

# SmartLine Wireless Flange Mounted Pressure Transmitter Specification

## 34-SW-03-04, August 2019

### Series 800 model:

STFW828      0 to 400 in H<sub>2</sub>O    0 to 1,000 mbar

### Series 700 Model:

STFW724      0 to 400 in H<sub>2</sub>O    0 to 1,000 mbar

### Introduction

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

With over 14 years of industrial wireless experience, the SmartLine Wireless Pressure builds upon and is compatible with the current XYR 6000 product portfolio. 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, you get best-in-class performance, reduction in spares inventory, and a lessening of the maintenance learning curve.

The SmartLine Wireless Pressure transmitter enables customers to obtain data and create information from remote and hazardous measurement locations without the need to run wires, where running wire is cost prohibitive and/or the measurement is in a hazardous location. Without wires, transmitters can be installed and operational in minutes, quickly providing information back to your system.



**Figure 1 — SmartLine Wireless Flange Mounted Pressure Transmitter**

The 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 delivered from the factory
- Remote and integral antenna options
- 24 VDC power option
- Publication rates of 1, 5, 10, or 30 seconds, plus new selections for ½ sec, and 1, 15, 30, 60 minutes
- Transmitter range (integral antenna) of 1150' (350 m) under ideal conditions.

The STFW800 and STFW700 series transmitters are high performance flange mounted level transmitters featuring piezoresistive sensor technology. These transmitters may be directly mounted onto a tank flange and are offered with a variety of tank connections including various flush and extended diaphragm configurations. STFW800 offers highest accuracy and stability while the STFW700 offers the best performance value. Both are applicable over a wide range of level applications.

#### 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)
STFW828	400 (1000)	-400 (-1000)	400 (1000)	4.0 (10.0)
STFW724	400 (1000)	-400 (-1000)	400 (1000)	4.0 (10.0)

## 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. The over-the-air function 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 safe environments.

**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 to each wireless transmitter and thus the network can consist of a mixture of meshing and non-meshing devices. Non-meshing is 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.

## 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 (Level 2 or 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.

The ability to deploy redundant WDMs improves the reliability ensuring no loss of process data which is a requirement for control applications.

The Field Device Access Point (FDAP) serves in two roles in the OneWireless network infrastructure, which are: 1) access point, and 2) field router. As an access point, the FDAP directly connects 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 whereas field devices are typically battery powered, and the FDAP offers greater range. The meshing capability of FDAPs allows flexibility in the setup of the wireless network to fit the requirements for wireless network performance, in terms of reliable communications, performance, and future growth.

The choice of 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, 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 (1150 feet) between Field Transmitter and Infrastructure Unit (FDAP) when using 4 dBi Integral antenna with a clear line of sight*

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

## 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>1,4</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 <sup>2</sup>	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	
Minimum Pressure mmHg absolute in H <sub>2</sub> O absolute	Atmospheric Atmospheric		25 13		2 (short term <sup>3</sup> ) 1 (short term <sup>3</sup> )			
Vibration	Maximum of 4g over 15 to 200Hz.							
Shock	Maximum of 40g.							
Power	Commercially available, non-proprietary 3.6V Lithium thionyl chloride (LiSOCl2) batteries, non-rechargeable, size D. Battery pack-only option is available. Approved list of the manufacturer models: 1. Xeno Energy XL-205F 2. Eagle Picher PT-2300H 3. Tadiran TL-5930/s							
	24 VDC power option.							
	For Non I.S. application: 16 to 28 VDC Input range, max input current 100mA. For I.S. application: Barrier in accordance with the control drawing required, Entity parameters 30V, 120mA, 0.9W							

<sup>1</sup> NEOBEE M-20 minimum temperature is -15°C (5°F). NEOBEE is a registered trademark of Stepan Company.

<sup>2</sup> For CTFE fill fluid, the maximum temperature rating is 150°C (300°F).

<sup>3</sup> Short term equals 2 hours at 70°C (158°F)

<sup>4</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.

**Maximum Allowable Working Pressure (MAWP)<sup>6, 7</sup>**

(STWX800 and STWX700 products are rated to Maximum Allowable Working Pressure. MAWP depends on Approval Agency and transmitter materials of construction.)

<b>STFW828</b>	<b>Flange Material</b>	<b>Ambient Temperature -29 to 38°C [-20 to 100°F]</b>	<b>Max Meterbody Temperature 125°C [257°F]</b>	<b>Process Interface Temperature 175°C [350°F]</b>
ANSI Class 150	304 S.S.	275 [19.0]	218 [15.0]	198 [13.7]
<b>psi [bar]</b>	316 S.S.	275 [19.0]	225 [15.5]	205 [14.1]
ANSI Class 300	304 S.S.	720 [49.6]	570 [39.3]	518 [35.7]
<b>psi [bar]</b>	316 S.S.	720 [49.6]	590 [40.7]	538 [37.1]
DN PN40	304 S.S.	534 [36.8] <sup>5</sup>	419 [28.9]	385 [26.5]
<b>psi [bar]</b>	316 S.S.	534 [36.8] <sup>5</sup>	434 [29.9]	399 [27.5]

<b>STFW724</b>	<b>Flange Material</b>	<b>Ambient Temperature -29 to 38°C [-20 to 100°F]</b>	<b>Max Meterbody Temperature 125°C [257°F]</b>	<b>Process Interface Temperature 175°C [350°F]</b>
ANSI Class 150	304 S.S.	275 [19.0]	218 [15.0]	198 [13.7]
<b>psi [bar]</b>	316 S.S.	275 [19.0]	225 [15.5]	205 [14.1]
ANSI Class 300	304 S.S.	720 [49.6]	570 [39.3]	518 [35.7]
<b>psi [bar]</b>	316 S.S.	720 [49.6]	590 [40.7]	538 [37.1]
DN PN40	304 S.S.	534 [36.8] <sup>5</sup>	419 [28.9]	385 [26.5]
<b>psi [bar]</b>	316 S.S.	534 [36.8] <sup>5</sup>	434 [29.9]	399 [27.5]

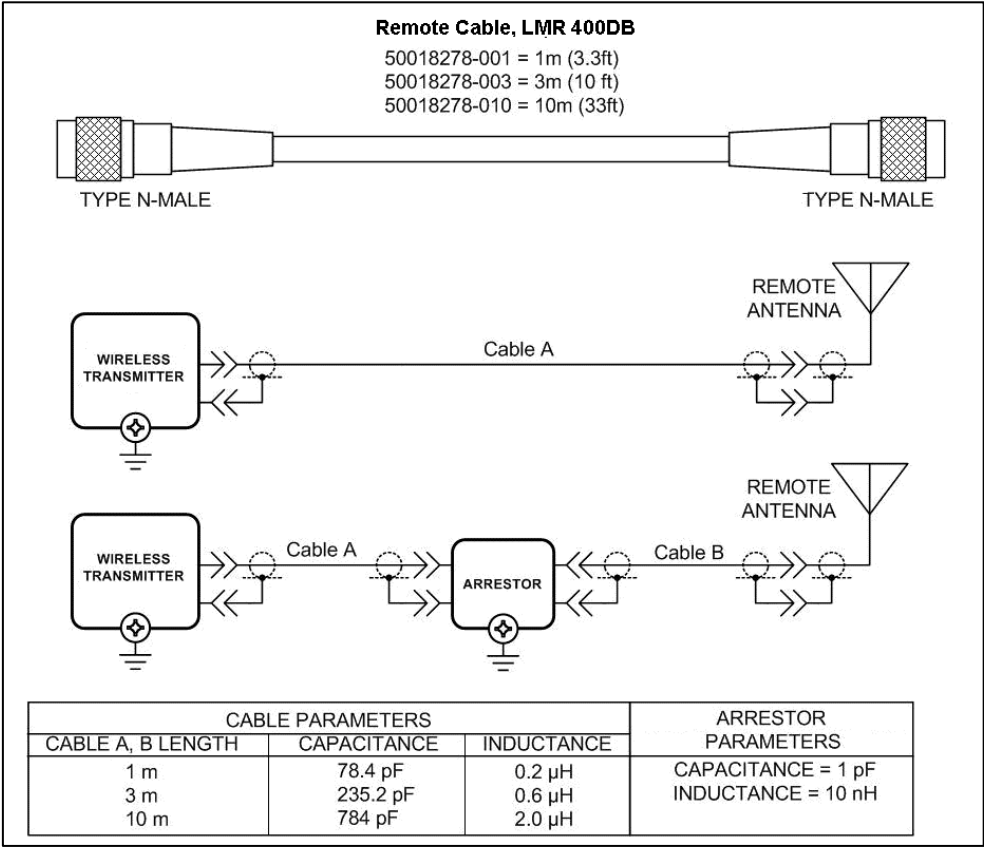
<sup>5</sup> Ambient Temperature for DN PN40 is -10 to 50°C [14 to 122 F]

<sup>6</sup> MAWP applies for temperature range -40 to 125°C. However, Static Pressure Limit is de-rated to 3,000 psi from -26°C to -40°C.

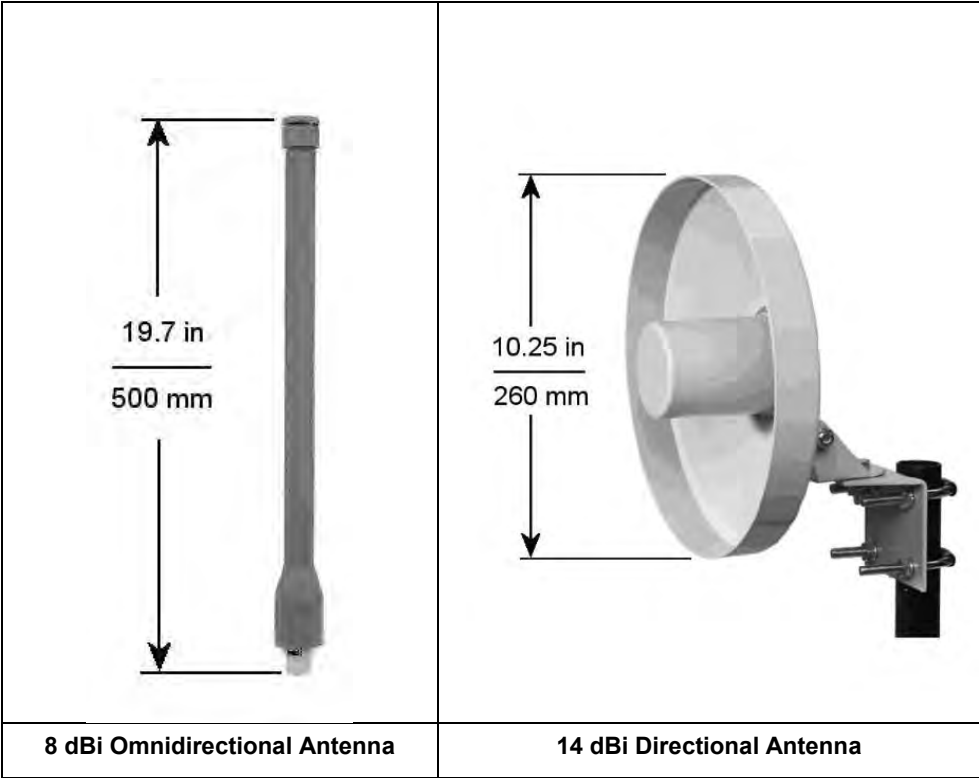
Use of graphite o-rings de-rates transmitter to 3,625 psi. Use of adaptor with graphite o-rings de-rates transmitter to 3,000 psi.

<sup>7</sup> Consult factory for MAWP of ST 800 and ST 700 transmitters with CSA approval.

Remote Antenna Cables



Remote Antennas



## Performance Specifications

### Performance under Rated Conditions\* - Model STFW828 (400 in H<sub>2</sub>O)

Parameter	Description
<b>Upper Range Limit</b> in H <sub>2</sub> O mbar	400 (39.2°F/4°C is standard reference temperature for in H <sub>2</sub> O range.) 1,000
<b>Lower Range Limit</b> in H <sub>2</sub> O mbar	-400 (39.2°F/4°C is standard reference temperature for in H <sub>2</sub> O range.) -1,000
<b>Minimum Span</b> in H <sub>2</sub> O mbar (Span can be between -400 to +400 inH <sub>2</sub> O / -1000 to +1000 mbar)	4 10
<b>Maximum Span</b> in H <sub>2</sub> O mbar (400 inH <sub>2</sub> O / 1000mbar (span can be between -400 to +400 inH <sub>2</sub> O))	400 1000
<b>Zero Elevation and Suppression</b>	No limit except min. span within ±100% URL. Specifications valid from -5 to +100% URL.
<b>Accuracy</b> (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • Accuracy includes residual error after averaging successive readings.	±0.075% 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: $\pm \left[ 0.025 + 0.05 \left( \frac{25 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.05 \left( \frac{62.5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Temperature Effect per 28°C (50°F)</b>	±0.20% of span. For URV below reference point (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>	±0.375% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.175 + 0.20 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.175 + 0.20 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Zero Static Pressure Effect per 300 psi (20 bar)</b>	±0.1625% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.0125 + 0.15 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.15 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
<b>Combined Zero and Span Static Pressure Effect per 300 psi (20 bar)</b>	±0.30% of span. For URV below reference point (50 in H <sub>2</sub> O), effect equals: $\pm \left[ 0.15 + 0.15 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.15 + 0.15 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$

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

Performance Under Rated Condition s\* - Model STFW724 (0 to 400 inH<sub>2</sub>O/1,000 mbar)

Parameter	Description
Upper Range Limit inH <sub>2</sub> O mbar	400 (39.2°F/4°C is standard reference temperature for inH <sub>2</sub> O range.) 1,000
Minimum Span inH <sub>2</sub> O mbar	4 10
Zero Elevation and Suppression	No limit except minimum span within ±100% URL. Specifications valid from –100% to + 100% URL.
Accuracy (Reference – Includes combined effects of linearity, hysteresis, and repeatability) • <b>Accuracy includes residual error after averaging successive readings.</b>	±0.075% of calibrated span or upper range value (URV), whichever is greater, terminal based. For URV below reference point (25 inH <sub>2</sub> O), accuracy equals: $\pm \left[ 0.025 + 0.05 \left( \frac{25 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.025 + 0.05 \left( \frac{62.5 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
Zero Temperature Effect per 28°C (50°F)	±0.30% of span. For span below reference point (50 inH <sub>2</sub> O), effect equals: $\pm 0.30 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \text{ or } \pm 0.30 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \text{ in \% of span}$
Combined Zero and Span Temperature Effect per 28°C (50°F)	±0.475% of span. For span below reference point (50 inH <sub>2</sub> O), effect equals: $\pm \left[ 0.225 + 0.25 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.225 + 0.25 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
Zero Static Pressure Effect per 300 psi (20 bar)	±0.2125% of span. For URV below reference point (50 inH <sub>2</sub> O), effect equals: $\pm \left[ 0.0125 + 0.20 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.0125 + 0.20 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$
Combined Zero and Span Static Pressure Effect per 300 psi (20 bar)	±0.40% of span. For URV below reference point (50 inH <sub>2</sub> O), effect equals: $\pm \left[ 0.20 + 0.20 \left( \frac{50 \text{ inH}_2\text{O}}{\text{span inH}_2\text{O}} \right) \right] \text{ or } \pm \left[ 0.20 + 0.20 \left( \frac{125 \text{ mbar}}{\text{span mbar}} \right) \right] \text{ in \% of span}$

\* 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 – All Models

Parameter	Description
<b>Electromagnetic Compatibility</b>	IEC 61326-1
<b>Lightning Surge Arrester (Remote antenna only)</b>	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.
<b>CE Conformity</b>	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
<b>Mounting Bracket</b>	Carbon Steel (zinc-plated) or Stainless Steel angle bracket or flat bracket available.
<b>Electronic Housing</b>	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 1 meter).
<b>Stainless Steel Housing (option)</b>	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.
<b>Process Connections</b>	<b>Process Head:</b> 1/4-inch NPT; 1/2-inch NPT with adapter. Process heads meet DIN 19213 requirements. <b>Flange:</b> 2, 3 or 4-inch Class 150 or 300 ANSI; DN50-PN40, DN80-PN40 or DN100-PN40 DIN flange. <b>Extended Diaphragm:</b> 2, 4 or 6 inches (50, 101, 152 mm) long. 2 or 3-inch, Class 150 ANSI flange.
<b>Mounting</b>	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> .
<b>Dimensions</b>	See <a href="#">Figure 3</a> and <a href="#">Figure 4</a> .
<b>Net Weight</b>	23 to 36 lbs (10.5 kg to 16.4 kg) depending on flange size <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)

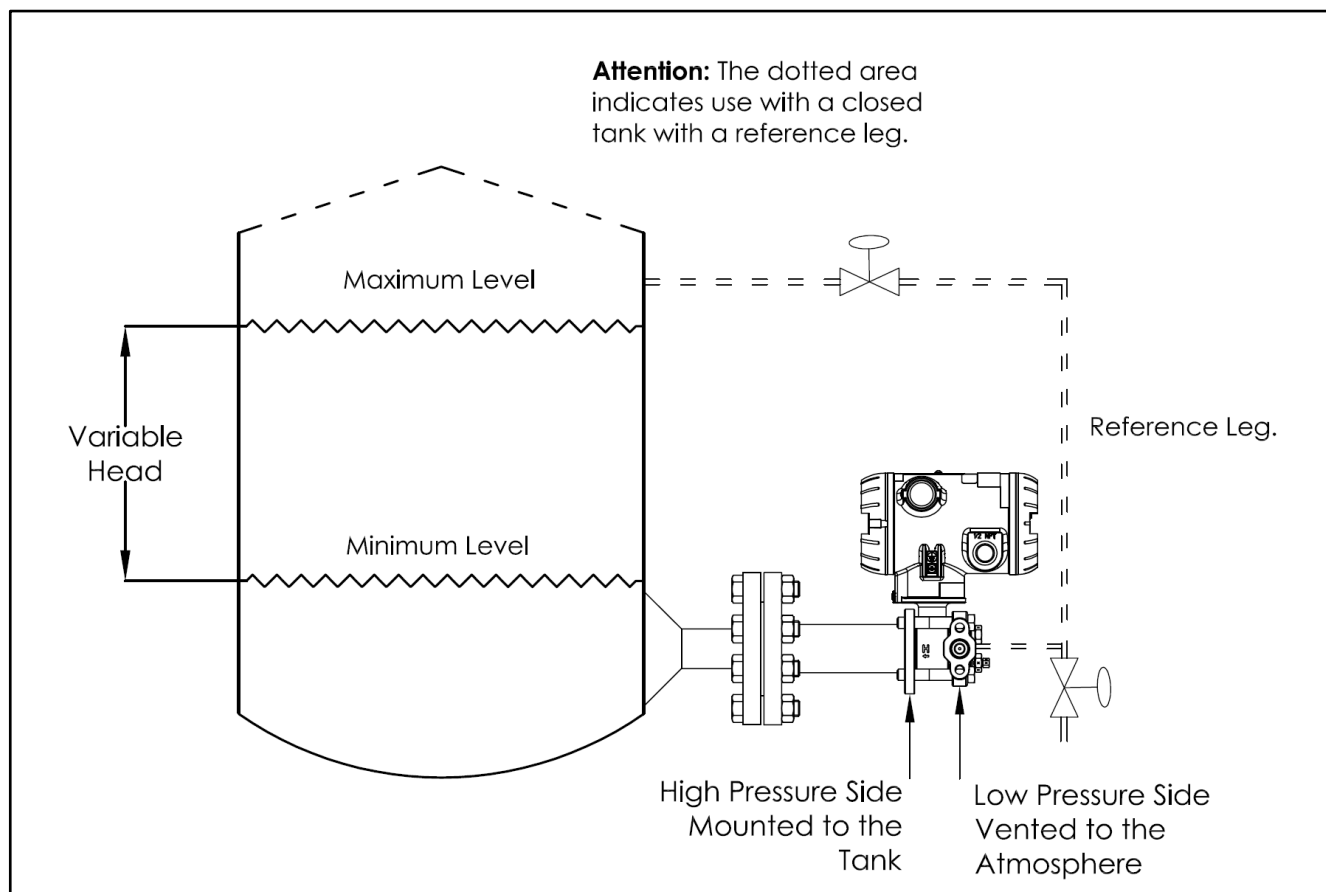
Parameter	Description
Barrier Diaphragm Material	316L SS and Hastelloy® C-276 <sup>2</sup>
Process Head Material	316 SS <sup>3</sup>
Vent/Drain Valves & Plugs <sup>1</sup>	316 SS <sup>3</sup>
Head Gaskets	Glass-filled PTFE standard. (STFW828 optionally available with Viton®)
Meter Body Bolting	Carbon Steel (zinc plated) standard. Options include 316 SS and NACE A286 SS bolts
Fill Fluid	Silicone DC 200 oil, NEOBEE M-20, or CTFE (chlorotrifluoroethylene)
Mounting Flange <sup>4</sup>	
Flush	316L SS and Hastelloy C-276 <sup>2</sup> .
Extended	316L SS

<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.

<sup>4</sup> Mounting flange is process wetted.



**Figure 2 — Typical mounting arrangement for flange mounted liquid level transmitter (antenna omitted)**

## Mounting and Dimensions

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

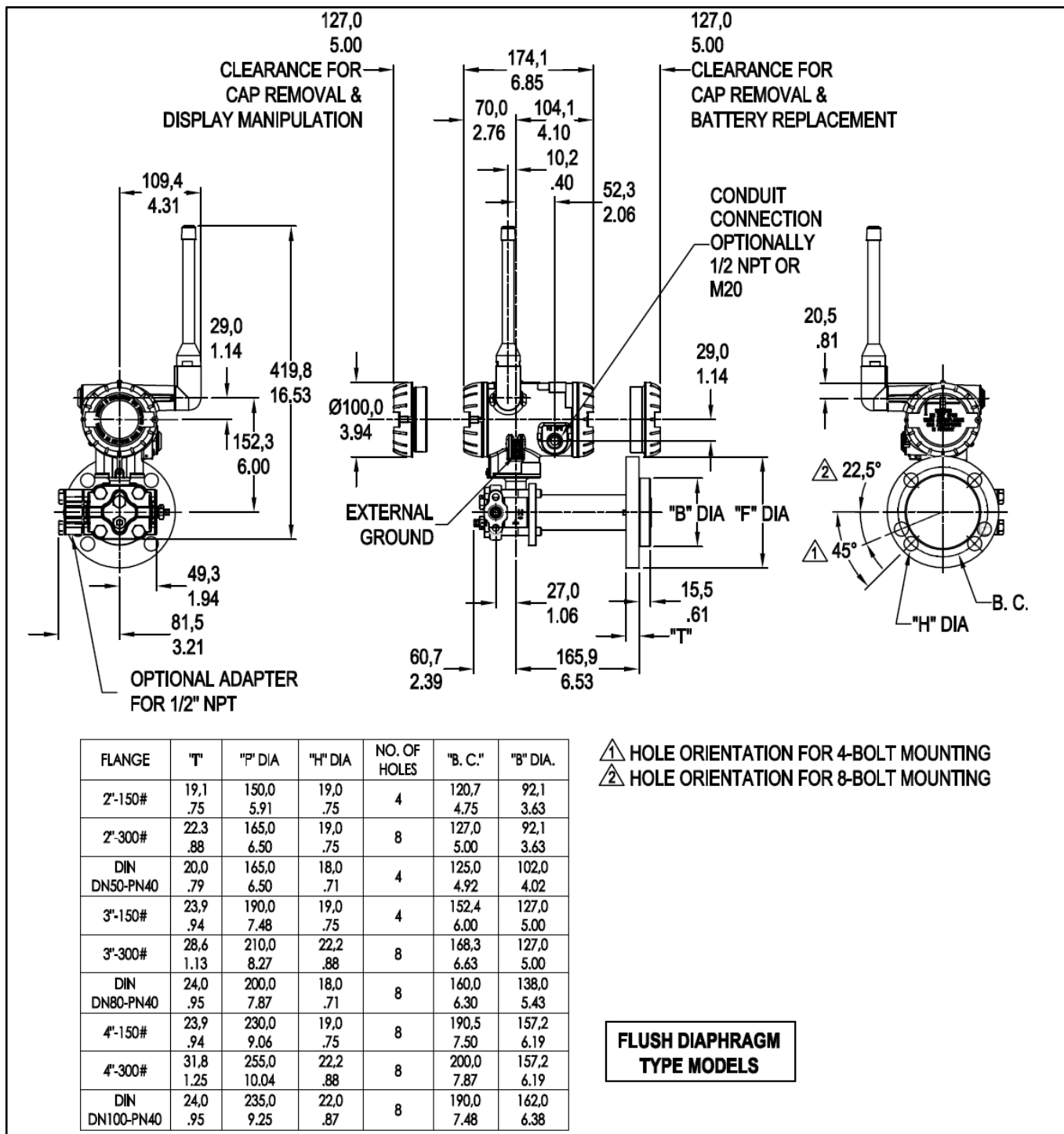


Figure 3 – Typical mounting dimensions for flush diaphragm type models STFW828 and STFW724

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

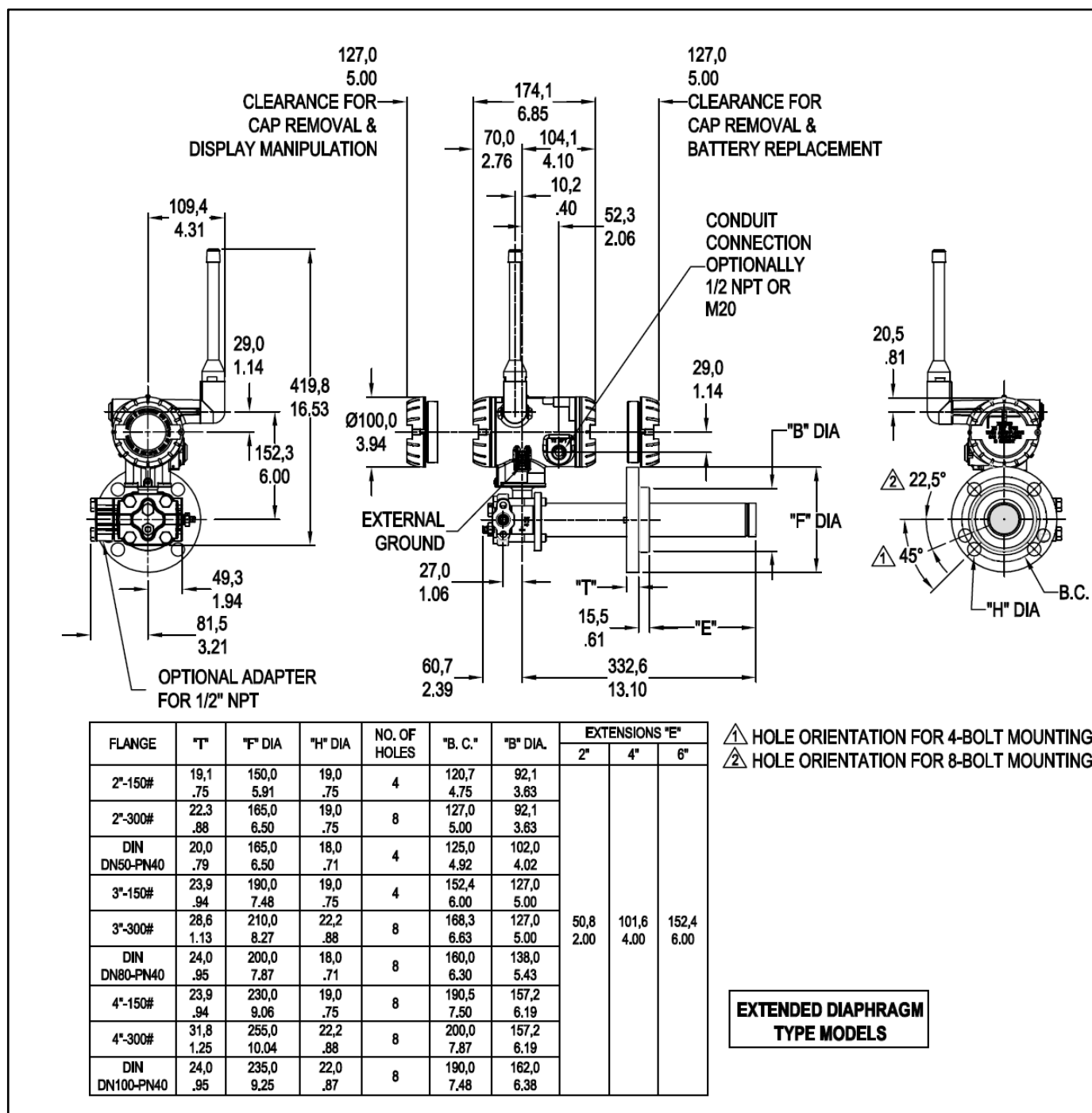


Figure 4 — Typical mounting dimensions for extended diaphragm type models STFW828 and STFW724

## Hazardous Locations Approvals

Refer to control drawing 50136123, in the User's manual #34-SW-25-01, for intrinsically safe installation details.

AGENCY	TYPE OF PROTECTION	Ambient Temperature	Product Applicability
CSA (USA and Canada)	<b>Intrinsically Safe:</b> Class I; Division 1; Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1; T4 Class I, Zone 0 AEx ia IIC T4 Ga Class I Zone 2 AEx ic IIC T4 Gc Ex ia IIC T4 Ga Ex ic IIC T4 Gc	See tables below	Pressure
	<b>Non Incendive:</b> Class I; Division 2; Groups A, B, C, D; Class II, Division 2, Groups E, F, G; Class III, Division 2, T6...T4 Ex nA [ia Ga] IIC T6...T4 Gc Class I, Zn 2, AEx nA [ia Ga] IIC T6...T4 Gc	See tables below	Pressure
	<b>Explosion-Proof/ Flameproof/Dust Proof:</b> Class I, Division 1; Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1; T6...T4 Ex db [ia Ga] IIC T6...T4 Gb Ex tb [ia Da] IIIC T95...T125 Db Class I, Zn 1 AEx db [ia Ga] IIC T6...T4 Gb Class II, Zn 21, AEx tb [ia Da] IIIC T95...T125 Db	See tables below	Pressure
	<b>Enclosure:</b> Type 4X/ IP66/ IP67		
	<b>Standards Used:</b> CSA C22.2 No. 0-10 CSA C22.2 No.94.2-15 CSA C22.2 No.213-16 CAN/CSA C22.2 No.60079-1:16 CAN/CSA C22.2 No.60079-31:15 ANSI/UL 60079-1-2015 ANSI/UL 60079-31-2015 FM 3616 – Dec 2011 ANSI/UL 50E-2015	CSA C22.2 No.25-17 CAN/CSA C22.2 No.61010-1-12 CAN/CSA C22.2 No.60529:16 CAN/CSA C22.2 No.60079-11:14 ANSI/ISA 12.12.01-2015 ANSI/UL 60079-11-2014 FM 3600 – Dec 2011 ANSI/IEC 60529 – 2004 ANSI/UL 61010-1-2016	CSA C22.2 No.30-M1986 CAN/CSA C22.2 No.157-92 CAN/CSA C22.2 No.60079-0:15 CAN/CSA C22.2 No.60079-15:16 ANSI/UL 60079-0-2013 ANSI/UL 60079-15-2013 FM 3615 – Aug 2006 ANSI/UL 913-2015

AGENCY	TYPE OF PROTECTION	Ambient Temperature	Product Applicability
FM Approvals <sup>TM</sup> (USA)	<b>Intrinsically Safe:</b> IS Class I, II, III; Division 1; Groups ABCDEFG; T4 Class I, Zone 0 AEx ia IIC Ga T4 Class I, Zone 2[0] AEx ic [ia Ga] IIC Gc T4	-40 °C to +85 °C	Pressure
	<b>Non Incendive:</b> NI-AIS Class I; DIV 2; Groups ABCD; T5...T6 Class I, Zone 2[0] AEx nA [ia Ga] IIC Gc; T5...T6	-40 °C to +85 °C : T5 -40 °C to +70 °C : T6	Pressure
	<b>Dust Proof:</b> DIP-AIS Class II, III DIV 1; Groups EFG; T5...T6 Zone 21[20] AEx tb [ia Da] IIIC T95°C Db	-40 °C to +85 °C : T5, T95 -40 °C to +70 °C : T6	Pressure
	<b>Enclosure:</b> Type 4X/ IP66/ IP67		
	<b>Standards Used:</b> FM 3600:2018 ANSI/ISA 60079-0: 2013 ANSI/ ISA 60079-15: 2013 ANSI/ NEMA 250: 2008	FM 3610: 2018 FM 3810: 2018 ANSI/ ISA 60079-31: 2015	FM 3611: 2018 FM 3616: 2011 ANSI/ ISA 60079-11: 2014 ANSI/ ISA 60529: 2004

AGENCY	TYPE OF PROTECTION	Ambient Temperature	Product Applicability
ATEX	Intrinsically Safe: II 1 G Ex ia IIC T4 Ga II 3 G Ex ic IIC T4 Gc	See tables below	Pressure
	Flameproof / Dust Proof: II 2[1] G Ex db [ia Ga] IIC T6...T4 Gb II 2[1] D Ex tb [ia Da] IIIC T95C...T125C Db	See tables below	Pressure
	<b>Non Incendive:</b> II 3[1] G Ex ec [ia Ga] IIC T6...T4 Gc	See tables below	Pressure
	Enclosure: IP66/ IP67		
	<b>Standards Used:</b> EN 60079-0 : 2012 + A1 EN 60079-26 : 2006	EN 60079-1 : 2014 EN 60079-7 : 2015	EN 60079-11 : 2012 IEC 60079-31 : 2013

AGENCY	TYPE OF PROTECTION	Ambient Temperature	Product Applicability*
IECEX	<b>Intrinsically Safe:</b> Ex ia IIC T4 Ga Ex ic IIC T4 Gc	See tables below	Pressure
	<b>Flameproof / Dust Proof:</b> Ex db [ia Ga] IIC T6...T4 Gb Ex tb [ia Da] IIIC T95C...T125C Db	See tables below	Pressure
	<b>Non Incendive:</b> Ex ec [ia Ga] IIC T6...T4 Gc	See tables below	Pressure
	Enclosure: IP66 /IP67		
	<b>Standards Used:</b> IEC 60079-0 : 2011 IEC 60079-26 : 2006	IEC 60079-1 : 2014 IEC 60079-7 : 2015	IEC 60079-11 : 2011 IEC 60079-31 : 2013

**For Intrinsic Safety Installations:**

The applicable temperature class, ambient temperature (Ta) and process temperature (Tp) range of the equipment when installed with type protection “Ex ia” is as follows:

Protection Type	Temperature Class
Ex ia	T4
	Ta = -40 to 80°C Tp = -40 to 125°C
Ex ic	Ta = -40 to 85°C Tp = -40 to 125°C

**For Flameproof , Dustproof, increased safety and non incendive Installations:**

The applicable temperature class, ambient temperature (Ta) and process temperature (Tp) range of the equipment when installed with type protection “Ex db”, “Ex ec”, “Ex nA” is as follows:

Protection Type	Temperature Class		
	T4	T5	T6
Ex db Ex ec Ex nA	Ta = -40 to 85°C Tp = -40 to 125°C	Ta = -40 to 85°C Tp = -40 to 100°C	Ta = -40 to 75°C Tp = -40 to 85°C

The applicable temperature class, ambient temperature (Ta) and process temperature (Tp) range of the equipment when installed with type protection “Ex tb” is as follows:

Protection Type	Temperature Class	
	T125C	T95C
Ex tb Ex nA Ex ec	Ta = -40 to 85°C Tp = -40 to 125°C	Ta = -40 to 85°C Tp = -40 to 100°C

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**Transmitter Options**  
**(indicated selection code is shown)****ISA100 Wireless Release Selections (A or B)**

OneWireless R2xx represents the previous releases whereas R3xx is the current release. A OneWireless system with R3xx firmware can host R2xx and R3xx devices. Please select the option to match the targeted OneWireless system.

**Remote Antenna and Cables (M or D)**

The user can select one of the optional remote antennas listed. The selection of the antenna option automatically includes the remote antenna adapter.

To complete the option selection, one of the remote antenna cables (1, 2, or 3) must also be selected.

**Lightning (Surge) Diverter and Cables (1, 2, or 3)**

The lightning surge diverter options includes the surge diverter and cable. The diverter features Type N connections (female) on both ends. The remote antenna adapter is not included.

**Remote Antenna Adapter (A)**

This option provides an adapter to be inserted into the opening where the integral antenna normally connects. The adapter is designed to connect to a remote antenna that the user supplies. It features a female Type N connection.

**Standard Diagnostics plus Anti-Alias Filter (3)**

This option enables the Anti-Alias filter option which attenuates the higher frequencies and helps to prevent aliasing components from being sampled.

**Destination Country (CA, EU, or US)**

This selection sets the transmission power at the factory to comply with the installation country location.

**Custom Configuration (C)**

Customer specified configuration parameters are programmed into the transmitter at the factory. Configuration information needs to be communicated to Honeywell Order Management at time of order entry.

Additionally, the Honeywell OneWireless user interface is accessible through any browser and thus all configurable parameters are visible and can be edited.

**Custom Calibration (B)**

Custom calibration would input customer specified LRV and URV values, and check linearity. LRV and URV information needs to be communicated to Honeywell Order Management at time of order entry.

**Mounting Brackets (1, 3, 5, or 7)**

The angle mounting bracket is available in either zinc-plated carbon steel or 316 stainless steel and is suitable for horizontal or vertical mounting on a two-inch (50 millimeter) pipe, as well as wall mounting.

An additional flat mounting bracket is also available in carbon steel and 316 stainless steel for two-inch (50 millimeter) pipe mounting.

**Tagging (Option 1 or 2)**

The choice of 1 or 2 stainless steel wired-on tags is available. Each tag can accommodate additional data of up to 4 lines of 28 characters. The number of characters includes spaces.

Note that the standard nameplate on the meter body contains the serial number and body-related data.

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## Model Selection Guide for STFW800

Model Selection Guides are subject to change and are inserted into the specifications as guidance only

### Model STFW800 Flange Mounted Liquid Level Wireless Transmitter

Model Selection Guide  
34-SW-16-33 Issue 4

#### Instructions

- Select the desired Key Number. The arrow to the right marks the selection available.
- Make one selection from each Table (I, II and IX) using the column below the proper arrow.
- A(●) denotes unrestricted availability. Aletter denotes restricted availability.
- Restrictions follow Table IX.

Key	I	II	III	IV	V	VI	VII	VIII	IX
STFW	-	-	-	-	-	-	-	-	00000

KEY NUMBER	URL	LRL	Max Span	Min Span	Units	Selection	Availability
Measurement Range Std Accuracy	400 (1000)	-400 (-1000)	400 (1000)	4 (10)	" H <sub>2</sub> O (mbar)	STFW828	↓

TABLE I										
Meter Body & Flange Design	Materials of Construction	Design	Ref. Head	Vent Drain Valve on Ref. Head <sup>2</sup>	Barrier Diaphragm. (wetted)	Diaphragm. Plate (wetted)	Extension (wetted)	Selection	Availability	
	a. Process Wetted Heads & Diaphragm Materials	Flush	316 SS <sup>5</sup>	316 SS	316L SS Hast C <sup>3</sup> Hast C <sup>3</sup>	316L SS 316L SS Hast C <sup>3</sup>	N/A	E _____ X _____ F _____	• • •	
		Extended	316 SS <sup>5</sup>	316 SS	316L SS Hast C <sup>3</sup>	316L SS	316L SS	R _____ S _____	• •	
	b. Fill Fluid (Meter Body & Flange)	Silicone Oil 200						_ 1 _ _ _ _	•	
		Fluorinated Oil CTFE						_ 2 _ _ _ _	•	
		NEOBEE® M-20						_ 4 _ _ _ _	•	
	c. Process Connection	Reference Head					Flange		Selection	Availability
		1/4 NPT					High Pressure Side	_ _ A _ _ _	•	
		1/2 NPT Adapter - material matches head material and head bolt material <sup>11</sup>					Low Pressure Side	_ _ C _ _ _		
							High Pressure Side	_ _ H _ _ _	•	
						Low Pressure Side	_ _ K _ _ _			
	d. Bolts for Process Heads	Carbon Steel Bolts							_ _ _ C _ _	•
		316 SS Bolts							_ _ _ S _ _	•
		A286 SS (NACE) Bolts							_ _ _ N _ _	•
	e. Vent/Drain Type/Location	Ref. Head Type	Vent Type	Location		Vent Material		Selection	Availability	
		Single Ended	None	None		None		_ _ _ 1 _ _	•	
Single Ended		Std	Side		Matches Head Material <sup>11</sup>		_ _ _ 2 _ _	•		
Single Ended		Ctr Vent	Side		Stainless Steel Only		_ _ _ 3 _ _	•		
Dual Ended		Std	End		Matches Head Material <sup>11</sup>		_ _ _ 4 _ _	•		
Dual Ended		Ctr Vent	End		Stainless Steel Only		_ _ _ 5 _ _	•		
Dual Ended		Vent/Plug	Side/End		Matches Head Material <sup>11</sup>		_ _ _ 6 _ _	•		
f. Gasket Material	Teflon® or PTFE (Glass Filled)							_ _ _ _ A	•	
	Viton® or Fluorocarbon Elastomer							_ _ _ _ B	•	

<sup>1</sup> Carbon Steel heads are zinc-plated and not recommended for water service due to hydrogen migration. For that service, use the 316 stainless steel Wetted Reference Head.

<sup>2</sup> Vent/Drains are Teflon or PTFE coated for lubricity.

<sup>3</sup> Hastelloy® C-276 or UNS N10276

<sup>4</sup> Monel 400® or UNS N04400

<sup>5</sup> Supplied as 316 SS or as Grade CF8M, the casting equivalent of 316 SS.

<sup>6</sup> Supplied as indicated or as Grade CW12MW, the casting equivalent of Hastelloy® C-276

<sup>7</sup> Supplied as indicated or as Grade M30C, the casting equivalent of Monel 400®

<sup>10</sup> Monel 400® or UNS N04400 or UNS N04405

<sup>11</sup> Except Carbon Steel Heads shall use 316SS Vent/Drain, Plugs & Adapters when required



Availability  
↓

TABLE II			Flange Material	Threaded Nut Ring Material	Selection	STFW828
Flange Assembly	a. Flange (ANSI Flanges have 125-500 AARH surface Finish)	3" ANSI Class 150	304 SS (non-wetted)	304 SS (non-wetted)	A __	•
		3" ANSI Class 300			B __	•
		DN80-PN40 DIN			C __	•
		4" ANSI Class 150			D __	•
		4" ANSI Class 300			E __	•
		DN100-PN40 DIN			F __	•
		2" ANSI Class 150			Q __	•
		2" ANSI Class 300			U __	•
		DN50-PN40 DIN			V __	•
		3" ANSI Class 150	316 SS (non-wetted)	304 SS (non-wetted)	H __	•
		3" ANSI Class 300			J __	•
		DN80-PN40 DIN			K __	•
		4" ANSI Class 150			L __	•
		4" ANSI Class 300			M __	•
		DN100-PN40 DIN			N __	•
		2" ANSI Class 150			W __	•
		2" ANSI Class 300			X __	•
		DN50-PN40 DIN			Z __	•
b. Gasket Ring (wetted)	Flush Design	316L SS Hastelloy® C <sup>3</sup> Monel 400® <sup>4</sup>		_ 1 _ _ 2 _ _ 3 _	s s q	
	Extended Design	316L SS		_ 5 _	v	
	c. Extension (wetted)	Flush			_ _ F	w
Diameter		Length	Selection	Availability		
1.87 Inches (for 2", 3" or 4 " spud) <sup>13</sup>		2 inches	_ _ C	v		
		4 inches	_ _ D	v		
		6 inches	_ _ E	v		

<sup>3</sup> Hastelloy® C-276 or UNS N10276<sup>4</sup> Monel 400® or UNS N04400<sup>13</sup> For part numbers and pricing information on Tank Spuds refer to page ST-91 (Supplementary Accessories & Kits).

TABLE III	Agency Approvals (see data sheet for Approval Code Details)	Selection	Availability
Approvals	No Approvals Required	0	•
	ATEX and IEC Ex Explosion proof, Intrinsically Safe, Non-incendive & Dustproof	A	•
	c CSA US Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof	B	•
	FM Intrinsically Safe, Non-incendive and Dustproof	H	•

TABLE IV	TRANSMITTER ELECTRONICS SELECTIONS			Selection	Availability
a. Electronic Housing Material & Connection Type	Material	Connection	Paint Color		
	Epoxy Polyester Hybrid Coated Aluminum	1/2 NPT	Standard (Blue / Gray)	C _ _ _ _	•
	Epoxy Polyester Hybrid Coated Aluminum	M20	Standard (Blue / Gray)	D _ _ _ _	•
	316 Stainless Steel (Grade CF8M)	1/2 NPT	Standard (no paint)	M _ _ _ _	•
b. Output Protocol	316 Stainless Steel (Grade CF8M)	M20	Standard (no paint)	N _ _ _ _	•
	Wireless Protocol				
	ISA100 Wireless 2.0 compatible (equivalent OW R300 or newer) ISA100 Wireless 1.0 compatible (equivalent to OW R2xx)			_ A _ _ _ _ B _ _ _	• •
c. Power	Power Options				
	Battery Holder Only - No Battery Included Battery Power - Batteries included 24 VDC power			_ _ 0 _ _ _ _ B _ _ _ _ D _ _	• • •
d. Antennas	Antenna Options				
	Integral Right-angle, vertical 4 dBi Remote Omnidirectional, 8 dBi Remote Directional, 14 dBi Remote Antenna Adapter only, Type N Connection			_ _ _ R _ _ _ _ M _ _ _ _ D _ _ _ _ A _	• • • •
e. Remote Antenna Cable	Remote Antenna Cable				
	None Type N Remote Cable, 1.0 m (required for connection to transmitter) Type N Remote Cable, 3.0 m (required for connection to transmitter) Type N Remote Cable, 10.0 m (required for connection to transmitter)			_ _ _ _ 0 _ _ _ _ _ 1 _ _ _ _ _ 2 _ _ _ _ _ 3 _	• • • •
f. Surge Diverter and Cable	Lightning Surge Diverter and Remote Cable				
	None Surge Diverter and Type N Cable (1.0 m) Surge Diverter and Type N Cable (3.0 m) Surge Diverter and Type N Cable (10.0 m)			_ _ _ _ 0 _ _ _ _ 1 _ _ _ _ 2 _ _ _ _ 3	• • • •

Availability



TABLE V	CONFIGURATION SELECTIONS	Selection	STFW828
a. Application Software	Diagnostics and Applications		
	Standard Diagnostics	1 _ _ _	•
	Standard Diagnostics plus Anti-Alias Filter	3 _ _ _	•
b. Country	Destination Country		
	Canada	_ CA _	•
	European Union (RED compliant countries includes Australia)	_ EU _	•
	USA and Puerto Rico	_ US _	•
c. General Configuration	General Configuration		
	Factory Standard	_ _ _ S	•

<sup>3</sup> NAMUR Output Limits 3.8 - 20.5mAdc can be configured by the customer or select custom configuration Table Vc

TABLE VI	CALIBRATION & ACCURACY SELECTIONS			Selection	Availability
Accuracy and Calibration	Accuracy	Calibrated Range	Calibration Qty		
	Standard	Factory Std	Single Calibration	A	•

TABLE VII	ACCESSORY SELECTIONS	Selection	Availability
a. Mounting Bracket	None (not required with flange mount unit)	0 _ _ _	•
b. Customer Tag	No customer tag	_ 0 _ _	•
	One Wired Stainless Steel Tag (Up to 4 lines 26 char/line)	_ 1 _ _	•
	Two Wired Stainless Steel Tag (Up to 4 lines 26 char/line)	_ 2 _ _	•
c. Unassembled Conduit Plugs & Adapters	No Conduit Plugs or Adapters Required	_ _ A0	•
	1/2 NPT Male to 3/4 NPT Female 316 SS Certified Conduit Adapter	_ _ A2	n
	1/2 NPT 316 SS Certified Conduit Plug	_ _ A6	n
	M20 316 SS Certified Conduit Plug	_ _ A7	m
	Minifast <sup>®</sup> 4 pin (1/2 NPT)	_ _ A8	n
	Minifast <sup>®</sup> 4 pin (M20)	_ _ A9	m

TABLE VIII	OTHER Certifications & Options: (String in sequence comma delimited (XX, XX, XX,...))	Selection	Availability
Certifications & Warranty	None - No additional options	00	•
	NACE MR0175; MR0103; ISO15156 (FC33338) Process wetted parts only	FG	•
	NACE MR0175; MR0103; ISO15156 (FC33339) Process wetted and non-wetted parts	F7	c
	EN10204 Type 3.1 Material Traceability (FC33341)	FX	•
	Certificate of Conformance (F3391)	F3	•
	Calibration Test Report & Certificate of Conformance (F3399)	F1	•
	Certificate of Origin (F0195)	F5	•
	Over-Pressure Leak Test Certificate (1.5X MAWP) (F3392)	TP	•
	Cert Clean for O <sub>2</sub> or CL <sub>2</sub> service per ASTM G93	OX	e
	PMI Certification <sup>1</sup>	PM	•
	Extended Warranty Additional 1 year	01	•
	Extended Warranty Additional 2 years	02	•
	Extended Warranty Additional 3 years	03	•
	Extended Warranty Additional 4 years	04	•
	Extended Warranty Additional 15 years	15	•

TABLE IX	Manufacturing Specials	Selection	Availability
Factory	Factory Identification	00000	•

**MODEL RESTRICTIONS**

Restriction Letter	Available Only with		Not Available with	
	Table	Selection(s)	Table	Selection(s)
c	Id	___N___		
e	Ib	_2____		
m	IVa	D, N _____		
n	IVa	C, M _____		
q	Ia	G _____		
s	Ia	E, X, F _____		
v	Ia	R,S _____		
w			Ia	R,S _____
			IIb	_____5_____
b	Select only one option from this group			

<sup>1</sup>The PM option is available on all Smartline Wireless Pressure Transmitter process wetted parts such as process heads, flanges, bushings and vent plugs except plated carbon steel process heads and flanges. PM option information is also available on diaphragms except Gold plated and STGW and STAW in-line construction pressure transmitters.

**FIELD INSTALLABLE REPLACEMENT PARTS**

Description	Kit Number
1/2 NPT cocket plug (ZN plated CS)	50021832-501
1/2 NPT certified conduit plug (SS)	50021832-502
M20 conduit plug (ZN plated CS)	50000547-502
M20 certified conduit plug (SS)	50000547-501
Lightning surge diverter (order cable separately)	50018279-590
IS battery pack	50047517-501
24 VDC external power module	50136118-501
Right-angle elbow assembly for 4dBi antenna, aluminum with gray, pure polyester paint	50030973-503
Right-angle elbow assembly for 4dBi antenna, aluminum with gray, epoxy-polyester paint	50030973-504
Right-angle elbow assembly for 4dBi antenna, stainless steel	50030973-505
Remote omnidirectional antenna, 8 dBi	50018414-501
Remote directional antenna, 14 dBi	50018415-501
Remote antenna adapter, Type N connection	50028364-501
Remote cable for antenna or accessories, Type N (1.0m)	50018278-501
Remote cable for antenna or accessories, Type N (3.0m)	50018278-503
Remote cable for antenna or accessories, Type N (10.0m)	50018278-510
Lithium thionyl chloride batteries (Qty 2)	50026010-501
Lithium thionyl chloride batteries (Qty 4)	50026010-502
Lithium thionyl chloride batteries (Qty 10)	50026010-503

**PRODUCT MANUALS**

Description	Part Number
SmartLine Wireless Transmitter User's Manual	34-SW-25-01

All product documentation is available at [www.honeywellprocess.com](http://www.honeywellprocess.com).

## Model Selection Guide for STFW700

Model Selection Guides are subject to change and are inserted into the specifications as guidance only.

## Model STFW700

### Flange Mounted Liquid Level

### Wireless Transmitter

Model Selection Guide

34-SW-16-03 Issue 4

**Instructions:** Make selections from all Tables using column below the proper arrow. Asterisk indicates availability. Letter (a) refers to restrictions highlighted in the restrictions table. Tables delimited with dashes.

Key Number	I	II	III	IV	V	VI	VII	VIII	IX
STFW7	-	-	-	-	-	-	-	-	00000

KEY NUMBER	URL	LRL	Max Span	Min Span	Units	Selection	Availability
Measurement Range Std Accuracy	400 (1000)	-400 (-1000)	400 (1000)	4 (10)	" H <sub>2</sub> O (mbar)	STFW724	↓

TABLE I	Materials of Construction	Design	Ref. Head	Vent Drain Valve on Ref. Head <sup>2</sup>	Barrier Diaphragm. (wetted)	Diaphragm. Plate (wetted)	Extension (wetted)		
Meter Body & Flange Design	a. Process Wetted Heads & Diaphragm Materials	Flush	316 SS <sup>5</sup>	316 SS	316L SS Hast C <sup>3</sup> Hast C <sup>3</sup>	316L SS 316L SS Hast C <sup>3</sup>	N/A	E _____ X _____ F _____	• • •
		Extended	316 SS <sup>5</sup>	316 SS	316L SS Hast C <sup>3</sup>	316L SS	316L SS	R _____ S _____	• •
	b. Fill Fluid (Meter Body & Flange)	Silicone Oil 200 Fluorinated Oil CTFE NEOBEE® M-20						_ 1 _____ _ 2 _____ _ 4 _____	• • •
		c. Process Connection	Reference Head			Flange			
	1/4 NPT 1/2 NPT Adapter - material matches head			High Pressure Side High Pressure Side		____ A ____ ____ H ____		• •	
	d. Bolts for Process Heads	Carbon Steel Bolts						____ C ____	•
		316 SS Bolts						____ S ____	•
		A286 SS (NACE) Bolts						____ N ____	•
	e. Vent/Drain Type/Location	Ref. Head Type	Vent Type	Location	Vent Material				
		Single Ended	None	None	None		____ 1 ____	•	
Single Ended		Std	Side	Matches Head Material <sup>11</sup>		____ 2 ____	•		
Single Ended		Ctr	Side	Stainless Steel Only		____ 3 ____	•		
Dual Ended		Std	End	Matches Head Material <sup>11</sup>		____ 4 ____	•		
Dual Ended		Cntr	End	Stainless Steel Only		____ 5 ____	•		
f. Gasket Material	Dual Ended	Vent/Plug	Side/End	Matches Head Material <sup>11</sup>		____ 6 ____	•		
	Teflon® or PTFE (Glass Filled)						____ A ____	•	

<sup>1</sup> Carbon Steel heads are zinc-plated and not recommended for water service due to hydrogen migration. For that service, use the 316 stainless steel Wetted Reference Head.

<sup>2</sup> Vent/Drains are Teflon or PTFE coated for lubricity.

<sup>3</sup> Hastelloy® C-276 or UNS N10276

<sup>5</sup> Supplied as 316 SS or as Grade CF8M, the casting equivalent of 316 SS.

<sup>6</sup> Supplied as indicated or as Grade CW12MW, the casting equivalent of Hastelloy® C-276

<sup>11</sup> Except Carbon Steel Heads shall use 316SS Vent/Drain, Plugs & Adapters when required

					Availability	
TABLE II			Flange Material	Threaded Nut Ring Material		STFW724
Flange Assembly	a. Flange  (ANSI Flanges have 125-500 AARH Surface Finish)	3" ANSI Class 150	304 SS (non-wetted)	304 SS (non-wetted)	A __	•
		3" ANSI Class 300			B __	•
		DN80-PN40 DIN			C __	•
		4" ANSI Class 150			D __	•
		4" ANSI Class 300			E __	•
		DN100-PN40 DIN			F __	•
		2" ANSI Class 150	316 SS (non-wetted)	304 SS (non-wetted)	Q __	•
		2" ANSI Class 300			U __	•
		DN50-PN40 DIN			V __	•
		3" ANSI Class 150			H __	•
		3" ANSI Class 300	J __	•		
		DN80-PN40 DIN	K __	•		
		4" ANSI Class 150	L __	•		
		4" ANSI Class 300	M __	•		
	DN100-PN40 DIN	N __	•			
	2" ANSI Class 150	W __	•			
	2" ANSI Class 300	X __	•			
	DN50-PN40 DIN	Z __	•			
	b. Gasket Ring (wetted)	Flush Design	316L SS Hastelloy® C <sup>3</sup>	316L SS	_ 1 _	s
		Extended Design			_ 2 _	s
c. Extension (wetted)	Flush			_ 5 _	v	
				_ _ F	w	
		Diameter	Length			
	1.87 Inches (for 2", 3" or 4 " spud) <sup>13</sup>	2 inches		_ _ C	v	
		4 inches		_ _ D	v	
6 inches		_ _ E	v			

<sup>3</sup> Hastelloy® C-276 or UNS N10276<sup>13</sup> For part numbers and pricing information on Tank Spuds refer to page ST-91 (Supplementary Accessories & Kits).

TABLE III	Agency Approvals (see data sheet for Approval Code Details)		
Approvals	No Approvals Required	0	•
	ATEX and IEC Ex Explosion proof, Intrinsically Safe, Non-incendive & Dustproof	A	•
	c CSA US Explosion proof, Intrinsically Safe, Non-incendive, & Dustproof	B	•
	FM Intrinsically Safe, Non-incendive and Dustproof	H	•

TABLE IV	HOUSING and ELECTRONICS SELECTIONS				
a. Electronic Housing Material & Connection Type	Material	Connection	Paint Color		
	Epoxy Polyester Hybrid Coated Aluminum	1/2 NPT	Standard (Blue / Gray)	C _ _ _ _	•
	Epoxy Polyester Hybrid Coated Aluminum	M20	Standard (Blue / Gray)	D _ _ _ _	•
	316 Stainless Steel (Grade CF8M)	1/2 NPT	None	M _ _ _ _	•
	316 Stainless Steel (Grade CF8M)	M20	None	N _ _ _ _	•
b. Output/ Protocol	Wireless Protocol				
	ISA100 Wireless 2.0 compatible (equivalent OW R300 or newer)				
	ISA100 Wireless 1.0 compatible (equivalent to OW R2xx)				
c. Power	Power Options				
	Battery Holder Only - No Battery Included				
	Battery Power - Batteries included				
d. Antennas	Antenna Options				
	Integral Right-angle, vertical 4 dBi				
	Remote Omnidirectional, 8 dBi				
	Remote Directional, 14 dBi				
	Remote Antenna Adapter only, Type N Connection				
e. Remote Antenna Cable	Remote Antenna Cable				
	None				
	Type N Remote Cable, 1.0 m (required for connection to transmitter)				
	Type N Remote Cable, 3.0 m (required for connection to transmitter)				
	Type N Remote Cable, 10.0 m (required for connection to transmitter)				
f. Surge Diverter and Cable	Lightning Surge Diverter and Remote Cable				
	None				
	Surge Diverter and Type N Cable (1.0 m)				
	Surge Diverter and Type N Cable (3.0 m)				
	Surge Diverter and Type N Cable (10.0 m)				

TABLE V		CONFIGURATION SELECTIONS		Availability
a. Application Software	Diagnostics and Applications		STFW724	
	Standard Diagnostics	1 _ _ _	•	
	Standard Diagnostics plus Anti-Alias Filter	3 _ _ _	•	
b. Country	Destination Country			
	Canada	_ CA _	•	
	European Union	_ EU _	•	
	USA and Puerto Rico	_ US _	•	
c. General Configuration	General Configuration			
	Factory Standard	_ _ _ S	•	

TABLE VI		CALIBRATION & ACCURACY SELECTIONS		
Accuracy and Calibration	Accuracy	Calibrated Range	Calibration Qty	
	Standard	Factory Std	Single Calibration	A •

TABLE VII		ACCESSORY SELECTIONS	
a. Mounting Bracket	None (not required with flange mount unit)	0 _ _ _	•
b. Customer Tag	No customer tag	_ 0 _ _	•
	One Wired Stainless Steel Tag (Up to 4 lines 26 char/line)	_ 1 _ _	•
	Two Wired Stainless Steel Tag (Up to 4 lines 26 char/line)	_ 2 _ _	•
c. Unassembled Conduit Plugs & Adapters	No Conduit Plugs or Adapters Required	_ _ A0	•
	1/2 NPT Male to 3/4 NPT Female 316 SS Certified Conduit Adapter	_ _ A2	n
	1/2 NPT 316 SS Certified Conduit Plug	_ _ A6	n
	M20 316 SS Certified Conduit Plug	_ _ A7	m
	Minifast® 4 pin (1/2 NPT)	_ _ A8	n
	Minifast® 4 pin (M20)	_ _ A9	m

TABLE VIII		OTHER Certifications & Options: (String in sequence comma delimited (XX, XX, XX,...))	
Certifications & Warranty	None - No additional options	00	•
	NACE MR0175; MR0103; ISO15156 (FC33338) Process wetted parts only	FG	•
	NACE MR0175; MR0103; ISO15156 (FC33339) Process wetted and non-wetted parts	F7	c
	EN10204 Type 3.1 Material Traceability (FC33341)	FX	•
	Certificate of Conformance (F3391)	F3	•
	Calibration Test Report & Certificate of Conformance (F3399)	F1	•
	Certificate of Origin (F0195)	F5	•
	Over-Pressure Leak Test Certificate (1.5X MAWP) (F3392)	TP	•
	Cert Clean for O <sub>2</sub> or CL <sub>2</sub> service per ASTM G93	OX	e
	PMI Certification	PM	•
	Extended Warranty Additional 1 year	01	•
	Extended Warranty Additional 2 years	02	•
	Extended Warranty Additional 3 years	03	•
	Extended Warranty Additional 4 years	04	•

TABLE IX		Manufacturing Specials	
Factory	Factory Identification	00000	•

**MODEL RESTRICTIONS**

Restriction Letter	Available Only with		Not Available with	
	Table	Selection(s)	Table	Selection(s)
c	Id	____ N ____		
e	Ib	__ 2 ____		
m	IVa	D, N ____		
n	IVa	C, M ____		
s	Ia	E, X, F ____		
v	Ia	R,S ____		
w			Ia	R,S ____
			Ib	__ 5 ____
b	Select only one option from this group			

<sup>1</sup>The PM option is available on all Smartline Wireless Pressure Transmitter process wetted parts such as process heads, flanges, bushings and vent plugs except plated carbon steel process heads and flanges. PM option information is also available on diaphragms except STGW and STAW in-line construction pressure transmitters.

**FIELD INSTALLABLE REPLACEMENT PARTS**

Description	Kit Number
1/2 NPT cocket plug (ZN plated CS)	50021832-501
1/2 NPT certified conduit plug (SS)	50021832-502
M20 conduit plug (ZN plated CS)	50000547-502
M20 certified conduit plug (SS)	50000547-501
Lightning surge diverter (order cable separately)	50018279-590
IS battery pack	50047517-501
24 VDC external power module	50136118-501
Right-angle elbow assembly for 4dBi antenna, aluminum with gray, pure polyester paint	50030973-503
Right-angle elbow assembly for 4dBi antenna, aluminum with gray, epoxy-polyester paint	50030973-504
Right-angle elbow assembly for 4dBi antenna, stainless steel	50030973-505
Remote omnidirectional antenna, 8 dBi	50018414-501
Remote directional antenna, 14 dBi	50018415-501
Remote antenna adapter, Type N connection	50028364-501
Remote cable for antenna or accessories, Type N (1.0m)	50018278-501
Remote cable for antenna or accessories, Type N (3.0m)	50018278-503
Remote cable for antenna or accessories, Type N (10.0m)	50018278-510
Lithium thionyl chloride batteries (Qty 2)	50026010-501
Lithium thionyl chloride batteries (Qty 4)	50026010-502
Lithium thionyl chloride batteries (Qty 10)	50026010-503

**PRODUCT MANUALS**

Description	Part Number
SmartLine Wireless Transmitter User's Manual	34-SW-25-01

All product documentation is available at [www.honeywellprocess.com](http://www.honeywellprocess.com).

## Sales and Service

For application assistance, current specifications, ordering, pricing, and name of the nearest Authorized Distributor, contact one of the offices below.

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1300-36-04-70

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#### For more information

To learn more about SmartLine Transmitters,  
visit [www.honeywellprocess.com](http://www.honeywellprocess.com)  
Or contact your Honeywell Account Manager

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