Honeywell

XYR 5000

Wireless Base Radio

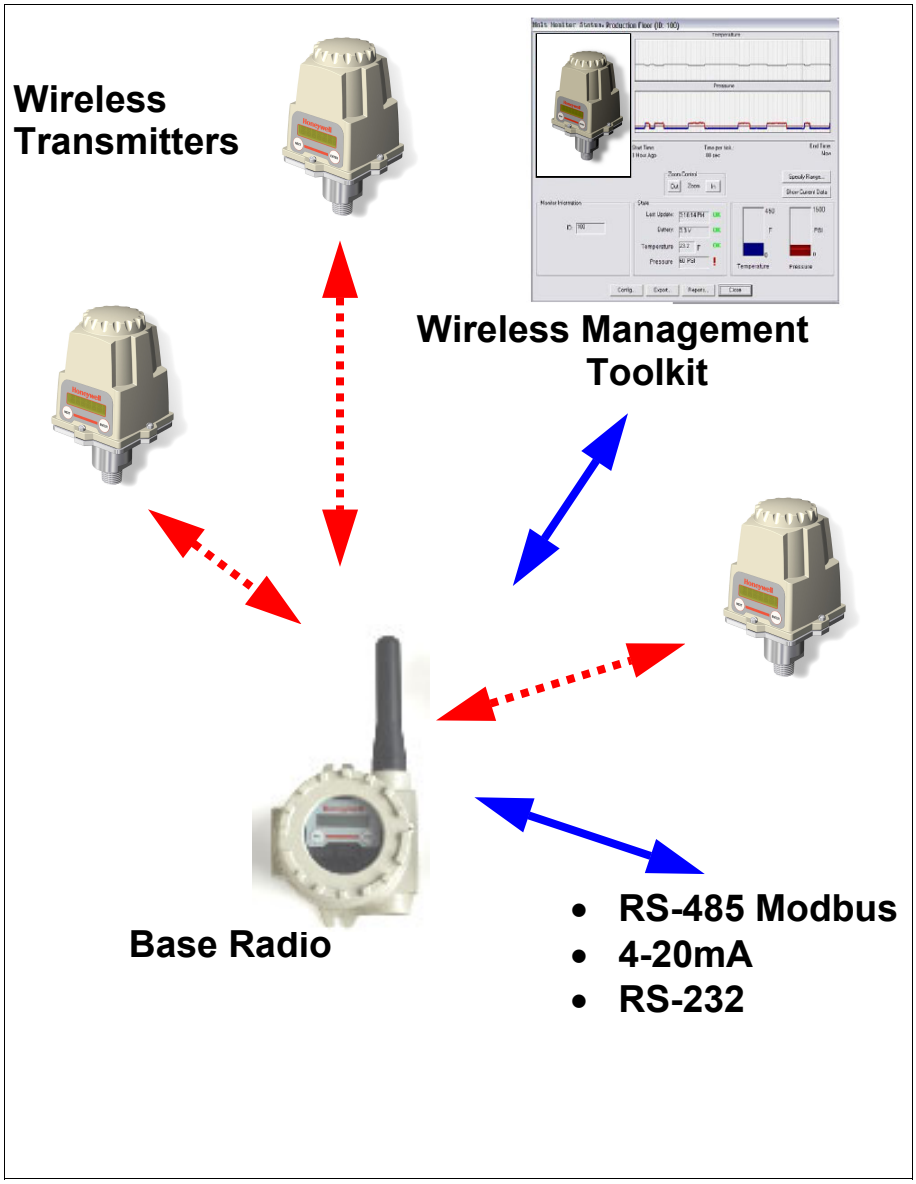
34-XY-01-05 12/2004 **PRODUCT SPECIFICATION AND MODEL SELECTION GUIDE**

Function

The Wireless Base Radio (WBR) is part of the XYR 5000 family of wireless products. It combines an RF transceiver and the interface to a SCADA, DCS, or data acquisition device. The WBR Radio Frequency (RF) transceiver 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. Each Wireless Base Radio can communicate with up to 50 field units. As part of its diagnostic capability, the Wireless Base Radio can identify and report field unit out of spec conditions, and low battery alarms. Multiple outputs are available. The Wireless Base Radio is easily configured using the local pushbuttons and display.

Enjoy the benefits of wireless technology today:

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



MODEL

Base Radio

Model #	INPUTS	OUTPUT
WBR	Up to 50 field units	• RS-485 Modbus • 4-20 mA (Quad Analog Output module) • RS-232

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.
Scan Rate	20 seconds @ 4.8 Kbps, 5 seconds @ 19.2 Kbps, 1.4 seconds @ 76.8 Kbps.
Antenna	External 3" omni-directional, ½ wave, dipole.
Signal Range	Up to 2000 feet (600 meters) from Base Radio with clear line of sight.*

*Actual range may vary depending on site topography.

DEVICE CONFIGURATION

Parameter Configuration	RF Channel Setup: 1 to 16. Field Device Baud Rate: 4.8 Kbps, 19.2 Kbps, 76.8 Kbps. Serial Output: 9.6 Kbps, 19.2 Kbps, 38.4 Kbps, 57.6 Kbps, 115 Kbps. Number of field units: 1 to 50. Output: • RS-485. • 4 – 20 mA (analog output via Quad output modules). • RS-232 (optional converter required).
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 field unit status, 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 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).

ELECTRICAL SPECIFICATIONS

Power connection	Two terminals, 22 AWG power supply wire (GND, 24V).
Signal connection	Two terminals, use 2 wire shielded and protected 16 AWG. Additional two terminals are supplied for linking base radios.
Grounding	Earth grounding required.
Power Supply	External Supply Voltage, 12 – 30 VDC @ 0.2A. DIN rail mounted 120/240 VAC adapter (optional).

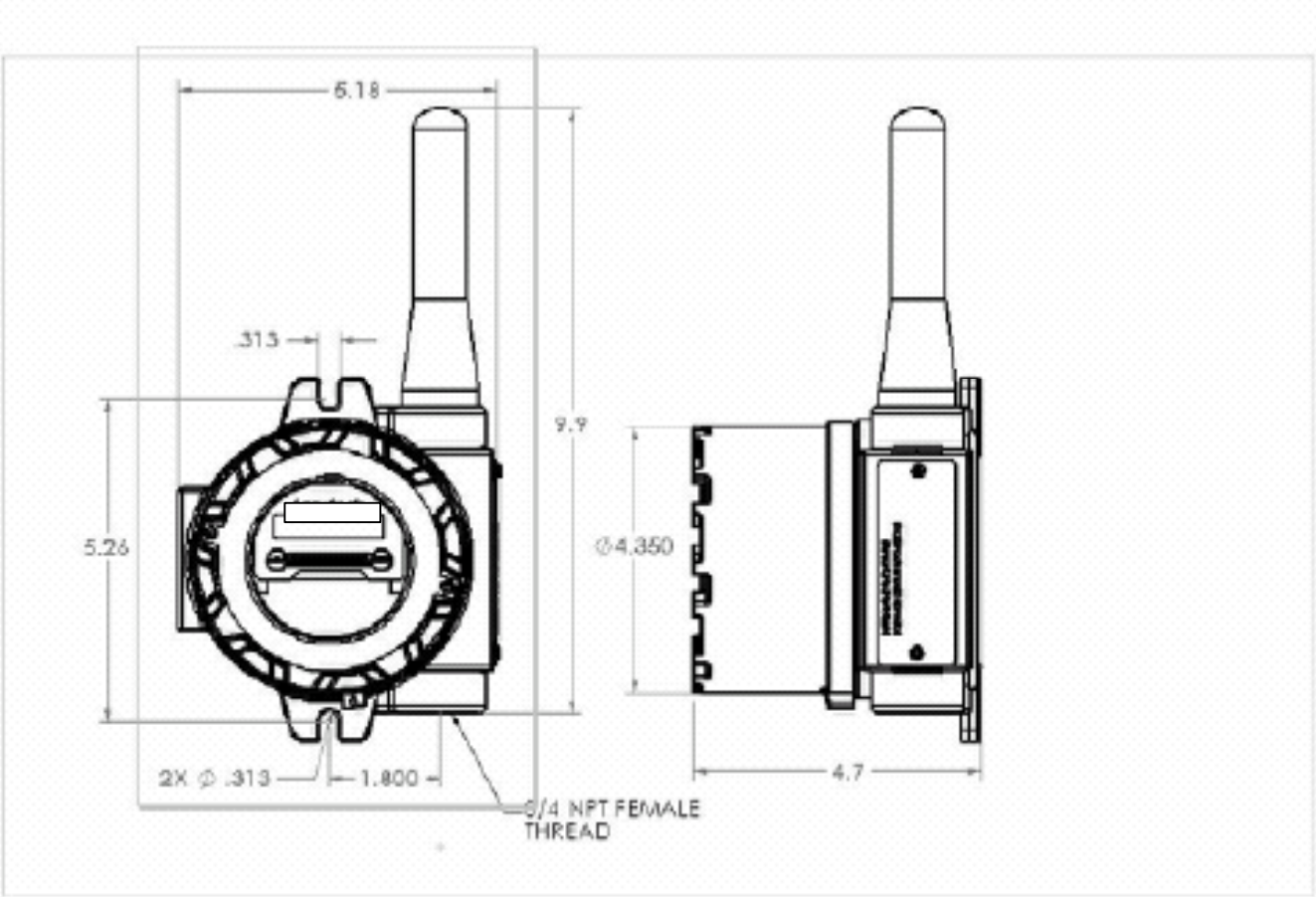
PHYSICAL SPECIFICATIONS

Electronic Housing	Baked enamel aluminum housing.
Conduit Connection	¾”-NPTF.
Net weight	2.5 kgs (5 lbs).
Mounting	Wall mount standard, or 2” pipe mounting bracket optional.

APPROVALS

Environmental protection	NEMA 4X, NEMA 7.

DIMENSIONS



Model Selection Guide

XYR 5000 Wireless Base Radio

Model Selection Guide
34-XY-16U-05 Issue 3

Instructions

- Select the desired key number. The arrow to the right marks the selection available.
- Make one selection from Table I. Select Table II options as desired.

Key Number		I (Optional)		II (Approvals)
_ _ _	-	_ _ , _ _	-	_ _ , _ _

KEY NUMBER	Selection	Availability
Description		
Wireless Base Radio (Dual Output)	WBR	▼

TABLE I - OPTIONS

2" Pipe Mounting Bracket	MB	•
120/240 VAC to 24 VDC 15 W DIN Rail Mounted Power Supply	PW	•
RS-485 to RS-232 Din Rail Converter kit	RS	•
DIN Rail Mounted Quad 4-20 mA Output Module (4 analog outputs) *	Pricing Table 1	•
DIN Rail Mounted Discrete Output Module (8 switch outputs) *	Pricing Table 2	•
DIN Rail Mounted Combined Analog/Discrete Output module (4 analog outputs and 8 digital switch outputs) *	Pricing Table 3	•

Example: WBR-RS,A1 List price = $2160

Pricing Table 1

Select option based on number of required outputs and enter option in Table I - Options

Number of analog outputs	Option	Price (US$)
4	A1	
8	A2	
12	A3	
16	A4	
20	A5	
24	A6	
28	A7	
32	A8	
36	A9	
40	AA	
44	AB	
48	AC	

Pricing Table 2

Select option based on number of required outputs and enter option in Table I - Options

Number of Discrete outputs	Option	Price (US$)
8	B1	
16	B2	
24	B3	
32	B4	
40	B5	
48	B6	
56	B7	
64	B8	
72	B9	
80	BA	
88	BB	
96	BC	

Pricing Table 3

Select option based on number of required outputs and enter option in Table I - Options

Num. of analog/dis. outputs		Option	Price (US$)
4	8	C1	
8	16	C2	
12	24	C3	
16	32	C4	
20	40	C5	
24	48	C6	
28	56	C7	
32	64	C8	
36	72	C9	
40	80	CA	
44	88	CB	
48	96	CC	

*** (Note - up to 25 output cards can be added to the base radio, in any combination of board type; one field measurement point can be mapped to multiple output points).**

TABLE II - CERTIFICATION OPTIONS

Certificate	Approval Type	Location or Classification	Code		
NONE	NONE	Ordinary Non-Hazardous Location	9X	•	
Combined FM	Explosionproof	Class I, Div. 1, Groups B,C,D, T5 Enclosure 4X	A1	•	
	Dust-Ignitionproof	Class II, III, Div. 1, Groups E,F,G, T5; Enclosure 4X			
CSA	Explosionproof	Class I, Div. 1, Groups B,C,D, T5 Enclosure 4X			
	Dust-Ignitionproof	Class II, III, Div. 1, Groups E,F,G, T5; Enclosure 4X			b

RESTRICTIONS

Restriction Letter		Available Only With		Not Available With
b	Table	Selection	Table	Selection
↓	II	mutually exclusive - select one		

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