Honeywell

THE POWER OF **CONNECTED**

Limitless™ Wireless Multi-Protocol Receiver
WMPR Series

002391

Issue 5

FEATURES

- Visual feedback via LCD: RF signal loss, battery condition, node update rate, node pairing, etc.
- Output is ODVA certified – EtherNet/IP Conformance Tested™, GEN code 1 only
- Ability to produce EtherNet/IP™ output
- Can monitor up to 14 Limitless™ digital or analog nodes on a single device
- FCC 15.247 (US) and IC RSS 210 (Canada)
- IP20 sealing
- Designed with combination of DIN Rail or through-hole mount for installation ease

POTENTIAL INDUSTRIAL APPLICATIONS

- Valve position
- Lifts
- Material handling
- Presses
- Conveyors
- Remote or temporary equipment
- Safety shower/eye-wash stations
- Grain diverters or gates
- Mold injection machines
- Door or gate position
- Hose attachment verification
- Specialty machines

DESCRIPTION

The WMPR Series is a reliable DIN Rail or panel-mountable receiver that is designed to receive a wireless signal from a Limitless™ digital or analog input or node. The WMPR Series receiver then communicates the Limitless™ digital or analog node status (i.e., switch open or closed, pressure value) to an EtherNet/IP™ compliant Master device (i.e., programmable logic controller). When compared to traditional wired solutions, Honeywell's wireless solutions can greatly reduce the costs of wiring, installation, and maintenance by eliminating the need for conduit, connectors, and wire while significantly reducing installation and labor costs.

Accommodating up to 14 Limitless™ digital or analog nodes, the WMPR Series is designed for applications requiring multiple wireless inputs. The WMPR Series receiver is menu driven through the use of function buttons and an easy-to-read LCD. The menu allows the user to see the status of the nodes, configure nodes, and update receiver functionality.

VALUE TO CUSTOMERS

- **Simple navigation:** LCD function buttons on the front panel allow the user to easily navigate through the menu to obtain status of the switch actuation state, sensor value, battery condition, RF signal loss, node pairing, node update rate, fault indications, etc.
- **Cost-effective:** Helps reduce installation and maintenance costs with no wires, conduit, strain relief, clips, connectors, connection boxes, etc.
- **Configurable:** Ability to reconfigure and network multiple interfaces, or point-to-point with personalized addresses, allows for adding, subtracting, or relocating Limitless™ inputs easily

DIFFERENTIATION

- Communicates both digital and analog node status
- Ability to produce EtherNet/IP™ output
- End users can configure the GEN code 2 WMPR device so that the IP address is static (permanently assigned)

PORTFOLIO

The WMPR Series is part of the Limitless™ Series of receivers and monitors, including the WDRR DIN Rail Receiver and WPMM Monitor.
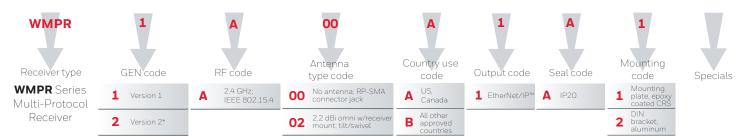
EtherNet/IP™
ODVA

Limitless™ Wireless Multi-Protocol Receiver, WMPR Series

Table 1. Specifications

	Parameter
Series name	WMPR Series
Product type	Limitless™ wireless multi-protocol receiver
Housing material	Flame retardant ABS (Acrylonitrile Butadiene Styrene)
Housing type	35 mm DIN Rail bracket or through-hole mounting plate design, 3,5 mm [#8] machine screws
Housing size	81,3 mm H x 160 mm W x 43,2 mm D [3.2 in H x 6.3 in W x 1.7 in D] ref.
Radio type	WPAN 802.15.4, 2.4 GHz
Communication agency approvals/certificates*	FCC 15.247: United States of America IC RSS 210: Canada
Antenna connection/type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication/operator interface	LCD display with function button navigation of a menu program Configuration LEDs: green, blue, red
Signal range	1000 ft** [305 m]** clear line of sight between Limitless™ input and receiver when using 2.2 dBi integral antenna
Supply voltage	10 Vdc to 30 Vdc
Supply current	500 mA max.
Output type	EtherNet/IP™ (ODVA – EtherNet/IP Conformance Tested™, GEN code 1 only)
Output connector	RJ-45 connector
Supply connection	lever actuating connector
Reverse polarity protection	Yes
Sealing	IP20
EMC	Latest applicable standards: EN 300 328, V1.8.1; EN 61326-1 (2013); EN 301 489-1, V1.9.2; EN 301 489-17, V2.2.1
Shock	IEC 60068-2-27; half sine, 10 g, 6 mS, 3 axis
Vibration	IEC 60068-2-6; 10 Hz to 58 Hz with 0,75 mm peak-to-peak, 58 Hz to 500 Hz @ 5g
Operating temperature	-20 °C to 70 °C [-4 °F to 158 °F]

* Honeywell is continuing to add new Country Communication Agency Approvals as opportunities and requirements are established.

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

Limitless™ Wireless Multi-Protocol Receiver, WMPR Series

WMPR	1	A	00	A	1	A	1	
Receiver type	GEN code	RF code	Antenna type code	Country use code	Output code	Seal code	Mounting code	Specials

Receiver type	GEN code	RF code	Antenna type code	Country use code	Output code	Seal code	Mounting code
WMPR Series Multi-Protocol Receiver	**1** Version 1	**A** 2.4 GHz; IEEE 802.15.4	**00** No antenna; RP-SMA connector jack	**A** US, Canada	**1** EtherNet/IP™	**A** IP20	**1** Mounting plate, epoxy coated CRS
	2 Version 2*		**02** 2.2 dBi omni w/receiver mount; tilt/swivel	**B** All other approved countries			**2** DIN bracket, aluminum

*GEN code 2 is not ODVA certfied due to programming allowing a static (permanently assigned) IP address.

Table 2. WMPR Order Guide

Part Number	Description
WMPR1A00A1A1	Limitless™ EtherNet/IP™ output receiver, no antenna – RP-SMA jack only, mounting plate, for use in US and Canada
WMPR1A00B1A1	Limitless™ EtherNet/IP™ output receiver, no antenna – RP-SMA jack only, mounting plate, for use in all approved countries
WMPR1A00A1A2	Limitless™ EtherNet/IP™ output receiver, no antenna – RP-SMA jack only, DIN Rail bracket, for use in US and Canada
WMPR1A00B1A2	Limitless™ EtherNet/IP™ output receiver, no antenna – RP-SMA jack only, DIN Rail bracket, for use in all approved countries
WMPR1A02A1A1	Limitless™ EtherNet/IP™ output receiver, 2.2 dBi omni tilt-and-swivel antenna, mounting plate, for use in US and Canada
WMPR1A02B1A1	Limitless™ EtherNet/IP™ output receiver, 2.2 dBi omni tilt-and-swivel antenna, mounting plate, for use in all approved countries
WMPR1A02A1A2	Limitless™ EtherNet/IP™ output receiver, 2.2 dBi omni tilt-and-swivel antenna, DIN Rail bracket, for use in US and Canada
WMPR1A02B1A2	Limitless™ EtherNet/IP™ output receiver, 2.2 dBi omni tilt-and-swivel antenna, DIN Rail bracket, for use in all approved countries
WMPR2A00A1A2	GEN code 2, Limitless™ EtherNet/IP™ output receiver, no antenna – RP-SMA jack only, DIN Rail bracket, for use in US and Canada

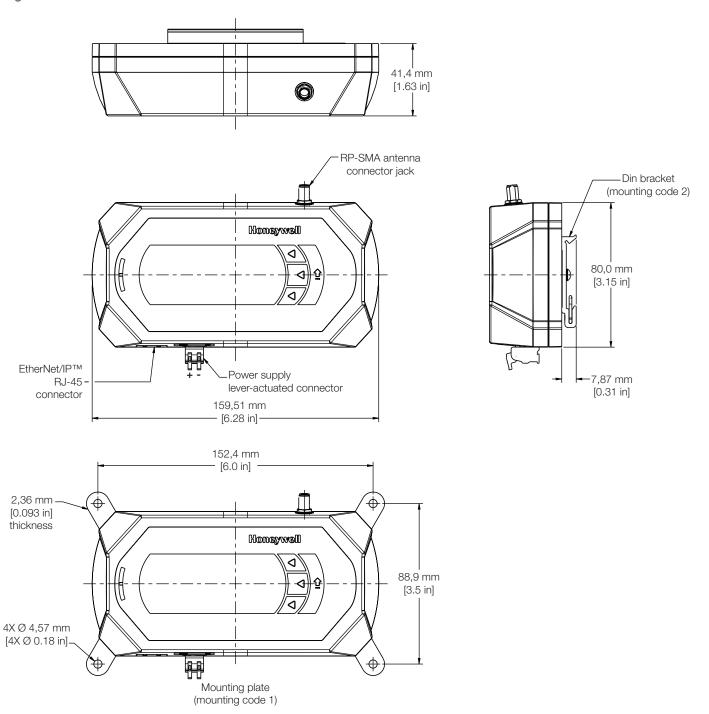# Limitless™ Wireless Multi-Protocol Receiver, WMPR Series

Figure 2. Product Dimensions

41,4 mm
[1.63 in]

RP-SMA antenna
connector jack

Din bracket
(mounting code 2)

Honeywell

80,0 mm
[3.15 in]

EtherNet/IP™
RJ-45
connector

+ -

Power supply
lever-actuated connector

7,87 mm
[0.31 in]

159,51 mm
[6.28 in]

152,4 mm
[6.0 in]

2,36 mm
[0.093 in]
thickness

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88,9 mm
[3.5 in]

4X Ø 4,57 mm
[4X Ø 0.18 in]

Mounting plate
(mounting code 1)

Limitless™ Wireless Multi-Protocol Receiver, WMPR Series

Table 3. Antenna Listings

The WMPR Series can be ordered without an antenna by using the "00" Antenna Type Code in the part number. Antennas may be ordered separately using the part numbers below.

	Part Number (if ordered separately)	Antenna Design	Antenna Gain (dBi)	Connector/Mounting	Dimensions
	WAN01RSP	straight	2.2	RP-SMA plug/direct mount	Ø 9,91 mm x 112,78 mm L [Ø 0.39 in x 4.44 in L]
	WAN02RSP	tilt/swivel	2.2	RP-SMA plug/direct mount	Ø 9,91 mm x 112,78 mm L [Ø 0.39 in x 4.44 in L]
	WAN03RSP	flat	3.0	RP-SMA plug/adhesive mount	Ø 7,87 mm x 22,1 mm W x 4,57 mm D [Ø 0.31 in x 0.87 in W x 0.18 in D] 3 m [9 ft] cable
	WAN05RSP*	tilt/swivel	9.0	RP-SMA plug/direct mount	Ø 12,7 mm x 384,05 mm L [Ø 0.50 in x 15.12 in L]
	WAN06RNJ*	straight	8.0	RP-N jack/bracket	Ø 33,5 mm x 427,9 mm L [Ø 1.32 in x 16.85 in L]
	WAN09RSP	low profile mobile	3.0	RP-SMA plug/magnetic	Ø 76,2 mm x 115 mm L [Ø 3.0 in x 4.54 in L] 4,57 m [15 ft] cable
	WAN10RSP	straight	5.0	RP-SMA plug/magnetic	Ø 76,2 mm x 230,1 mm L [Ø 3.0 in x 9.06 in L] 1,52 m [5 ft] cable
	WAN11RSP*	low profile mobile dome	4.0	RP-SMA plug/thru-hole screw	Ø 39 mm x 42,4 mm L [Ø 1.54 in x 1.67 in L]

* Not allowed for use with Country Code "B" Limitless™ products

Limitless™ Wireless Multi-Protocol Receiver, WMPR Series

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ADDITIONAL MATERIALS

The following associated literature is available on the Honeywell web site at sensing.honeywell.com:

- Product installation instructions
- Product range guide
- Limitless™ product brochure
- Video: Dr. Larry on Limitless™ Wireless Solutions
- White Paper: Limitless™ Switches Offer Unlimited Benefits
- Product application-specific information
  - Application Flyer: Fume Hood Sash Management
  - Application Flyer: Safety Shower/Eyewash Station Alarm Solutions (WBX Series)
  - Application Note: Crane Jib/Two Block Assembly
  - Application Note: Limitless™ Wireless Solutions in Anti-Two Block Warning Systems for Cranes, Stationary and on Trucks
  - Application Note: Limitless™ Wireless Solutions in Industrial Tank Level Monitoring
  - Application Note: Limitless™ Wireless Solutions on Automotive Factory Floors
  - Application Note: Limitless™ Wireless Solutions on Hangar Doors
  - Application Note: Sensors and Switches for Industrial Manual Process Valves
  - Application Note: Sensors and Switches in Mobile Cranes
  - Application Note: Sensors and Switches Used in Valve Actuators and Valve Positioners

For more information

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Asia Pacific	+65 6355-2828
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DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.
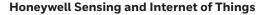
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Honeywell Sensing and Internet of Things

9680 Old Bailes Road
Fort Mill, SC 29707
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