

XYR 5000

WI550

Wireless Analog Input Transmitters

34-XY-01-04 10/2003

PRODUCT SPECIFICATION AND MODEL SELECTION GUIDE

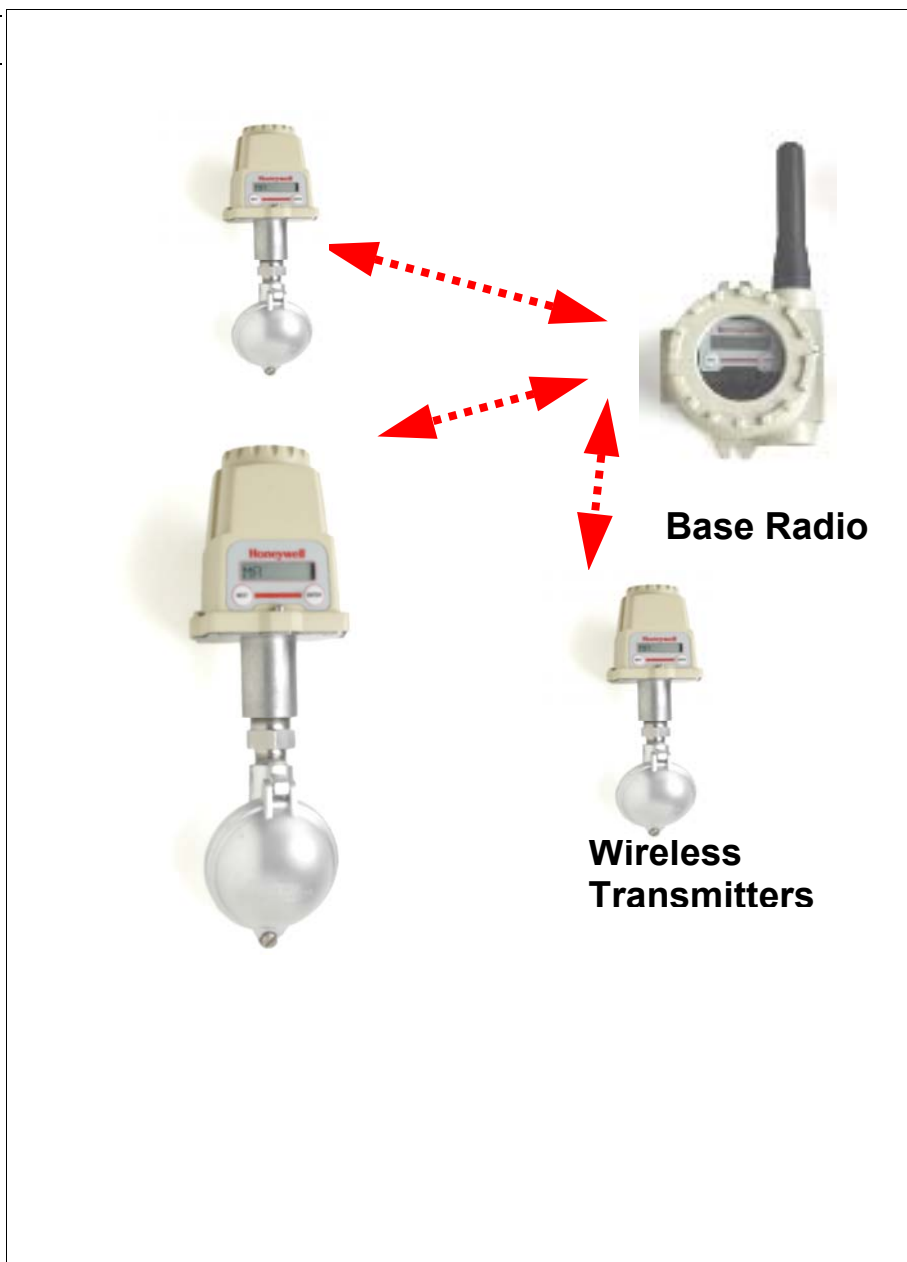
Function

The WI550 Analog Input Field Transmitter is part of the XYR 5000 family of wireless products. It is used to add wireless capabilities to new or existing analog transmitters, such as pressure, temperature, level, flow meters, pH meters, or any device that has voltage (0 – 10 V) or current (4 – 20 mA) outputs. The Smart Response Manager allows the transmitter to adapt to changing process conditions, allowing greater visibility to process variation. Smart Response Manager allows the user to set thresholds which, when exceeded, cause the transmitter to adjust sampling and data transmission rates.

The transmitter combines a high resolution signal conditioner, with a Radio Frequency (RF) transceiver that communicates in a digital protocol, using Frequency Hopping Spread Spectrum (FHSS). FHSS ensures data integrity by continually switching the carrier wave over a wide range of frequencies. Power is supplied by a C size 3.6 V lithium battery, with an expected lifetime of up to five years.

Enjoy the benefits of wireless technology today:

Improve Product Quality, Ensure High Uptime, Reduce Maintenance and Operational Costs, Meet Regulatory Requirements, and Enhance Flexibility.



Multi-Input

Model #	INPUTS	INPUT CHARACTERISTICS
WI551	Two 4 – 20 mA inputs	10 ohms
WI552	Two 0 – 10 volt inputs	100 k ohms

WIRELESS GENERAL SPECIFICATIONS

Wireless Communication	902 MHz – 928 MHz Frequency Hopping Spread Spectrum (FHSS) FCC certified ISM license-free band. Every data block transmitted is verified (CRC check) and acknowledged by the Base Radio.
RF Transmit Power	31 mW, 17.8 mW typical.
Data Rate	Configurable: 4.8 Kbps, 19.2 Kbps, or 76.8 Kbps.
Antenna	Internal 3" omni-directional, ¼ wave, monopole.
Signal Range	Up to 2000 feet (600 meters) from Base Radio with clear line of sight.*

*Actual range may vary depending on site topography.

PERFORMANCE

Accuracy (linearity and hysteresis)	±0.1% of full scale reading at Reference Conditions (24 °C, 75 °F).
Ambient Temperature Effect	±0.01% of reading per °C.
Resolution	24-bit A/D converter.

DEVICE CONFIGURATION

Parameter Configuration	<ul style="list-style-type: none">• RF Channel Setup: 1 to 16.• Baud Rate: 4.8 Kbps, 19.2 Kbps, 76.8 Kbps.• RF ID: 1 to 50.• Password .• Tag Name (up to 21 characters).• Normal Transmit Rate: (1–5 sec, 10 sec, 15 sec, 20 sec, 40 sec, 1 min).• Normal Sampling Rate: (1–10 sec, 15 sec, 20 sec, 30 sec, 1 min).• Abnormal Transmit Rate: (1–5 sec, 10 sec, 15 sec, 20 sec, 40 sec, 1 min).• Abnormal Sampling Rate: (1–10 sec, 15 sec, 20 sec, 30 sec).• Analog Input Normal Upper Value: Disabled/Enabled. Enabled to change Sampling and Transmit rates during abnormal process conditions.• Analog Input Normal Lower Value: Disabled/Enabled. Enabled to change Sampling and Transmit rates during abnormal process conditions.• Engineering Units: Current model (mA/A); Voltage model (V/mV).• Offset: User defined offset will be transmitted instead of actual value.• Trim: Applies a user-defined one- or two-point correction curve to the actual value.
Configuration Panel	Integrated LCD display with membrane switch buttons for local configuration. LCD display is 7-digit (alternating) high contrast, anti-reflective monochrome. Display cycles between input 1, input 2, and RF status.

SELF DIAGNOSTICS

Self-checking software and hardware that identifies and reports out of spec conditions, and field unit low battery voltage.

OPERATING/STORAGE CONDITIONS

Humidity	99% RH (non-condensing).	
Temperature	Ambient Electronics:	-40 to +185°F (-40 to +85°C)
	Display (Full visibility):	-4 to +158°F (-20 to +70°C)
	Display (Reduced visibility):	-40 to +185°F (-40 to +85°C)
	Storage:	-58 to +185°F (-50 to +85°C).

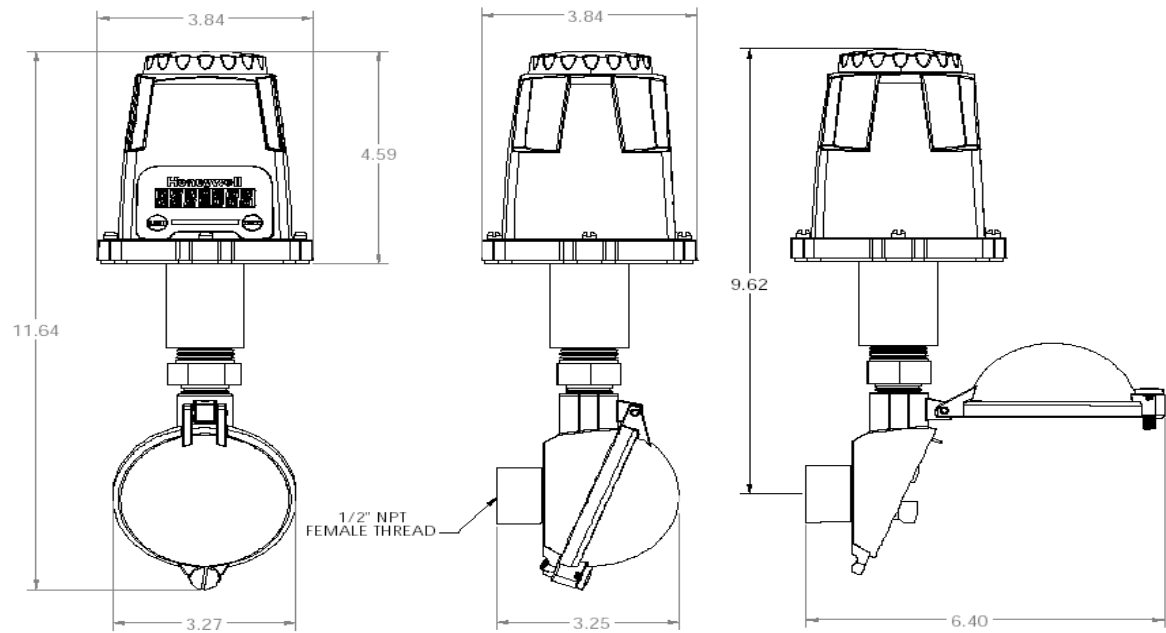
PHYSICAL SPECIFICATIONS

Base	Aluminum junction box.	
Electronic Housing	GE Lexan. V0 Rating and UV Stable.	
Vibration and Shock	Certified per IEC EN00068 2-6 (Vibration) and 2-27 (Shock)	
Random Vibration	Certified to withstand 6 g's, 15 minutes per axis from 9 – 500 Hz.	
Net weight	0.6 kg (1.2 lbs).	
Electromagnetic Compatibility (CE Compliance)	Operates within Specifications in fields from 80 to 1,000 MHz with Field Strengths to 30 V/m. Meets EN 50082-1 General Immunity Standard and EN 55011 Compatibility Emissions Standard.	

APPROVALS

Environmental protection	NEMA 4 (pending).
Electrical classification	CSA and FM Rated Intrinsically Safe for Class I, Div. 1, Groups A,B,C,D; Class II, Div. 1, Groups E,F,G; Class III, Div. 1 (pending).

DIMENSIONS



Model Selection Guide

XYR 5000 Wireless Dual Analog Input Interface

Model Selection Guide
34-XY-16-04 Issue 0

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Instructions

- Select the desired key number.

Key Number

KEY NUMBER

Selection

Description	
Wireless Dual Input 4 - 20 mA interface	WI551
Wireless Dual Input 0 - 10 V interface	WI552

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