Honeywell

OneWireless XYR 6000 Transmitter

Professional Installation Guide

34-XY-25-47
Revision 3
September 2012

Honeywell Process Solutions

Notices and Trademarks

Honeywell Process Solutions

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About This Document

This document outlines professional installation requirements for the Honeywell XYR 6000 Transmitter for the Honeywell OneWireless Network. Professional installation is required to comply with certification agency and legal requirements. This document must be adhered to for all installations of the Honeywell OneWireless XYR 6000 Transmitters.

Honeywell does not recommend using devices for critical control where there is a single point of failure or where single points of failure result in unsafe conditions. OneWireless is targeted at open loop control, supervisory control, and controls that do not have environmental or safety consequences. As with any process control solution, the end-user must weigh the risks and benefits to determine if the products used are the right match for the application based on security, safety, and performance. Additionally, it is up to the end-user to ensure that the control strategy sheds to a safe operating condition if any crucial segment of the control solution fails.

Revision Information

Document Name OneWireless XYR 6000 Transmitter Professional Installation Guide	Document ID **34-XY-25-47** **Revision Number**	Publication Date
New	Revision 1	January 2011
ANATEL and INMETRO certificates added	Revision 2	January 2012
Korea certificate added, adjusted TX power settings for Australia	Revision 3	September 2012

References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

Document Title	
XYR 6000 Transmitters Quick Start Guide	34-XY-25-21
Getting Started with Honeywell OneWireless Solutions	OW-CDX010

Support and contact info

United States and Canada

Contact: Honeywell Process Solution
- Global Technical Support - Phone: 001-800-423-9883
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- Outside United States - Phone: 001-215-641-3610

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Email support: ask-ssc@honeywell.com

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For more contact details for Europe, Asia, North and South Americas, please see back page.

World Wide Web

Honeywell Solution Support Online:

www.honeywellprocess.com

Elsewhere

Call your nearest Honeywell office. See back page for details.

Training Classes

Honeywell Automation College:

http://www.automationcollege.com

Symbol Definitions

The following table lists those symbols used in this document to denote certain conditions.

Symbol	Definition
	**ATTENTION:** Identifies information that requires special consideration.
	**TIP:** Identifies advice or hints for the user, often in terms of performing a task.
CAUTION	Indicates a situation which, if not avoided, may result in equipment or work (data) on the system being damaged or lost, or may result in the inability to properly operate the process.
	**CAUTION**: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. **CAUTION** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	**WARNING**: Indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death. **WARNING** symbol on the equipment refers the user to the product manual for additional information. The symbol appears next to required information in the manual.
	**WARNING, Risk of electrical shock**: Potential shock hazard where HAZARDOUS LIVE voltages greater than 30 Vrms, 42.4 Vpeak, or 60 VDC may be accessible.
	**ESD HAZARD:** Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices.
	**Protective Earth (PE) terminal**: Provided for connection of the protective earth (green or green/yellow) supply system conductor.
	**Functional earth terminal**: Used for non-safety purposes such as noise immunity improvement. NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national local electrical code requirements.
	**Earth Ground**: **Functional earth connection.** NOTE: This connection shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.
	**Chassis Ground**: Identifies a connection to the chassis or frame of the equipment shall be bonded to Protective Earth at the source of supply in accordance with national and local electrical code requirements.

continued

Symbol	Description
	The Factory Mutual® Approval mark means the equipment has been rigorously tested and certified to be reliable.
	The Canadian Standards mark means the equipment has been tested and meets applicable standards for safety and/or performance.
	The Ex mark means the equipment complies with the requirements of the European standards that are harmonized with the 94/9/EC Directive (ATEX Directive, named after the French "ATmosphere EXplosible").
	For radio equipment used in the European Union in accordance with the R&TTE Directive the CE Mark and the notified body (NB) identification number is used when the NB is involved in the conformity assessment procedure. The alert sign must be used when a restriction on use (output power limit by a country at certain frequencies) applies to the equipment and must follow the CE marking.
	The C-Tick mark is a certification trade mark registered to ACMA (Australian Communications and Media Authority) in Australia under the Trade Marks Act 1995 and to RSM in New Zealand under section 47 of the NZ Trade Marks Act. The mark is only to be used in accordance with conditions laid down by ACMA and RSM. This mark is equal to the CE Mark used in the European Union. N314 directly under the logo is Honeywell's unique supplier identification number.
	The ANATEL mark is certification trade mark registered to the Brazilian Agency of Telecommunications (in Portuguese, Agência Nacional de Telecomunicações - Anatel). Anatel is a special authority created by the general telecommunications law (Act 9472, 16/07/1997) in 1997 and regulated by the decree 2338, 07/10/1997.
	The INMETRO mark is a certification trade mark registered to the National Institute of Metrology, Standardization and Industrial Quality (INMETRO). INMETRO is a Brazilian federal autarchy, linked to MDIC, the Ministry of Development, Industry and Foreign Commerce. INMETRO was created by Brazilian Law 5966, of 11 of December 1973.

Contents

Tables

Figures

1. Designation, Scope and Preface

1.1 Designation

This document is valid for the following XYR 6000 Transmitter types:

Table 1-1 – XYR 6000 Transmitter Types

Model Number Type	Model Number Description	Model Key Number	Description
STTW	Temperature Transmitter	STTW8XX	Temperature Transmitter with integral probe
		STTW400	Temperature Transmitter
		STTW401	Temperature/Two Discrete Input Transmitter
STXW	Discrete Input Transmitter	STXW500	Discrete Input Transmitter
STIW	HLAI Transmitter	STIW600	HLAI
STUW	Universal Input Transmitter	STUW700	Multi AI DI Transmitter
		STUW701	Multi AI DI DO Transmitter
STAW	Absolute Pressure Transmitter	STAW14L/94L	Absolute Pressure Transmitter
STDW	Differential Pressure Transmitter	STDW120/125/130/170/924/930/974	Differential Pressure Transmitter
STGW	Gauge Pressure Transmitter	STGW944/94L/974/97L/98L/99L STGW14L/17L/18L/19L	Gauge Pressure Transmitter
STFW	Flange Mount Pressure Transmitter	STFW128/132/924/932	Flange Mount Pressure Transmitter
STFW	Pseudo-Flange Pressure Transmitter	STFW12F/13F/14F/92F/93F	Pseudo-Flange Pressure Transmitter
STRW	Remote Seal Pressure Transmitter	STRW12D/13D/14A/14G/17G/93D/94G	Remote Seal Pressure Transmitter
CETW	SmartCET Transmitter	CETW6000M	SmartCET Transmitter (Corrosion)

Model Selection Guide Table IV selections XF, EF or JF mean that the XYR 6000 has a FHSS radio.

Model Selection Guide Table IV selections XD, ED or JD mean that the XYR 6000 has a DSSS radio.

Model Selection Guide Table IV selection XS means that the transmitter has an ISA100.11 compliant radio.

For the complete model number information, please see the appropriate XYR 6000 Transmitter Model Selection Guides.

The WCX Series XYR 6000 Valve Position Sensor is not covered by this document and has its own Professional Installation Guide.

1.2 Scope

This document outlines professional installation requirements for the Honeywell XYR 6000 Transmitter for the Honeywell OneWireless Network. Professional installation is required to comply with certification agency and legal requirements. This document must be adhered to for all installations of the Honeywell OneWireless XYR 6000 Transmitters.

1.3 Preface

This manual covers professional installation of the Honeywell OneWireless XYR 6000 Transmitters. See the Getting Started with Honeywell OneWireless, Honeywell OneWireless Planning Guide and Honeywell OneWireless XYR 6000 User's Guides for general information on overall system implementation, configuration, and management of these devices.

The XYR 6000 is classified by the FCC as a device that must be professionally installed. To be in compliance with FCC requirements, the radio must be installed with one of the approved antennas listed in this document.

1.4 Site survey

It is assumed for the purposes of this document that a site survey has been performed and that the antenna types, cable lengths and lightning surge arrestors were appropriately selected per the results of that survey. Any changes to these items as a result of the actual installation of the XYR 6000 transmitters into the site may require that the TX power setting of the radio board needs to be adjusted from the factory setting in order to maintain agency approvals. See Section 7 and Section 8 for more information.

1.5 Abbreviations & Definitions

The term **Honeywell XYR 6000 Transmitter** will be used to describe the composite unit which includes the Honeywell FHSS or DSSS RF Module and all subassemblies housed within the XYR 6000 Transmitter enclosure.

Table 1-2 –Table of Abbreviations and Definitions

ACMA	Australian Communications and Media Authority
AD	Authentication Device
ANATEL	National agency of Telecomnunication (Agência Nacional de Telecomunicaçõe)
ATEX	Potentially Explosive Atmospheres Directive
AWG	American Wire Gauge
Co-located	Two or more radios transmitting simultaneously and with less than 20cm of separation distance.
CSA	Canadian Standards Association
DCS	Distributed Control System
DSSS	Direct Sequence Spread Spectrum
EMC	Electromagnetic Compatibility
ETSI	European Telecommunications Standards Institute
EU	European Union
FCC	Federal Communications Committee
FHSS	Frequency-Hopping Spread Spectrum
FM	Factory Mutual
FSK	Frequency Shift Keying
GFSK	Gaussian Frequency Shift Keying
GTS	Honeywell Global Technical Services
IC	Industry Canada
IEEE	Institute of Electrical and Electronics Engineers
INMETRO	National institute of Metrologia, Quality and Technology (Instituto Nacional de Metrologia, Qualidade e Tecnologia)
IR	Infrared
IrDA	Infrared Data Association
ISA100	International Society of Automation open-standard wireless networking technology

KCC	Korean Communications Commission, Republic of Korea
KMOC	Kuwait Ministry of Communications
MIC	Japan Ministry of Internal Affairs and Communications
MPE	Maximum Permissible Exposure
MSG	Honeywell Model Selection Guide
NA	North America – United States of America and Canada
NEMA	National Electrical Manufacturers Association
OQPSK	Offset Quadrature Phase-Shift Keying
TELEC	Japan Telecom Engineering Center
TIIS	Japan Technology Institution of Industrial Safety
TNTC	Thailand National Telecommunications Commission
TX	Transmit
Wi-Fi	Wireless Local Area Network based on IEEE 802.11 Specifications
WNSIA	Wireless Network for Secure Industrial Application

2. Federal Communication Commission (FCC)

2.1 FCC Compliance Statement

- This device complies with Part 15 of FCC Rules and Regulations. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radiofrequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Intentional or unintentional changes or modifications must not be made to the XYR 6000 unless under the express consent of the party responsible for compliance. Any such modifications could void the user's authority to operate the equipment and will void the manufacturer's warranty.

2.2 Industry Canada (IC)

2.2.1 IC Compliance Statements

- To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropic radiated power (EIRP) is not more than that permitted for successful communication.
- Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- This Class A digital apparatus complies with Canadian ICES-003.
- French: Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

2.2.2 RF Safety Statement

- To comply with FCC's and Industry Canada's RF exposure requirements, the following antenna installation and device operating configurations must be satisfied.
- Remote Point-to-Multi-Point antenna(s) for this unit must be fixed and mounted on outdoor permanent structures with a separation distance between the antenna(s) of greater than 20cm and a separation distance of at least 20cm from all persons.
- Furthermore, when using integral antenna(s) the XYR 6000 unit must not be co-located with any other antenna or transmitter device and have a separation distance of at least 20cm from all persons.

2.3 FCC and Industry Canada (IC) Identification Numbers

This information is shown on the label attached to each RF Module.

2.3.1 FHSS Radios

- Honeywell XYR 6000 Transmitter FHSS Radio Module Identification
    - Honeywell Identification for Class 1 Div 2 RF Modules: 50016517-001
    - Honeywell Identification for Intrinsically Safe RF Modules: 50025132-001

- Honeywell XYR 6000 Transmitter FHSS Radio Limited Modular Approval
    - Federal Communication Commission Identification for Class 1 Div 2 RF Modules: S5750016517
    - Federal Communication Commission Identification for Intrinsically Safe RF Modules: S5750016517

- Honeywell XYR 6000 Transmitter FHSS Radio Limited Modular Approval
    - Industry Canada Identification for Class 1 Div 2 RF Modules: 573I-50016517
    - Industry Canada Identification for Intrinsically Safe RF Modules: 573I-50016517

2.3.2 DSSS and ISA100 Radios

- Honeywell XYR 6000 Transmitter DSSS Radio Module Identification
- Honeywell Identification for DSSS Intrinsically Safe RF Modules: 50025034-001
- Honeywell Identification for ISA100 Intrinsically Safe RF Modules: 50025034-002

- Honeywell XYR 6000 Transmitter DSSS and ISA100 Radio Limited Modular Approval
    - Federal Communication Commission Identification for Intrinsically Safe RF Modules: S5750025034
    - Industry Canada Identification for Intrinsically Safe RF Modules: 573I-50025034

2.4 Japan MIC Identification and Certification Numbers

2.4.1 DSSS and ISA100 Radios

- Honeywell XYR 6000 Transmitter DSSS Radio Module and ISA100 Radio Module Identification
    - Honeywell Identification for DSSS Intrinsically Safe RF Modules: 50025034-001
    - Honeywell Identification for ISA100 Intrinsically Safe RF Modules: 50025034-002
- MIC Certification Number: 006WWC0174

This information is shown on the label attached to each RF Module. This approval and certification is only for the DSSS and ISA100 Radios, there is no approval or certification for the FHSS Radio.

2.5 Brazil Anatel Identification Number

2.5.1 DSSS and ISA100 Radios

- Honeywell XYR 6000 Transmitter DSSS Radio Module and ISA100 Radio Module Identification
    - Honeywell Identification for DSSS Intrinsically Safe RF Modules: 50025034-001
    - Honeywell Identification for ISA100 Intrinsically Safe RF Modules: 50025034-002
- Anatel Identification Number for Brazil NCC 7591/11

This information is shown on the label attached to each transmitter. This approval and certification is only for the DSSS and ISA100 Radios, there is no approval or certification for the FSSS Radio.

2.6 Intended Country Usage

2.6.1 NORTH AMERICA

Country	ISO 3166 2 letter code
Canada	CA
United States	US

2.6.2 ASIA PACIFIC

Country	ISO 3166 2 letter code
Australia	AU
Japan	JP
New Zealand	NZ
Thailand	TH
Republic of Korea	KR

2.6.3 EUROPEAN UNION

Country	ISO 3166 2 letter code	Country	ISO 3166 2 letter code
Austria	AT	Latvia	LV
Belgium	BE	Liechtenstein	LI
Bulgaria	BG	Lithuania	LT
Cyprus	CY	Malta	MT
Czech Republic	CZ	Netherlands	NL
Denmark	DK	Norway	NO
Estonia	EE	Poland	PL
Finland	FI	Portugal	PT

Country	ISO 3166 2 letter code	Country	ISO 3166 2 letter code
France	FR	Romania	RO
Germany	DE	Slovakia	SK
Greece	GR	Slovenia	SI
Hungary	HU	Spain	ES
Iceland	IS	Sweden	SE
Ireland	IE	Switzerland	CH
Italy	IT	United Kingdom	BG

2.6.4 MIDDLE EAST

Country	ISO 3166 2 letter code
Kuwait	KW
Oman	OM

2.6.5 Central and South America

Country	ISO 3166 2 letter code
Brazil	BR

3. XYR 6000 Transmitter General Description

3.1 Intended Used

The XYR 6000 Transmitter is a key component of the Honeywell Wireless Network for Secure Industrial Application (WNSIA). These transmitters are available for various sensor types including Digital Inputs, Temperature, High Level Analog Inputs, Pressure and Corrosion. The XYR 6000 Transmitter uses a low-powered FHSS or DSSS or ISA100 2.4 GHz radio to communicate with Radio Infrastructure and Gateway devices that are connected to a wired DCS network.

3.2 XYR 6000 Transmitter Diagrams

Figure 3-1 shows unit-level drawings of the XYR 6000 Transmitter antenna options.

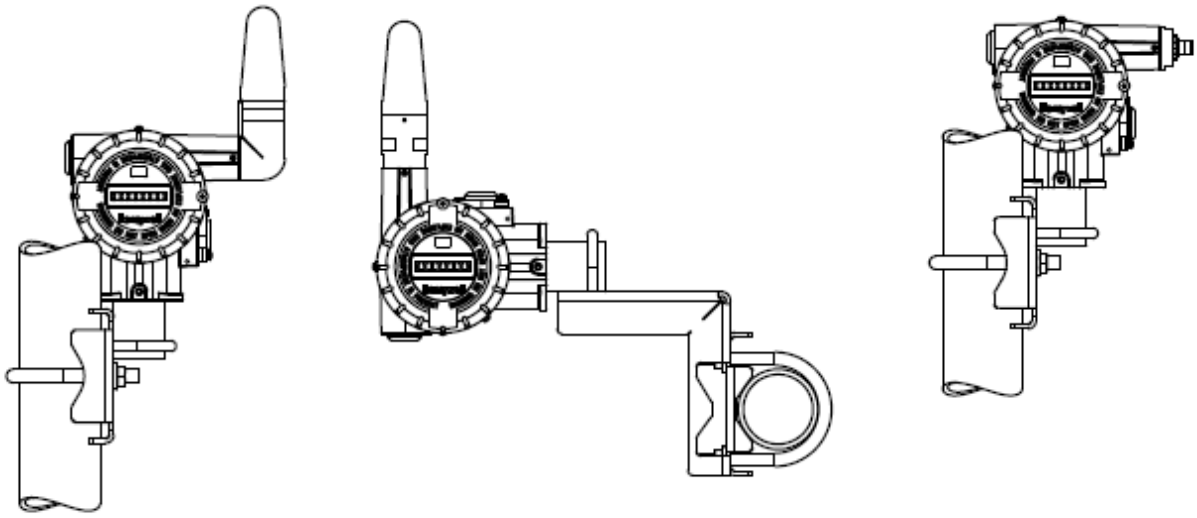


Figure 3-1 XYR 6000 Transmitters showing Right-angle -2 dBi Integral Antenna (left), Straight Integral -2 dBi Antenna (center) and Remote Antenna connector (right) options

4. Product Specification

4.1 Frequency Hopping Spread Spectrum (FHSS) Radio, 2.4 GHz

WARNING!

- The XYR 6000 Transmitter must be Professionally Installed in accordance with the requirements specified in this document. See Section 15 for professional installation maximum TX power setting requirements. Only the specified TX power settings, antenna types and gains and cable lengths (attenuation) as outlined in this document are valid for XYR 6000 Transmitter installations.

Item	Specification
Wireless Standard	Frequency Hopping Spread Spectrum (FHSS), 2.4 GHz
Data Rates and Modulation	Data Rate: 250 kbps Modulation: Gaussian Frequency Shift Keying (GFSK)
Frequency Band	2,402 – 2,482 MHz
Module Transmit Power	Maximum: 20 dBm (Maximum transmit power will vary by channel)
Receive Sensitivity (typical)	-97 dBm

Table 4-1 Specifications of FHSS Radio Module in XYR 6000 Transmitter

4.2 Direct Sequence Spread Spectrum (DSSS) and ISA100 Radio, 2.4 GHz

WARNING!

- The XYR 6000 Transmitter must be Professionally Installed in accordance with the requirements specified in this document. See Section 10, for professional installation maximum TX power setting requirements. Only the specified TX power settings, antenna types and gains and cable lengths (attenuation) as outlined in this document are valid for XYR 6000 Transmitter installations.

Table 4-2 Specifications of DSSS and ISA100 Radio Module in XYR 6000 Transmitter

Item	Specification
Wireless Standard	FCC 15.247 / IEEE 802.15.4 Direct Sequence Spread Spectrum (DSSS), 2.4 GHz
Data Rates and Modulation	Data Rate: 250 kbps Modulation: Offset Quadrature Phase-Shift Keying (OQPSK – DSSS)
Frequency Band	2,405 – 2,475 MHz
Module Transmit Power	Maximum: 20 dBm (Maximum transmit power will vary by channel)
Receive Sensitivity (typical)	-100 dBm

4.3 Direct Sequence Spread Spectrum (DSSS) Radio for Kuwait Oil Company Applications, 2.4 GHz

This option is licensed by the Kuwait Ministry of Communications (KMOC) for use only by the Kuwait Oil Company (KOC)

WARNING!

- The XYR 6000 Transmitter must be Professionally Installed in accordance with the requirements specified in this document. See Section 10, for professional installation maximum TX power setting requirements. Only the specified TX power settings, antenna types and gains and cable lengths (attenuation) as outlined in this document are valid for XYR 6000 Transmitter installations.

Table 4-3 Specifications of DSSS Radio Module in XYR 6000 Transmitter for KOC Applications

Item	Specification
Wireless Standard	FCC 15.247 / IEEE 802.15.4 Direct Sequence Spread Spectrum (DSSS), 2.4 GHz
Data Rates and Modulation	Data Rate: 250 kbps Modulation: Offset Quadrature Phase-Shift Keying (OQPSK – DSSS)
Frequency Band	2,485 – 2,495 MHz
Module Transmit Power	Maximum: 20 dBm (Maximum transmit power will vary by channel)
Receive Sensitivity (typical)	-100 dBm

4.4 XYR 6000 Transmitter User Environment

Table 4-4 User Environment Specifications for XYR 6000 Transmitter

Item	Specification
Operating Temperature:	–40ºC to +85ºC (–40°F to +185°F)
Storage Temperature:	–40ºC to +85ºC (–40°F to +185°F)
Operating Humidity:	0 to 100% RH

Other Environmental specifications and information may be found in the appropriate Instrument Specification available on the Honeywell website. www.honeywellprocess.com

4.5 XYR 6000 Instrument Power Specifications

The XYR 6000 Transmitters operate from two (2) D-size 3.6V Lithium Thionyl Chloride (Li/SOCl2) batteries. These are joined in series to produce a maximum voltage of +7.6 Vdc. An optional external +24 Volt power supply option is also available.

4.6 Weight

Most non-pressure sensing versions of the XYR 6000 transmitter have a maximum weight of 7.0 lbs (3.2 kg). Pressure transmitter versions can weigh from 7.0 lbs (3.2 kg) to 35 lbs (15.9 kg) for a flange equipped model. These weights do not include remote cables or antennas. Add 8.0 lbs (3.6 kg) to any transmitter equipped with the stainless steel housing option (A3 or SH option).

4.7 Dimensions

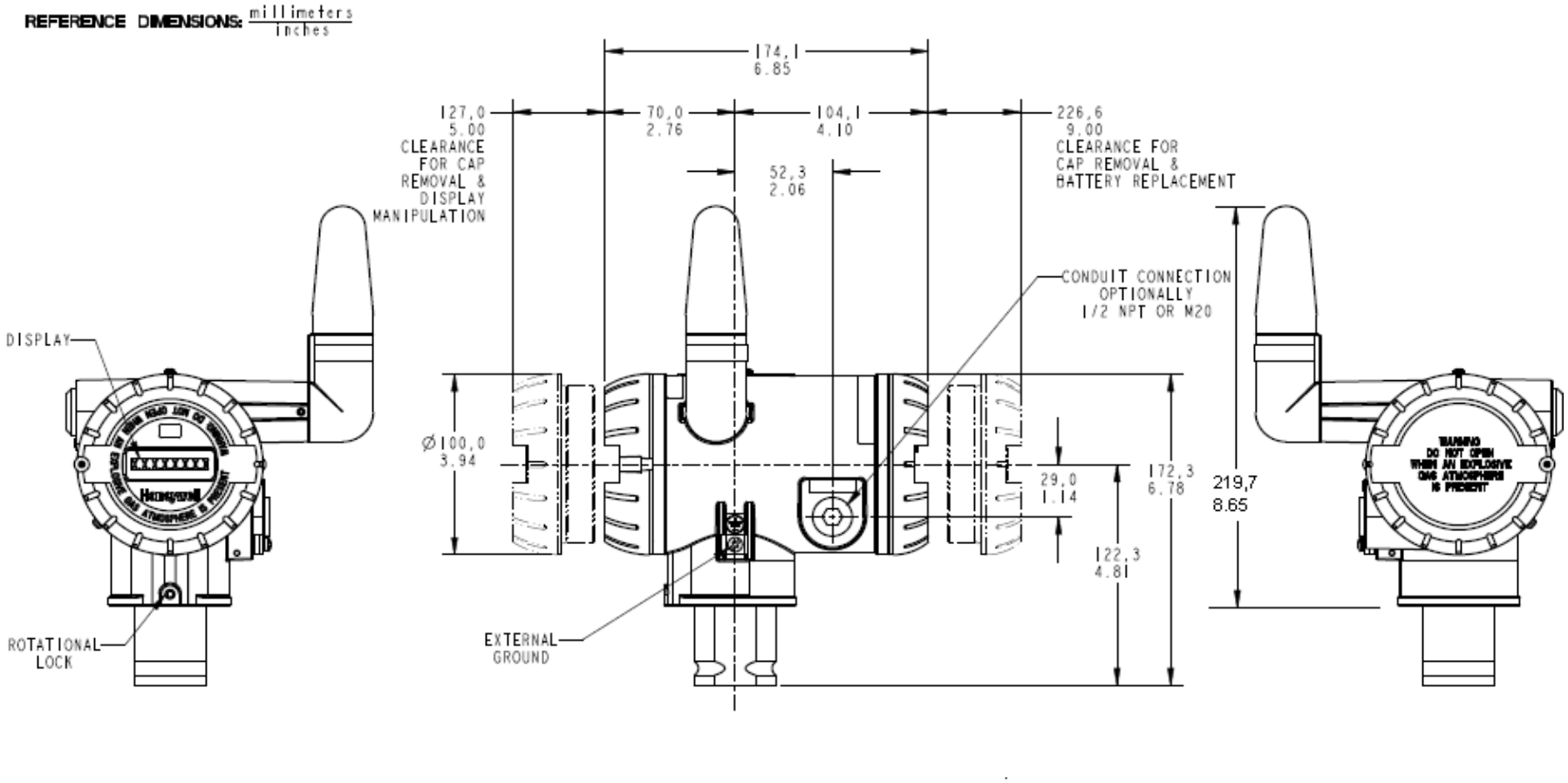


Figure 4-1 Dimensions of a typical XYR 6000 Transmitter with the Right-angle -2 dBi Integral Antenna Option

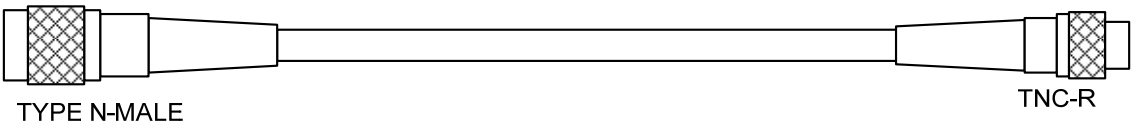
5. Cables

5.1 XYR 6000 Transmitter with RP-TNC Connectors Antenna or Lightning Arrestor Cables

All cables in these tables have a specified impedance of 50 ohms.

Table 5-1 Transmitter to Antenna or Lightning Arrestor Cable Specifications for XYR 6000 with RP-TNC connectors

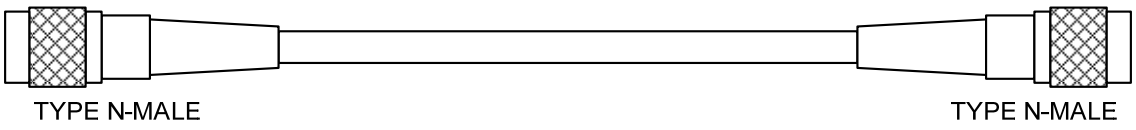
Honeywell Part Number	Cable Type	Connector Type	Frequency (GHz)	Length (m)	Loss (dB)
50018110-001	400 Series	RP-TNC to N male	2.4	1	1
50018110-003	400 Series	RP-TNC to N male	2.4	3	2
50018110-010	400 Series	RP-TNC to N male	2.4	10	3



5.2 XYR 6000 Transmitter with N Connectors Antenna or Lightning Arrestor Cables

Table 5-2 Transmitter to Antenna or Lightning Arrestor Cable Specifications for XYR 6000 with N connectors

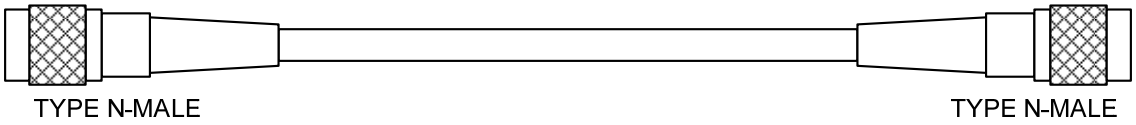
Honeywell Part Number	Cable Type	Connector Type	Frequency (GHz)	Length (m)	Loss (dB)
50018278-001	400 Series	N male to N male	2.4	1	1
50018278-003	400 Series	N male to N male	2.4	3	2
50018278-010	400 Series	N male to N male	2.4	10	3



5.3 Transmitter connection status

Table 5-3 Lightning Arrestor to Antenna Cable Specifications

Honeywell Part Number	Cable Type	Connector Type	Frequency (GHz)	Length (m)	Loss (dB)
50018278-001	400 Series	N male to N male	2.4	1	1
50018278-003	400 Series	N male to N male	2.4	3	2
50018278-010	400 Series	N male to N male	2.4	10	3



5.4 Antenna Lightning Arrestors

Table 5-4 Lightning Arrestor Specifications for Remote Antenna(s)

Honeywell Part Number	Manufacturer	Manufacturer Part Number	Specification	Connector Type	Frequency (GHz)	Attenuation (dB)
50018279-090	ALTELECON	AL-NFNFB-9	50 ohm	N Female to N Female	0 – 3	0.4 (max)

The lightning surge arrestor must be properly grounded in order to perform per specification. Connecting to local ground using a No. 12 (4 mm2) copper conductor is recommended. See the installation manual for other details.

Figure 5-1 Lightening Surge Arrestor (Altelecon AL-NFNFB-9) 50018279-090

6. Approved Antenna Types/Gains

6.1 Antenna Details

Table 6-1 Approved Antenna Types/Gains

Antenna Type	Antenna Application	Manufacturer	Manufacturer Part Number	Honeywell Part Number	Beam Width	Peak Gain (dBi)	Freq. (GHz)	Agency Compliance Notes
Omni (integral)	Point to Multi-Point	CENTURION	MAF94152	50016185-001	Omni	-2 [1]	2.4	– – –
Omni (integral)	Point to Multi-Point	L-COM	WHON511 – 0001	50029933-001	Omni	4	2.4	– – –
Omni [3] (remote)	Point to Multi-Point	L-COM	HGV-2409U	50018414-001	Omni	8	2.4	See Note 3
Directional [3] (remote)	Point to Multi-Point	L-COM	HG2414D	50018415-001	25°	14	2.4	See Note 3
Sectional [2] (remote)	Point to Multi-Point	L-COM	HG2414SP-120	N/A	120°	14	2.4	See Note 2

Notes for Table 6-1

1. The Centurion antenna listed in Table 6-1 has a specified gain of 2.2 dBi. Through EIRP measurements performed during antenna qualification testing, this antenna when installed in the Honeywell Radome and attached to the XYR 6000 Transmitter body in either the right-angle or straight integral antenna options has an actual gain of -2 dBi. This value is used in determining the maximum EIRP for Agency Compliance purposes.
2. The L-COM Sectional antenna HG2414SP-120 listed in Table 6-1 is approved for use only in Japan. It is not approved for other locations. This antenna is not available through Honeywell and must be purchased directly from L-COM.
3. Anatel for Brazil does not allow the use of antenna gains greater than 6 dBi.

See Figure 6-1 and Figure 6-2 for antenna size information.

Figure 6-1 Comparison of instruments with -2 dBi Integral Antenna (left) and 4 dBi Integral Antenna

The XYR 6000 Transmitter is available with either a -2 dBi Integral Antenna or a 4 dBi Integral Antenna. The 4 dBi antenna is 139,0 mm / 5.47 inches taller than the -2 dBi antenna. See Table 4-1 for other dimensions.

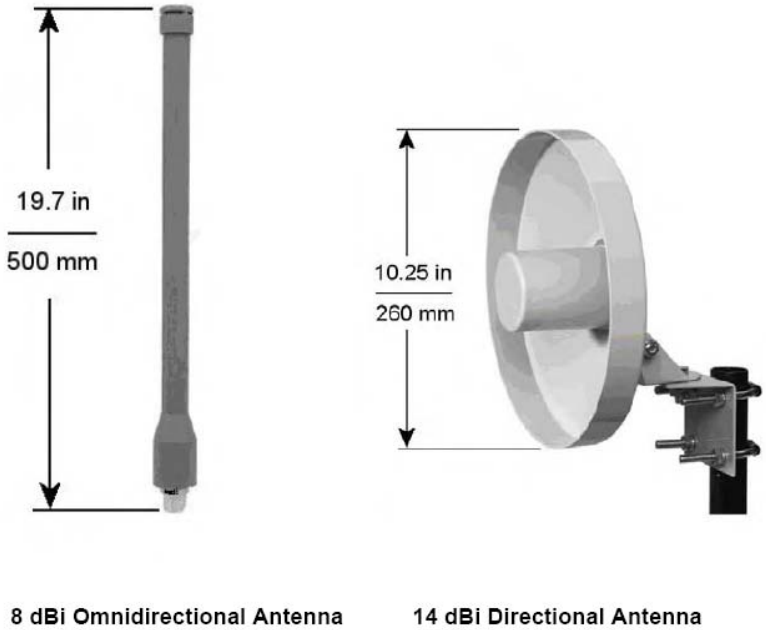


Figure 6-2 Remote Antennas

The XYR 6000 Transmitter is available with 8 dBi Omnidirectional or 14 dBi Directional Remote Antennas for all locations. A 14 dBi sectional antenna is available for use in Japan.

7. Equivalent Isotropically Radiated Power (EIRP)

In radio communication systems, Equivalent Isotropically Radiated Power (EIRP) or, alternatively, Effective Isotropic Radiated Power, is the amount of power that would have to be emitted by an isotropic antenna (that evenly distributes power in all directions and is a theoretical construct) to produce the peak power density observed in the direction of maximum antenna gain. EIRP can take into account the losses in transmission line and connectors and includes the gain of the antenna. The EIRP is often stated in terms of decibels over a reference power level that would be the power emitted by an isotropic radiator with an equivalent signal strength. The EIRP allows making comparisons between different emitters regardless of type, size or form. From the EIRP, and with knowledge of a real antenna's gain, it is possible to calculate real power and field strength values.

EIRP(dBm) = Radio TX Power (dBm) – Cable Loss (dB) + Antenna Gain(dBi)

Antenna gain is expressed relative to a (theoretical) isotropic reference antenna (dBi).

7.1 EIRP LIMITS

Table 7-1 Maximum EIRP Limits for FHSS Radios

Antenna Type	Radio Usage / Application		Freq. (GHz)	Peak Ant. Gain (dBi)	Min. Cable Length (m)	Min. Cable Loss (dB)	Agency/Country	Max. TX Power Setting (dBm) [1]	Max. EIRP (dBm)
-2 dBi Omni	Point to Multi-Point	Integral	2.4	-2	0	0	FCC, IC, ACMA	20	18
							ETSI, TNTC	20	18
							France 2400-2454 MHz	20	18
							France 2454-2482.5 MHz	Do not use [4]	---
4 dBi Omni	Point to Multi-Point	Integral	2.4	4	0	0	FCC, IC, ACMA	20	24
							ETSI, TNTC	16	20
							France 2400-2454 MHz	16	20
							France 2454-2482.5 MHz	Do not use [4]	---
8 dBi Omni	Point to Multi-Point	Remote	2.4	8	1	1	FCC, IC, ACMA	18	25
							ETSI, TNTC	13	20
							France 2400-2454 MHz	13	20
							France 2454-2482.5 MHz	Do not use [4]	---
14 dBi Directional	Point to Multi-Point	Remote	2.4	14	1	1	FCC, IC, ACMA	12	25
							ETSI, TNTC	7	20
							France 2400-2454 MHz	7	20
							France 2454-2482.5 MHz	Do not use [4]	---

Table 7-2 Maximum EIRP Limits for DSSS and ISA100 Radios

Antenna Type	Radio Usage / Application		Freq. (GHz)	Max. Ant. Gain (dBi)	Min. Cable Length (m)	Min. Cable Loss (dB)	Agency/Country	Max. TX Power Setting (dBm) [1]	Max. EIRP (dBm) [7]
-2 dBi Omni	Point to Multi-Point	Integral	2.4	-2	0	0	FCC, IC, ACMA, ANATEL	20	18
							Japan [7]	10	15
							ETSI, TNTC, KCC	14	12
							France 2400-2454 MHz	14	12
							France 2454-2482.5 MHz	Do not use [4]	---
							KOC [5] 2485-2499 MHz	20	18
4 dBi Omni	Point to Multi-Point	Integral	2.4	4	0	0	FCC, IC, ACMA, ANATEL	20	24
							Japan [7]	10	15
							ETSI, TNTC, KCC	8	12
							France 2400-2454 MHz	8	12
							France 2454-2482.5 MHz	Do not use [4]	---
							KOC [5] 2485-2499 MHz	20	24
8 dBi Omni	Point to Multi-Point	Remote	2.4	8	1	1	FCC, IC, ACMA	18	25
							Japan [7]	10	15
							ETSI, TNTC, KCC	5	12
							France 2400-2454 MHz	5	12
							France 2454-2482.5 MHz	Do not use [4]	---
							KOC [5] 2485-2499 MHz	19	26
14 dBi Directional	Point to Multi-Point	Remote	2.4	14	1	1	FCC, IC, ACMA	12	25
							Japan [7]	10	25
							ETSI, TNTC, KCC	-2	11
							France 2400-2454 MHz	-2	11
							France 2454-2482.5 MHz	Do not use [4]	---
							KOC [5] 2485-2499 MHz	13	26
14 dBi Sectional	Point to Multi-Point	Remote	2.4	14	1	1	Japan [7]	10	19.9

Notes for Table 7-1 andTable 7-2:

1. The Maximum TX Power Setting values given in Table 7-1 and Table 7-2 represent the power produced by the Radio circuit within the RF Module. These Maximum TX Power Setting values do not include antenna gain nor do they include the losses caused by cables and connectors. When these external gains and losses are included, then using these Maximum TX Power Setting values ensures that the XYR 6000 EIRP will not exceed the maximum EIRP limits that are given in Table 7-1 and Table 7-2.

2. The values in the above tables have been determined through agency certification testing.

3. The following shall apply for antenna type, frequency range, application/usage and agency/country compliance:

   - Antenna gains above the maximum values shown shall not be used.
   - Cable length/loss below the minimum values shown shall not be used.
   - Maximum overall radio output power shown shall not be exceeded.
   - Maximum EIRP values shown above shall not be exceeded.

4. **France** restricts outdoor use to 10mW (10 dBm) EIRP in the frequency range of 2,454-2,483.5 MHz. Installations in France must limit EIRP to 10 dBm for operating modes utilizing frequencies in the range of 2,454 – 2,483.5MHz. For this reason, Honeywell does not recommend configuring frequency hopping modes that use this frequency range. ***For installations in France, use only the following OneWireless Frequency Hopping (FH) Mode Selections:*** *EU Channel #1, EU Channel #7* and *NA/EU Channel 3 (FH Mode selections #4, 5 and 10).*

5. **Kuwait** has licensed the Kuwait Oil Company (KOC) to use the **Kuwait Reserved Band** (2485 – 2499 MHz). ***For installations in Kuwait for KOC, use the following OneWireless Frequency Hopping (FH) Mode Selection:*** *Kuwait Reserved Band (FH Mode selection #8),* ***no other selections are permitted. This selection is licensed for use in Kuwait only by KOC, it should not be used for other applications and locations.***

6. **Industry Canada Compliance Statement**: This device has been designed to operate with the antenna types listed in this document, and having a maximum gain of 14 dBi. Antenna types not included in this list or having a gain greater than 14 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

7. **Japan** restricts maximum EIRP to 12.14 dBm/MHz (equivalent to 15.14 dbm) EIRP. For this reason, **Japan** restricts the TX Power setting to 10 dBm (equivalent to 7 dBm/MHz) for all models and does not permit changes to this value.

8. **Brazil Anatel** does not permit the use of Honeywell supplied antennas of greater than 6 dBi gain. Other Anatel approved antennas can be used in Brazil, consult local suppliers for availability. When using non-Honeywell supplied antennas, adjust TX Power such that the EIRP limit given in Table 7-2 is not exceeded.

Table 7-3 FHSS Transmit Power Settings for the antennas and cable lengths specified above

Description	Model Selection Guide Table III [1]	Cable(s) Length [2] (m)	TX Power Setting for ETSI/TNTC [3] (dBm)	TX Power Setting for FCC/IC/ACMA [3] (dBm)
-2 dBi Integral Antenna	V 0 0 0 0 or S 0 0 0 0	N/A	16	16
4 dBi Integral Antenna	R 0 0 0 0 or H 0 0 0 0	N/A	16	16
8 dBi Omni w/o suppressor	M 0 1 0 0 or M 0 3 0 0 or M 2 1 00 or M 2 3 0 0	1, 3	13	16
8 dBi Omni w/o suppressor	M 1 0 0 0 or M 2 9 0 0	10	15	16
8 dBi Omni with suppressor	M 0 1 0 1 or M 2 1 0 1	1+1	15	16
8 dBi Omni with suppressor	M 0 1 0 3 or M 0 3 0 3 or M 0 3 1 0 or M 0 3 0 1 or M 1 0 0 3 or M 1 0 1 0 or M 2 1 0 3 or M 2 3 0 3 or M 2 3 1 0 or M 2 3 0 1 or M 2 9 0 3 or M 2 9 1 0	1+3, 3+3, 3+10, 3+1, 10+3, 10+10	16	16
14 dBi directional w/o suppressor	D 0 1 0 0 or D 0 3 0 0 or D 2 1 0 0 or D 2 3 0 0	1,3	7	12
14 dBi directional w/o suppressor	D 1 0 0 0 or D 2 9 0 0	10	9	14
14 dBi directional with suppressor	D 0 1 0 1 or D 2 1 0 1	1+1	9	14
14 dBi directional with suppressor	D 0 1 0 3 or D 0 3 0 1 or D 0 3 0 3 or D 2 1 0 3 or D 2 3 0 1	1+3, 3+1, 3+3	10	15
14 dBi directional with suppressor	D 0 3 1 0 or D 1 0 0 3 or D 2 3 1 0 or D 2 9 0 3	3+10, 10+3	11	16
14 dBi directional with suppressor	D 1 0 1 0 or D 2 9 1 0	10+10	13	16

Table 7-4 DSSS and ISA100 Transmit Power Settings for the antennas and cable lengths specified above

Description	Model Selection Guide Table III [1]	Remote Cable(s) Length [2] (m)	TX Power Setting for ETSI/TNTC/KCC [3] (dBm)	TX Power Setting for FCC/IC/KOC /ACMA /ANATEL [3, 8] (dBm)	TX Power Setting for Japan [3, 4] (dBm)
-2 dBi Integral Antenna	V 0 0 0 0 or S 0 0 0 0	N/A	14	16	10
4 dBi Integral Antenna	R 0 0 0 0 or H 0 0 0 0	N/A	8	16	10
8 dBi Omni w/o suppressor	M 0 1 0 0 or M 0 3 0 0 or M 2 1 0 0 or M 2 3 0 0	1, 3	5	16	N/A
8 dBi Omni w/o suppressor	M 1 0 0 0 or M 2 9 0 0	10	7	16	N/A
8 dBi Omni with suppressor	M 0 1 0 1 or M 2 1 0 1	1+1	6	16	N/A
8 dBi Omni with suppressor	M 0 1 0 3 or M 0 3 0 3 or M 0 3 1 0 or M 0 3 0 1 or M 1 0 0 3 or M 1 0 1 0 or M 2 1 0 3 or M 2 3 0 3 or M 2 3 1 0 or M 2 3 0 1 or M 2 9 0 3 or M 2 9 1 0	1+3, 3+3, 3+10, 3+1, 10+3, 10+10	7	16	10
14 dBi directional w/o suppressor [6]	D 0 1 0 0 or D 0 3 0 0 or D 2 1 0 0 or D 2 3 0 0	1,3	-2	12	10
14 dBi directional w/o suppressor [6]	D 1 0 0 0 or D 2 9 0 0	10	0	14	10
14 dBi directional with suppressor [6]	D 0 1 0 1 or D 2 1 0 1	1+1	-1	14	10
14 dBi directional with suppressor [6]	D 0 1 0 3 or D 0 3 0 1 or D 0 3 0 3 or D 2 1 0 3 or D2 3 0 1 or D 2 3 0 3	1+3, 3+1, 3+3	-2	15	10
14 dBi directional with suppressor [6]	D 0 3 1 0 or D 1 0 0 3 or D 2 3 1 0 or D 2 9 0 3	3+10, 10+3	2	16	10
14 dBi directional with suppressor [6]	D 1 0 1 0 or D 2 9 1 0	10+10	3	16	10
No remote antenna or cables option [7]	A 0 0 0 0	N/A	0	0	10

Notes for Table 7-3 and Table 7-4

1. The Model Number of any instrument may be found on the identification name plate located on the outside of the XYR 6000 transmitter. The values in the **Cable(s) Length** column represent those customer selections from Table III of the XYR 6000 Model Selection Guides.
2. In the **Cable(s) Length** column, entries of the form "X+X" indicate that there are two cables between the XYR 6000 and the remote antenna, with a lightning surge arrestor used to connect the two cables together. Entries of the form "X" mean that there is a single cable and that no lightning surge arrestor is used. For entries of the form "X+X"; the first value is the length of the cable between the instrument and the arrestor while the second value is the length of the cable between the arrestor and the remote antenna. All cables are 400 series types as specified in Table 5-1 and Table 5-2.
3. TX Power is set by the Honeywell factory producing the XYR 6000. The factory set value for TX power is determined by the customer's model number selections in the Model Selection Guide Table III for antenna type, cables and the lightning suppressor along with the customer's selection in Table V for Country Code and is consistent with the values shown in Table 7-3 and Table 7-4. If the Country location, cable lengths, antenna type or the use of a lightning surge arrestor are changed in the field away from the Model Number listed on the instrument's nameplate, then the TX power setting should likewise be changed per the tables above to match the new Country/antenna/cable/arrestor selections.
See Section 8.
4. **Japan** restricts the TX Power setting to 10 dBm (equivalent to 7 dbm/MHz). **N/A** entries in this column mean that these antenna and cable length combinations are not permitted for Japanese applications as using them would exceed the maximum EIRP values given in Table 7-2.
5. The TX Power Setting values given in Table 7-3 and Table 7-4 represent the power produced by the Radio circuit within the RF Module. These TX Power Setting values do not include antenna gain nor do they include the losses caused by cables, connectors and lightning arrestors. When these external gains and losses are included, then using the TX power values in Table 7-3 and Table 7-4 ensures that the XYR 6000 EIRP will not exceed the maximum EIRP limits that are given in Table 7-1 and Table 7-2
6. The TX Power Setting values given in Table 7-4 for the 14 dBi directional antenna are also used for the 14 dBi sectional antenna shown in Table 6-1. This sectional antenna is only approved for use in Japan.
7. Units with Model Selection Guide Table III selection **A 0 0 0 0** are shipped without cables or a remote antenna. The Professional Installer must set the TX power for these units according to the characteristics of the antenna and cables selected by the end user, guided by the information provided above. Only Omnidirectional antennas with gains less than or equal to 8 dBi and Directional antennas with gains equal to or less than 14 dBi may be used and still meet Agency restrictions. The TX values used must result in an EIRP value that does not exceed the maximum EIRP values given in Table 7-1 and Table 7-2. Honeywell recommends that, regardless of the antenna and cables used, that TX power not be set higher than 16 dBm in order to maximize the battery life of the instrument.
8. Anatel approvals for Brazil do not permit the use of Honeywell supplied antennas of greater than 6 dBi gain. Other Anatel approved antennas can be used in Brazil, consult local suppliers for availability. When using non-Honeywell supplied antennas, adjust TX Power such that the EIRP limit given in Table 7-2 is not exceeded.

8. Setting TX Power

8.1 TX Power Setting

WARNING!

- The XYR 6000 Transmitter must be Professionally Installed in accordance with the requirements specified in this document. Only the specified power settings, antenna types and gains and cable lengths (attenuation) as outlined in this document are valid for XYR 6000 Transmitter installations.

The XYR 6000 as shipped from the factory will have its TX Power value set according to its Model Number and this value is consistent with those values given in Table 7-3 and Table 7-4.

The TX Power setting may be changed via the Authentication Device or Provisioning Device when a special application (app) is installed. This app is considered to be Honeywell sensitive material and is made available only to the qualified Professional Installer. Due to radio approval body regulations, changing the TX Power setting is only available if the professional installer option has been explicitly enabled on your Authentication Device or Provisioning Device. If you do not have the professional installer option enabled and would like to do so, then please contact Honeywell Global Technical Services (GTS). A separate application, AuthDev Power Settings, is required to enable the "Write TX Power Level" option.

When this app is installed in the AD, the XYR 6000 TX power setting, normally a read-only parameter, becomes a read/write parameter.

The TX Power adjustment feature is provided for Professional Installers to adjust the XYR 6000 TX power to match a change in the selection of antenna and cables made at the installation site and still ensure that the EIRP does not exceed the regulatory limits.

WARNING!

- **Japan** does not allow the installer to change the TX Power setting. For this reason, the special AD app is not available for installations in Japan.

9. Agency Label Information

The following information shall be clearly and permanently labeled on the XYR 6000 Transmitter unit:

9.1 External FCC/IC Labels

9.1.1 50016195-001 – Transmitters with FHSS Radios

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

FCC ID: S5750016517 / IC: 573I-50016517

9.1.2 50016195-002 – Transmitters with Intrinsically Safe FSSS Radios

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

FCC ID: S5750025034 / IC: 573I-50025034

9.2 Internal FCC/IC Labels

These labels are located on the RF Module

50021957-001

RF MOD 50016517-001
FCC ID: S5750016517
IC: 573I-50016517

50021957-002

RF MOD 50025132-001
FCC ID: S5750016517
IC: 573I-50016517

50021957-003

RF MOD 50025034-001
FCC ID: S5750025034
IC: 573I-50025034

50021957-004

RF MOD 50025034-002
FCC ID: S5750025034
IC: 573I-50025034

9.3 Internal Japan Ministry of Internal Affairs and Communications Label

These labels are located on the RF Module

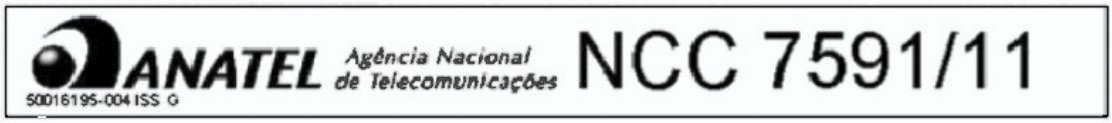
50055374-001

This label is used only on XYR 6000 DSSS and ISA100 radio boards that are shipped to Japan. This approval and certification is only for the DSSS and ISA100 Radios, there is no Japanese approval or certification for the FHSS Radio.

9.4 External Brazil Anatel Label

This label is used only on XYR 6000 DSSS and ISA100 instruments intended for installation in Brazil. There is no Anatel approval or certification for FSSS radios for Brazil.

50016195-004



10. RF Safety, Maximum Permissible Exposure (MPE) Statement

10.1 MPE Statement

To comply with FCC's and Industry Canada's RF exposure requirements, the following antenna installation and device operating configurations must be satisfied:

Remote antenna(s) for this unit must be fixed and mounted on outdoor permanent structures with a separation distance between the antenna(s) of at least 20 cm and a separation distance of at least 20 cm from all persons.

When using integral antenna(s) the XYR 6000 Transmitter unit must not be co-located with any other antenna or transmitter device and have a separation distance of at least 20 cm from all persons.

11. Agency Compliance

11.1 Radio and EMC Certifications

11.1.1 Federal Communication Commission (FCC)

- Specification: FCC Part 15.247 Subpart B for unintentional radiators
- Specification: FCC Part 15.247 Subpart C for intentional radiators

11.1.2 Industry Canada (IC)

- Method: RSS-210, Issue 7
- RSS-Gen, Issue 2
- ICES-003, Issue 4

11.1.3 European Telecommunications Standards Institute (ETSI)

- Emissions Specification and Method: EN 300 328 V1.7.1
- Emissions Spec and Method: EN 301 893 V1.3.1
- Immunity Specification: EN 301 489-17 V1.2.1
- Immunity Method: EN 301 489-1 V1.6.1
- Product Standard: IEC61326-1 (1st Edition, 2002-02, Industrial Locations)

11.1.4 Australian communications and media authority (ACMA)

- Specification: AS NZS 4771-2000

11.1.5 Thailand National Telecommunications Commission (TNTC)

- Specification: เรื่อง เครื่องวิทยุคมนาคมและสถานีวิทยุคมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาต (Specification for non-licensed Radio and Radio Station Telecommunications)

11.1.6 Japan Ministry of Internal Affairs and Communications (MIC)

- Technical Regulations Conformity Certification for 2.4 GHz band wide-band, low-power data communication system (Item 19 of Article 2 Paragraph 1).

11.1.7 Kuwait Ministry of Communications (KMOC)

- Documentation received via Kuwait Oil Company (KOC)

11.1.8 Brazil Anatel

- Conformity Certificate Number: NCC 7591/11

11.1.9 Republic of Korea - Korea Communications Commission

- KCC Certificate: HWL-XYR6000DS-SA14

11.2 Product Safety Agency Certifications

11.2.1 Canadian Standards Association (CSA)

- ANSI/ISA S82.02.01 (61010-1) CSA C22.2 No. 1010-1, ANSI/UL 61010-1, Safety Standard for Electrical Equipment for Measurement, Control and Laboratory Use – Part 1: General Requirements
- C22.2 No. 0, General Requirements - Canadian Electrical Code, Part II
- C22.2 No. 25, Enclosures for Use in Class II, Group E, F & G Hazardous Locations
- C22.2 No. 94, Special Purpose Enclosures, Industrial Products
- C22.2 No. 14, Industrial Control Equipment, Industrial Products
- C22.2 No. 30, Explosion Proof Enclosures for Use in Hazardous Locations, Industrial Products
- C22.2 No. 157, Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
- C22.2 No. 213, Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
- E60079-0, Electrical Apparatus for Explosive Gas Atmospheres, Part 0: General Requirements
- E60079-1, Electrical Apparatus for Explosive Gas Atmospheres, Part 1: Flameproof “d”
- E60079-15, Electrical Apparatus for Explosive Gas Atmospheres, Part 15: Electrical Apparatus With Type of Protection "n"
- Temperature code: T4 (135°C) based on the maximum specified ambient of 85°C.

11.2.2 Factory Mutual (FM)

- ANSI/ISA S82.02.01 (61010-1) CSA C22.2 No. 1010-1, ANSI/UL 61010-1, Safety Standard for Electrical Equipment for Measurement, Control and Laboratory Use – Part 1: General Requirements
- FM electrical equipment requirements for use within Class I, Division 2, Groups A, B, C and D/Zone 2, Group IIC Hazardous Locations.
- Factory Mutual Approval Standard Class No. 3600, “Electrical Equipment for Use in Hazardous (Classified) Locations – General Requirements
- Factory Mutual Approval Standard Class No. 3810, “Electrical and Electronic Test, Measuring, and Process Control Equipment
- Factory Mutual Approval Standard Class No. 3611, “Electrical Equipment for Use in Class I, Division 2, Class II, Division 2 and Class III, Division 1 and 2 Hazardous (Classified) Locations
- Temperature code: T4 (135°C) based on the maximum specified ambient of 85°C.

11.2.3 European ATEX Certification (ATEX)

- EN 60079-0, Electrical Apparatus for Explosive Gas Atmospheres, Part 0: General Requirements
- EN 60079-1, Electrical Apparatus for Explosive Gas Atmospheres, Part 1: Flameproof Enclosures “d”
- EN 60079-11, Electrical Apparatus for Explosive Gas Atmospheres, Part 11: Intrinsic Safety "i"
- EN 60079-15, Electrical Apparatus for Explosive Gas Atmospheres, Part 15: Electrical Apparatus with Type of Protection “n”
- EN 50281, Electrical Apparatus for Use in the Presence of Combustible Dust
- EN 50284, Special Requirements for Construction, Test and Marking of Electrical Apparatus of Equipment Group II, Category 1G
- The temperature code for the XYR 6000 Transmitter shall not exceed T4 (135°C) based on the maximum specified ambient of 85°C.

11.2.4 European Union Certification (CE-mark)

- Compliance with:
  - R&TTE Directive 1999/5/EC
  - EMC Directive 2004/108/EC
  - LVD Directive 73/23/EEC
  - ATEX Directive 94/9/EC

11.2.5 Japan Technology Institution of Industrial Safety (TIIS) Certification

- Per European ATEX Certifications as shown in Section 11.2.3

12. Reference Documents

12.1 OneWireless reference documentation

Table 12-1 – Reference documents

1	Getting Started with Honeywell OneWireless
2	Honeywell OneWireless Planning Guide
3	OneWireless XYR 6000 Model Selection Guides
4	OneWireless XYR 6000 Quick Start Guide
5	Honeywell XYR 6000 User's Manuals
6	Honeywell XYR 6000 Installation Manual
7	Radio Antenna: A Primer White Paper
8	Honeywell OneWireless System Administration Guide
9	Honeywell OneWireless Field Network Dictionary
10	OneWireless Builder Parameter Reference
11	OneWireless Builder User's Guide

These reference documents may be found on the Honeywell HPS website for Wireless Instrumentation.

www.honeywellprocess.com/en-US/explore/products/wireless/Pages/default.aspx

Sales and Service

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

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