

XYR6000 Wireless Temperature Transmitter Series WT400

STTW820,830,840 with direct mounted T/C or RTD
STTW400 only with input for T/C's (3 max) or RTD's (2 max)

34-XY-03-29
7/23/07

Specification and Model Selection Guide

Introduction

Building upon the tremendously successful ST 3000 series transmitter line; Honeywell brings simple, safe, and secure wireless technology to its measurement portfolio in the XYR 6000 Series WT400 Wireless Transmitters.

The XYR 6000 series measurements are part of the WNSIA (Wireless Network for Secure Industrial Applications) compliant field devices.

Measurement and information without wires! The XYR 6000 wireless transmitter series enable 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.

XYR 6000 wireless transmitters send information to a multinode or series of multinodes creating a MESH infrastructure. Wireless System Gateways (WSG) provide the path to bring that information into Experion PKS or any other control system wirelessly via OPC client or Modbus-TCP.

Each multinode accepts signals from up to 20 wireless transmitters reporting at 1 second, and up to 400 transmitters reporting at slower rates. Up to 20 multinodes can be implemented in the same infrastructure. WSG also provides Modbus-TCP data access to wireless data in addition to OPC.

Transmitter power is supplied by two "D" size lithium batteries with an expected lifetime of up to ten years. Transmitter range with the integral antenna is 1000' (305 m) under ideal conditions.

The temperature transmitter supports three thermocouple inputs, two RTD inputs, or one thermocouple and one RTD without sharing field wiring terminals. The temperature transmitter will simultaneously support an integral probe and external inputs. When the integral probe is a thermocouple, then two external thermocouples or one external RTD can be wired to the transmitter. When the integral probe is a RTD, then one external thermocouple or one external RTD can be wired to the transmitter.



Figure 1 — XYR6000 Temperature Transmitters

Implement the value of wireless technology today:

- Measure remote access points simply, safe and securely
- Obtain and utilize previously inaccessible information due to high wiring cost or hazardous locations.
- Easily meet Regulatory Requirements
- Improve process efficiency
- Enhance Flexibility to monitor applications:
 - that have no access to power
 - that are remote or difficult to reach
 - that may require frequent reconfiguration
 - where manual readings have been required previously.

Specifications

Operating Conditions

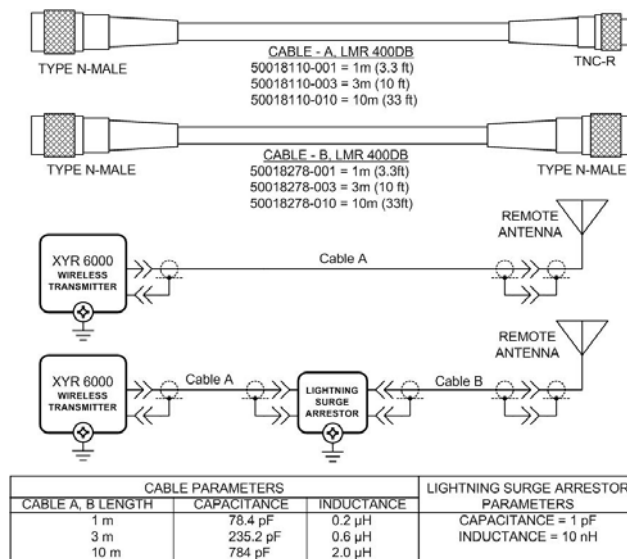
Parameter	Reference Condition		Rated Condition		Operative Limits		Transportation and Storage	
	°C	°F	°C	°F	°C	°F	°C	°F
Ambient Temperature	25 ±1	77 ±2	-40 to 85	-40 to 185	-40 to 85	-40 to 185	-40 to 85	-40 to 185
Humidity %RH	10 to 55		0 to 100		0 to 100		0 to 100	
Ambient Temperature LCD Display visible range	25 ±1	77 ±2	-20 to 70°C -4 to 158°F					
Vibration	Maximum of 4g over 15 to 200Hz.							
Shock	Maximum of 40g.							

Wireless Specifications

Parameter	Description
Wireless Communication	2,400 to 2,483.5 MHz (2.4 GHz) Frequency Hopping Spread Spectrum (FHSS) USA – FCC Certified Canada – IC Certified European Union – RTTE/ETSI Conformity
RF Transmitter Power	125 mW (20.9 dBm) maximum per FCC/IC not including antenna, or 400 mW (26.0 dBm) maximum EIRP including antenna for USA and Canadian locations. 100 mW (20.0 dBm) maximum EIRP per RTTE/ETSI including antenna for EU locations.
Data	Rate: 250 Kbps
Antennas	Integral – 2 dBi omnidirectional monopole Remote – 8 dBi omnidirectional monopole with up to 20 m cable and lightning surge arrester. Remote – 14dBi Directional with up to 20 m cable and lightning surge arrester.
Signal Range	Nominal 305 m (1,000 feet) between Field Transmitter and Infrastructure Unit (multinode) or Gateway Unit with a clear line of sight.*

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

Remote antenna



Performance under Rated Conditions

Parameter	Description
Accuracy	±0.10% of range in mV at reference conditions for linear inputs and RTDs
Temperature Effects	±0.01% of full scale per °C
Stability	±0.10% of URL per year
Stray Rejection	<i>Common Mode</i> (50 or 60 Hz): 120 dB <i>Normal Mode</i> (50 or 60 Hz): 40 dB
Cold Junction Accuracy	±0.5°C
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 protection requirements of European Council Directives: 89/336/EEC, the EMC Directive and 1999/5/EC, the Telecommunications Directive per EN 300 328 V1.7.1, EN301 893 V1.3.1, EN301 489-17 V1.2.1, EN301 489-1 V1.6.1 and EN61326-1 (1st Edition, 2002-02, Industrial Locations). Electrical Equipment for Measurement, Control and Laboratory Use – EMC Requirements.
Hazardous Location Certifications	See the Model Selection Guide on page 7.

- Performance specifications are based on reference conditions of 25°C (77°F), and 10 to 55% RH.

Physical Specifications

Parameter	Description
Mounting Bracket	Carbon Steel (Zinc-plated) or Stainless Steel angle bracket or Carbon Steel flat bracket available (standard options).
Terminal Assembly wiring gauge range	28 to 14 AWG
Electronic Housing	Epoxy-Polyester hybrid paint. Low Copper-Aluminum. Meets NEMA 4X (hosedown and corrosion resistant), IP 66/67 (hosedown and submersible to 1m).
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 Figure 2.
Dimensions	See page 5.
Net Weight	Approximately 6 pounds (2.7 Kg)

Input Types and Ranges

Input Type	Range Deg.F	Range Deg.C
Pt100 RTD (alpha 0.00385)	-300 to +1200	-184 to +649
Pt200 RTD	-300 to +1200	-184 to +649
Pt500 RTD	-300 to +1200	-184 to +649
Type B T/C	0 to 3300	-18 to +1816
Type E T/C	-454 to +1832	-270 to +1000
Type J T/C	0 to 1600	-18 to + 871
Type K T/C	0 to 2400	-18 to +1316
Type N T/C	0 to 2372	-18 to +1300
Type R T/C	0 to 3100	-18 to +1704
Type S T/C	0 to 3100	-18 to +1704
Type T T/C	-300 to +700	-184 to +371
Millivolts	0 to 10 0 to 50 0 to 100	
Resistance (Ohms)	0 to 100Ω 0 to 200Ω 0 to 500Ω 0 to 1000Ω	

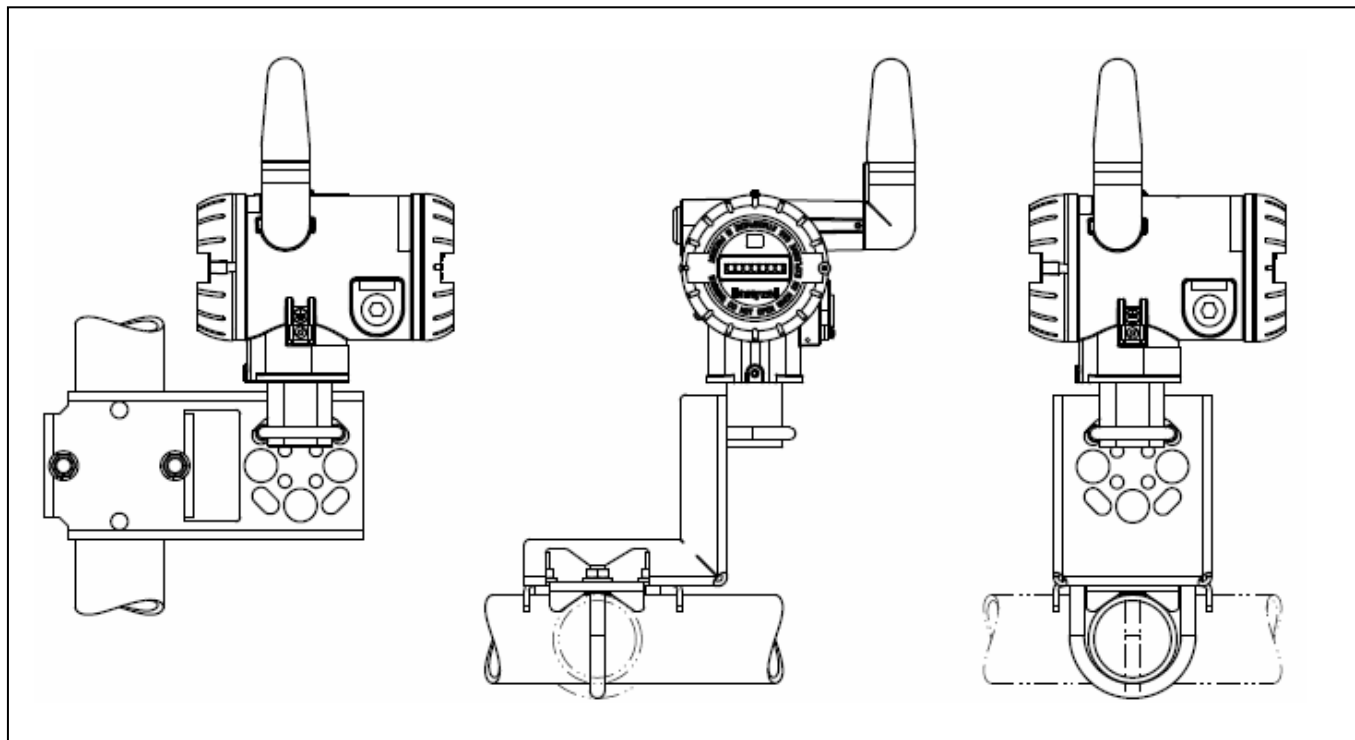


Figure 2 — Examples of typical mounting positions

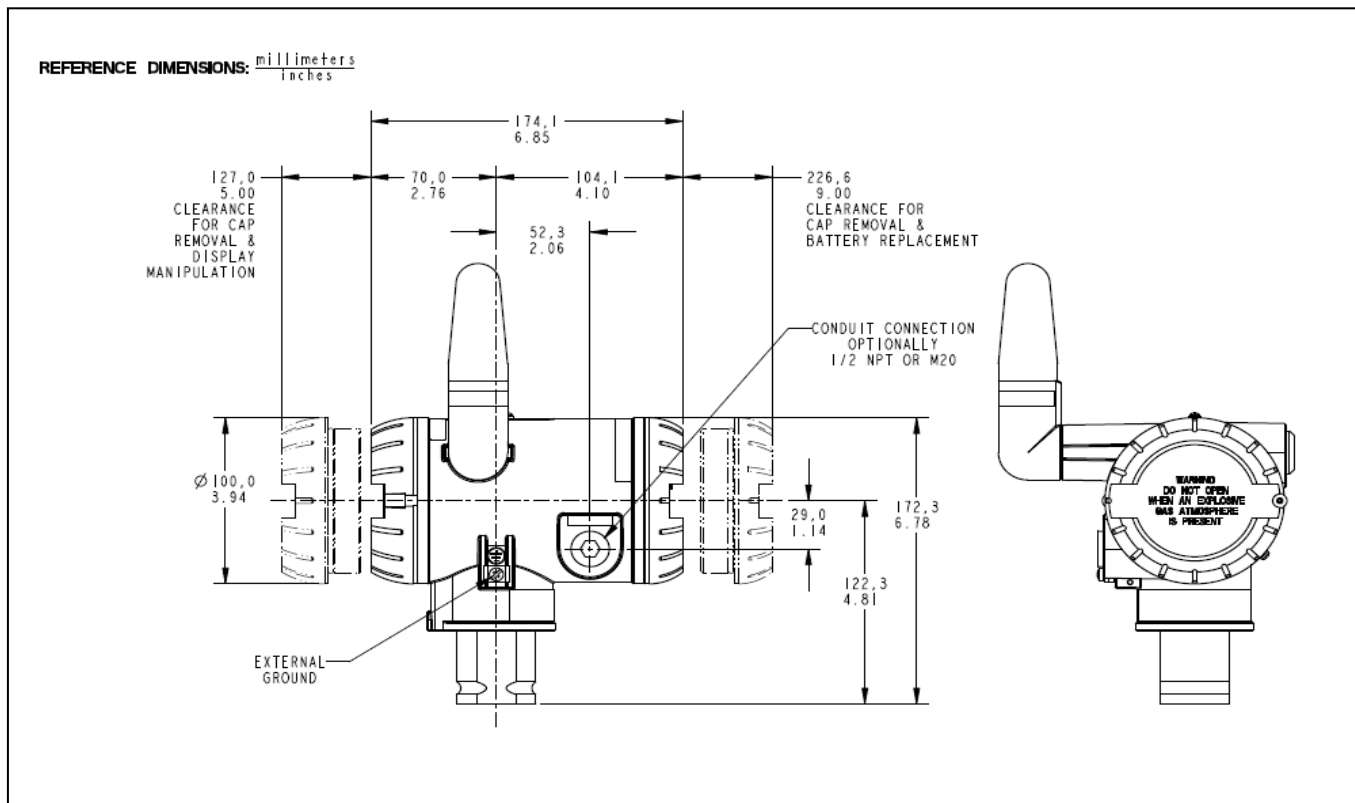


Figure 3 — Typical mounting dimensions

Options

Mounting Bracket

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

Tagging (Option TG)

Up to 30 characters can be added on the stainless steel nameplate mounted on the transmitter's electronics housing at no extra cost. A stainless steel wired on tag with additional data of up to 4 lines of 28 characters is also available. The number of characters for tagging includes spaces.

Transmitter Configuration

All configurable parameters are accessible via the WNSIA network via READ/WRITE transactions.

Ordering Information

Contact your nearest Honeywell sales office, or

In the U.S.:

Honeywell
Industrial Automation & Control
16404 North Black Canyon Hwy.
Phoenix, AZ 85053
1-800-288-7491

In Canada:

The Honeywell Centre
155 Gordon Baker Rd.
North York, Ontario M2H 3N7
1-800-461-0013

In Latin America:

Honeywell Inc.
480 Sawgrass Corporate Parkway,
Suite 200
Sunrise, FL 33325
(954) 845-2600

In Europe and Africa:

Honeywell S. A.
Avenue du Bourget 1
1140 Brussels, Belgium

In Eastern Europe:

Honeywell Praha,
s.r.o. Budejovicka 1
140 21 Prague 4,
Czech Republic

In the Middle East:

Honeywell Middle East Ltd.
Khalifa Street,
Sheikh Faisal Building
Abu Dhabi, U. A. E.

In Asia:

Honeywell Asia Pacific Inc.
Honeywell Building,
17 Changi Business Park Central 1
Singapore 486073
Republic of Singapore

In the Pacific:

Honeywell Pty Ltd.
5 Thomas Holt Drive
North Ryde NSW Australia 2113
(61 2) 9353 7000

In Japan:

Honeywell K.K.
14-6 Shibaura 1-chrome
Minato-ku, Tokyo, Japan 105-0023

Or, visit Honeywell on the World Wide Web at: <http://www.honeywell.com>

Specifications are subject to change without notice.

Model Selection Guide (34-XY-16-46)

Instructions

- Choose availability column based on mounting configuration.
 - A (•) dot denotes unrestricted availability. A letter denotes restricted availability.
 - Blank denotes unavailable - choose alternate mounting. Restrictions follow Table V.
 - Select the desired Key Number based on the desired communications protocol.
 - Select options and approvals from Tables.
- | | | | | | | | | | | |
|------------|---|-----|---|------|---|-------|---|-----------------|---|------|
| Key Number | - | I | - | II | - | III | - | IV | - | V |
| _____ | | 000 | | 0000 | | _____ | | _ _ , _ _ , _ _ | | XXXX |

HOW WILL THE UNIT BE MOUNTED?

STTW400 Transmitter only with input for T/C's (3 max) or RTD's (2 max)

Availability

Key Number	Description	Selection	
	Wireless Temperature Transmitter Only - Separately supplied Sensor Probe or Thermowell	STTW400	↓

TABLE I

No selection		000	•
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TABLE II

No selection		0000	•
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TABLE III - ANTENNA OPTIONS

Antennas	Integral Right-angle, vertical (Standard)	V _ _ _ _	d
	Integral Straight, horizontal	S _ _ _ _	d
	Remote Omnidirectional, 8 dBi	M _ _ _ _	e
	Remote Directional, 14 dBi	D _ _ _ _	e
Cable A for Remote Antenna	None	_ 0 0 _	•
	1.0m remote Cable A, TNC-R - N (Req'd to connect to XYR 6000)	_ 0 1 _	•
	3.0m remote Cable A, TNC-R - N (Req'd to connect to XYR 6000)	_ 0 3 _	•
	10.0m remote Cable A, TNC-R - N (Req'd to connect to XYR 6000)	_ 1 0 _	•
Lightning Protection for remote Antenna With Cable B	None	_ _ _ 0 0	•
	Lightning Protection + 1.0m Cable B to Antenna, N - N	_ _ _ 0 1	•
	Lightning Protection + 3.0m Cable B to Antenna, N - N	_ _ _ 0 3	•
	Lightning Protection + 10.0m Cable B to Antenna, N - N	_ _ _ 1 0	•

See STTW820, STTW830 or STTW840 for transmitter with direct mounted T/C or RTD.

STTW400

TABLE IV - OPTIONS

	Selection	
None	00	•
Transmitter Housing & Electronics Options		
M20 Conduit Thread (1/2" NPT is standard)	A1	•
1/2" NPT to 3/4" NPT 316 SS Conduit Adapter	A2	•
Stainless Steel Customer Wired-On Tag (4 lines, 28 characters per line, customer supplied information)	TG	•
Stainless Steel Customer Wired-On Tag (blank)	TB	•
End Cap Warning Label in Spanish	SP	•
End Cap Warning Label in Portuguese	PG	•
End Cap Warning Label in Italian	TL	•
End Cap Warning Label in German	GE	•
Transmitter Mounting Brackets Options		
Mounting Bracket - Carbon Steel	MB	•
Mounting Bracket - 304 SS	SB	•
Flat Mounting Bracket - Carbon Steel	FB	•
Services/Calibration/Conformance Options		
User's Manual Paper Copy	UM	•
Calibration Test Report and Certificate of Conformance (F3399)	F1	•
Certificate of Conformance (F3391)	F3	•
Certificate Options		
Certificate of Origin (F0195)	F5	•
Warranty Options		
Additional Warranty - 1 year	W1	•
Additional Warranty - 2 years	W2	•

Note: Chosen Operator's Manuals and chosen Certificates are automatically shipped with unit.
See 13:STT-OE pages for additional manuals and alternate shipping.

Certificate	Approval Type	Location or Classification		
No hazardous location approvals			9X	•
CSA cus	Nonincendive	Nonincendive, CL I, Div 2, Groups A,B,C & D, CL II & III, Div 2, Groups F & G, T4 Ta = 85°C	2N	•
	Non-Sparking	Class I, Ex/AEx nC IIC; T4, Ta ≤ 85°C, Zone 2; IP 66/67		
ATEX	Non-Sparking	Ex II 3 GD; Ex nL IIC; T4, Ta ≤ 85°C, Zone 2; IP 66/67	3N	•

TABLE V - Additional Features

No Selection	XXXX	•
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RESTRICTIONS

Restriction	Available Only With	Not Available With
Letter	Table	Selection
b	Select only one option from this group	
d	III	_ 00 _ _ , _ _ _ 00
e		_ 00 _ _

Note: To request a quotation for a non-published "special", fax RFQ to 602 313-6155.

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Honeywell

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