remote Antenna Cables



## Remote Antennas



## Performance Specifications

### Performance under Rated Conditions\* - Model STDW810 (0 to 10 inH<sub>2</sub>O / 25 mbar)

Parameter	Description
<b>Upper Range Limit</b> in H <sub>2</sub> O mbar	10 (39.2°F/4°C is standard reference temperature for in H <sub>2</sub> O range.) 25
<b>Minimum Span</b> in H <sub>2</sub> O mbar	0.1 0.25
<b>Zero Elevation and Suppression</b>	-5 to +100% URL
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • Accuracy includes residual error after averaging successive readings.	±0.0375% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (1 in H <sub>2</sub> O), accuracy equals: $\pm 0.0125 + 0.025 \left( \frac{1 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \text{ or } \pm \left[ 0.0125 + 0.025 \left( \frac{2.5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Temperature Effect per 28°C (50°F)</b>	±0.20% of span. For URV below reference point (2 in H <sub>2</sub> O), effect equals: $\pm 0.20 \left( \frac{2 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \text{ or } \pm 0.20 \left( \frac{5 \text{ mbar}}{\text{span mbar}} \right) \text{ in \% of span}$
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>	±0.225% of span. For URV below reference point (2 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.025 + 0.20 \left( \frac{2 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.20 \left( \frac{5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Static Pressure Effect per 1000 psi (70 bar)</b>	±0.075% of span. For URV below reference point (2 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.0125 + 0.0625 \left( \frac{2 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.0625 \left( \frac{5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Combined Zero and Span Static Pressure Effect per 1000 psi (70 bar)</b>	±0.15% of span. For URV below reference point (2 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.0875 + 0.0625 \left( \frac{2 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0875 + 0.0625 \left( \frac{5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$

\* Performance specifications are based on reference conditions of 25°C (77°F), zero (0) static pressure, 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.

**Performance under Rated Conditions\* - Model STDW820 (0 to 400 inH<sub>2</sub>O / 1000 mbar)**

Parameter	Description
<b>Upper Range Limit</b> <b>in H<sub>2</sub>O mbar</b>	400 (39.2°F/4°C is standard reference temperature for in H <sub>2</sub> O range.) 1,000
<b>Minimum Span</b> <b>in H<sub>2</sub>O mbar</b>	1 2.5
<b>Zero Elevation and Suppression</b>	-5 to +100% URL
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • Accuracy includes residual error after averaging successive readings.	±0.0375% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (25 in H <sub>2</sub> O), accuracy equals: $\pm \left[ 0.0125 + 0.025 \left( \frac{25 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.025 \left( \frac{62 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Temperature Effect per 28°C (50°F)</b>	±0.20% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm 0.20 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \text{ or } \pm 0.20 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \text{ in \% of span}$
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>	±0.225% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.025 + 0.20 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.20 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Static Pressure Effect per 1000 psi (70 bar)</b>	±0.075% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.0125 + 0.0625 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.0625 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Combined Zero and Span Static Pressure Effect per 1000 psi (70 bar)</b>	±0.15% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.0875 + 0.0625 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0875 + 0.0625 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$

\* Performance specifications are based on reference conditions of 25°C (77°F), zero (0) static pressure, 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.



**Performance under Rated Conditions\* - Model STDW830 (0 to 100 psi/7,000 mbar)**

Parameter	Description
<b>Upper Range Limit</b> <b>psi</b> <b>bar</b>	100 7
<b>Minimum Span</b> <b>psi</b> <b>bar</b>	1 0.07
<b>Zero Elevation and Suppression</b>	-5 to +100% URL.
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability) •Accuracy includes residual error after averaging successive readings.	±0.065% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (15 psi), accuracy equals: $\pm \left[ 0.0125 + 0.05 \left( \frac{15 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.05 \left( \frac{1.0 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Zero Temperature Effect per 28°C (50°F)</b>	±0.05% of span. For URV below reference point (30 psi), effect equals: $\pm 0.05 \left( \frac{30 \text{ psi}}{\text{span psi}} \right) \text{ or } \pm 0.05 \left( \frac{2 \text{ bar}}{\text{span bar}} \right) \text{ in \% of span}$
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>	±0.075% of span. For URV below reference point (30 psi), effect equals: $\pm \left[ 0.025 + 0.05 \left( \frac{30 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.05 \left( \frac{2 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Zero Static Pressure Effect per 1000 psi (70 bar)</b>	±0.075% of span. For URV below reference point (30 psi), effect equals: $\pm \left[ 0.0125 + 0.0625 \left( \frac{30 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.0625 \left( \frac{2 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Combined Zero and Span Static Pressure Effect per 1000 psi (70 bar)</b>	±0.15% of span. For URV below reference point (30 psi), effect equals: $\pm \left[ 0.0875 + 0.0625 \left( \frac{30 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.0875 + 0.0625 \left( \frac{2 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$

\* Performance specifications are based on reference conditions of 25°C (77°F), zero (0) static pressure, 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.

**Performance under Rated Conditions\* - Model STDW870 (0 to 3,000 psi/210 bar)**

Parameter		Description
<b>Upper Range Limit</b>	<b>psi bar</b>	3,000 210
<b>Minimum Span</b>	<b>psi bar</b>	30 2.1
<b>Zero Elevation and Suppression</b>		-0.6 and +100% URL.
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability)  <i>Accuracy includes residual error after averaging successive readings.</i>		±0.125% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (300 psi), accuracy equals: $\pm \left[ 0.025 + 0.10 \left( \frac{300 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.10 \left( \frac{21 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Zero Temperature Effect per 28°C (50°F)</b>		±0.10% of span. For URV below reference point (500 psi), effect equals: $\pm 0.10 \left( \frac{500 \text{ psi}}{\text{span psi}} \right) \text{ or } \pm 0.10 \left( \frac{35 \text{ bar}}{\text{span bar}} \right) \text{ in \% of span}$
<b>Combined Zero and Span Temperature Effect per 28°C (50°F)</b>		±0.15% of span. For URV below reference point (500 psi), effect equals: $\pm \left[ 0.05 + 0.10 \left( \frac{500 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.05 + 0.10 \left( \frac{35 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Zero Static Pressure Effect per 1000 psi (70 bar)</b>		±0.075% of span. For URV below reference point (500 psi), effect equals: $\pm \left[ 0.0125 + 0.062 \left( \frac{500 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.062 \left( \frac{35 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$
<b>Combined Zero and Span Static Pressure Effect per 1000 psi (70 bar)</b>		±0.15% of span. For URV below reference point (500 psi), effect equals: $\pm \left[ 0.088 + 0.062 \left( \frac{500 \text{ psi}}{\text{span psi}} \right) \right] \text{ or } \pm \left[ 0.088 + 0.062 \left( \frac{35 \text{ bar}}{\text{span bar}} \right) \right] \text{ in \% of span}$

\* Performance specifications are based on reference conditions of 25°C (77°F), zero (0) static pressure, 10 to 55% RH, and 316L Stainless Steel barrier diaphragm.

### Performance Under Rated Conditions – All Models

Parameter	Description
Electromagnetic Compatibility	IEC 61326-1
Lightning Surge Arrester (Remote antenna only)	Frequency range: 0 – 3 GHz, 50 Ohms, VSWR = 1:1.3 Max, Insertion Loss = 0.4 dB Connectors Type N Female, Max, Gas Tube Element: 90 V ± 20%, Impulse Breakdown Voltage = 1,000 V ± 20%, Maximum Withstand Current = 5 KA.
CE Conformity	These transmitters are in conformity with the Radio Equipment Directive, ETSI EN 300 328 V2.1.1 including EMC standard EN61326-1 2013

### Physical Specifications

Parameter	Description
Mounting Bracket	Carbon Steel (Zinc-plated) or Stainless Steel angle bracket or Carbon Steel flat bracket available (standard options).
Fill Fluid	Silicone DC 200 oil, CTFE (Chlorotrifluoroethylene) or NEOBEE® M-20
Electronic Housing	Epoxy-Polyester hybrid paint. Low Copper-Aluminum with 1/2" NPT or M20 conduit connections. Meets NEMA 4X (hosedown and corrosion resistant), IP 66/67 (hosedown and submersible to 1m).
Stainless Steel Housing (option)	316 SS or Grade CF8M, the casting equivalent of 316 SS with M20 or 1/2" NPT conduit connections. If ordered with the Remote Antenna options, the antenna parts are not SS or Marine type cables; the integral antenna uses SS parts.
Process Connections	1/4-inch NPT; 1/2-inch NPT with adapter. Process heads meet DIN 19213 requirements.
Mounting	Can be mounted in virtually any position using the standard mounting bracket. Mounting should result in the antenna being vertically oriented. Bracket is designed to mount on 2-inch (50 mm) vertical or horizontal pipe. See <a href="#">Figure 2</a> .
Dimensions	See <a href="#">Figure 3</a> , <a href="#">Figure 4</a> and <a href="#">Figure 5</a> .
Net Weight	Approximately 11 pounds (5 Kg) <sup>1</sup>

<sup>1</sup> Add 8.0 pounds (3.6 kg) to any model equipped with stainless steel housing option (Model Selection Guide Table IV selection M or N)

### Materials Specifications (see model selection guide for availability/restrictions with various models)

Parameter	Description
Barrier Diaphragms Material	316L SS and Hastelloy® C-276 <sup>2</sup>
Process Head Material	316 SS <sup>3</sup>
Vent/Drain Valves & Plugs <sup>1</sup>	316 SS <sup>3</sup>
Head Gaskets	Teflon or PTFE (glass filled) is standard.
Meter Body Bolting	Carbon Steel (Zinc plated) standard. Options include 316 SS and NACE A286 SS bolts
Optional Adapter Flange and Bolts	Adapter flange material is 316 SS. Bolt material for flanges is dependent on process head bolts material chosen. Standard adaptor seal material is glass-filled PTFE

<sup>1</sup> Vent/Drains are sealed with Teflon®

<sup>2</sup> Hastelloy C-276 or UNS N10276

<sup>3</sup> Supplied as 316 SS or as Grade CF8M, the casting equivalent of 316 SS.

## Mounting and Dimensions

Reference Dimensions:  $\frac{\text{millimeters}}{\text{inches}}$

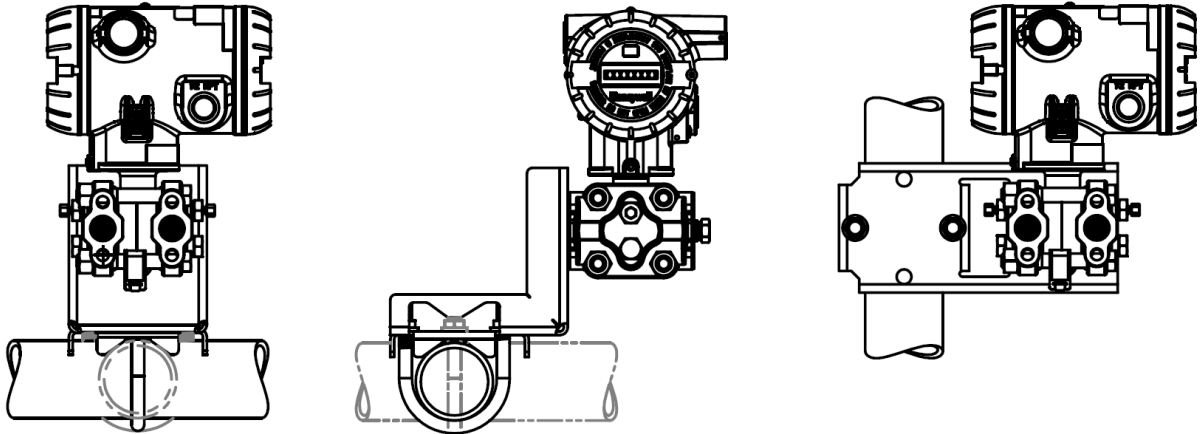


Figure 2 — Examples of typical mounting positions (antenna omitted)

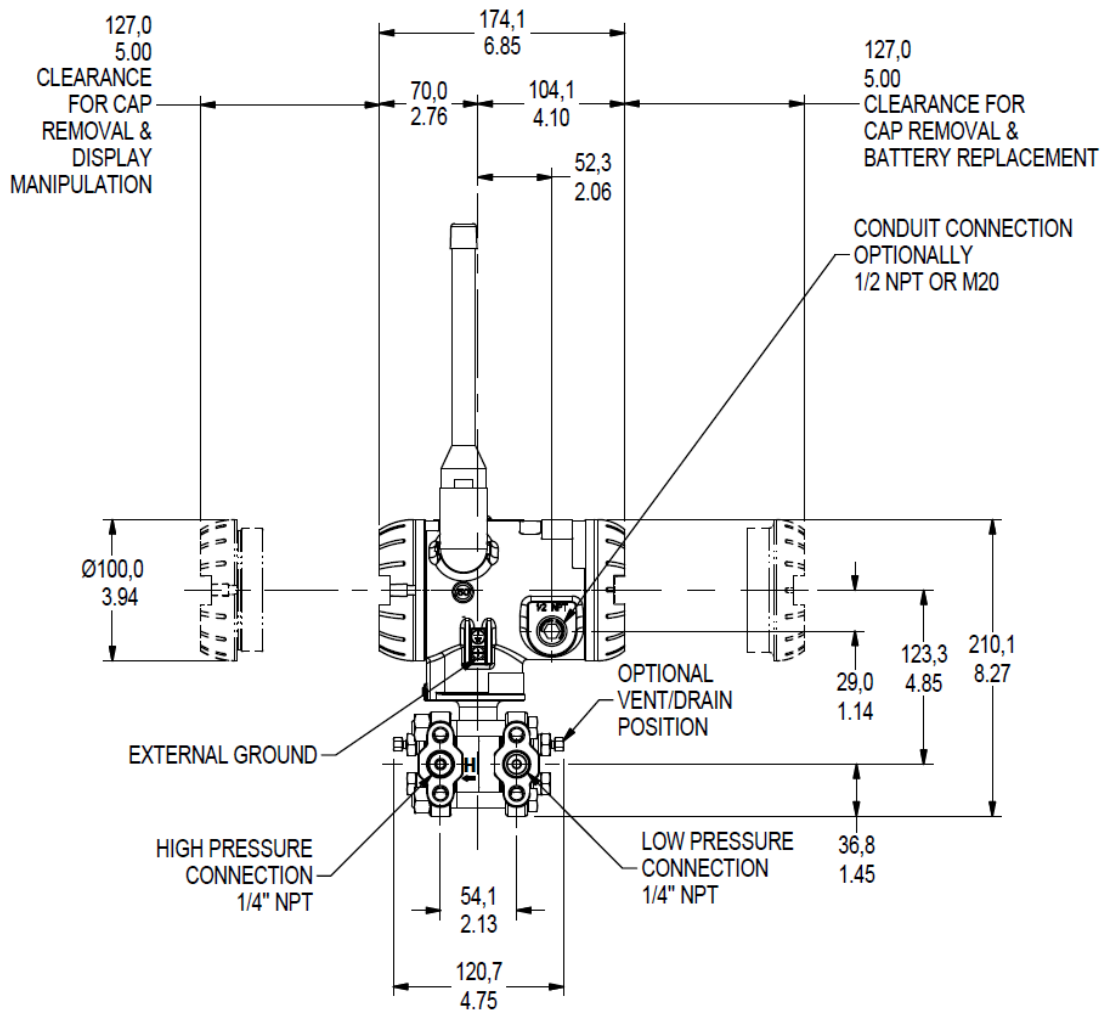


Figure 3 – Informational and dimensional drawing (4 dBi antenna shown)

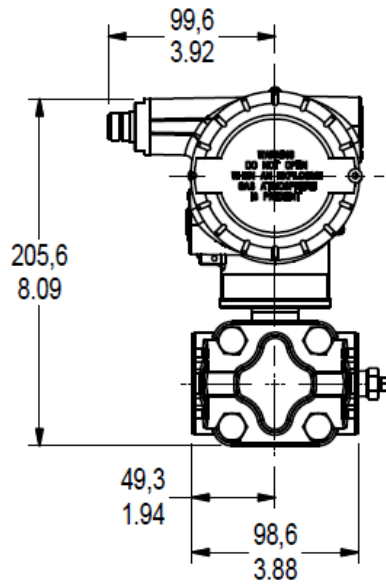


Figure 4 — Typical mounting c

d STDW870 (remote antenna

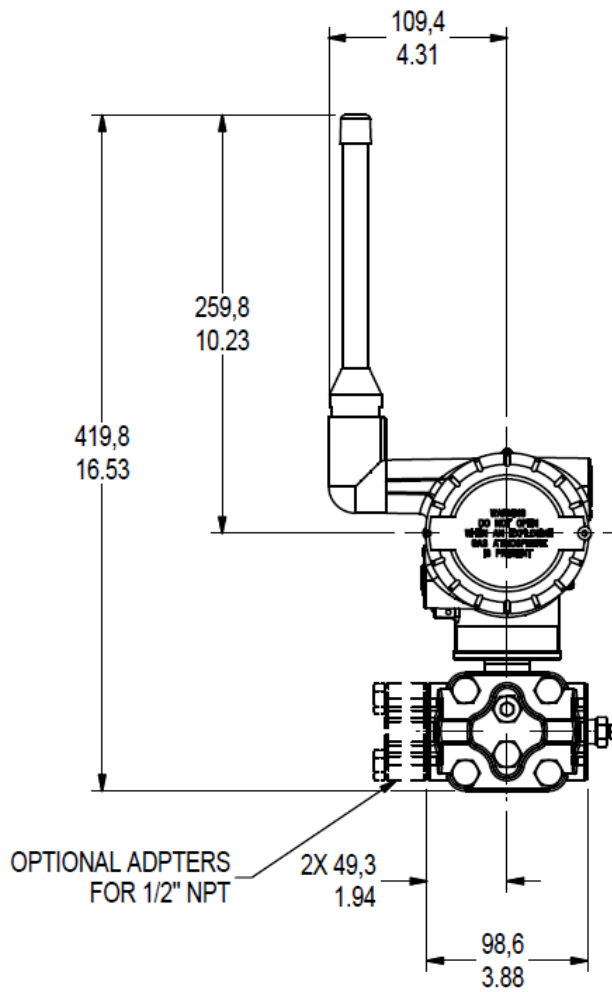


Figure 5 — Typical I ..... dBi antenna shown, rear view)

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