Honeywell



Limitless™ Wireless Din-Rail Receiver

WDRR Series



Datasheet

Limitless™ WDRR Series
Wireless Din-Rail Receiver

The WDRR Series is a reliable din-rail or panel-mountable receiver that is designed to receive a wireless signal from a Limitless™ digital input. The WDRR receiver then communicates the Limitless™ digital input status (i.e. switch open or closed) to a PLC (programmable logic controller) or any host controller capable of NPN/PNP-type inputs. Honeywell's wireless solutions can save up to 60% compared to traditional wired solutions by eliminating the need for conduit, connectors, and wire while significantly reducing installation and labor costs.

Accommodating up to 14 Limitless™ digital inputs, the WDRR Series is for applications requiring multiple wireless inputs. These inputs communicate to a PLC or host controller via NPN or PNP-type output, along with RF communication and battery diagnostics. Blue LEDs give visual confirmation that the system is wirelessly connected.

What makes our wireless solutions better?

- Enables control and/or notification in remote parts of application/machinery/manufacturing plants, where wiring is too costly or not possible
- Ability to reconfigure and network multiple interfaces, or point-to-point with personalized addresses which allows for adding, subtracting, or relocating Limitless™ inputs easily
- Reduced installation/maintenance costs with no wiring to Limitless™ switches, conduit, strain relief, clips, connectors, junction boxes, etc.
- Eliminates issues with wire connection integrity on moving equipment
- Visual feedback with LEDs: actuation, low battery, RF signal loss, and pairing



INDUSTRY STANDARD
VALUE • RELIABLE

Features and Benefits

WIRELESS DESIGN

Radio (license-free and global): WPAN 802.15.4, 2.4 GHz, point-to-point to deliver **reliable, flexible, and secure wireless transmission**. Enables operator control or indication (i.e., push button or limit switch) from remote locations where wiring is too costly or is not possible (up to 305 m [1000 ft].

VISUAL FEEDBACK

Multiple function LEDs on the front panel provide status indicators for actuation, low battery, RF signal loss, and pairing.

Range of 305 m [1000 ft]

REMOTE MONITORING

License-free RF wireless protocol standards (IEEE 802.15.4) allow for remote monitoring of processes and equipment. **Designed for global availability**, the WDRR offers a wide variety of Limitless™ inputs with simple and universal PLC connections.

Reduced installation and maintenance

SIGNAL STRENGTH

With direct or remote-mount antenna options for space and/or signal transmission optimization, the WDRR receiver can **monitor up to 14 Limitless™ inputs** on a single device.

RECONFIGURABLE

Able to reconfigure multiple inputs to allow for adding, subtracting, or relocating of Limitless™ inputs. **Eliminates issues with wire connection integrity** on moving equipment.

REDUCES COSTS

Reduces installation/maintenance costs with no wires, conduit, strain relief, clips, connectors, connection boxes, etc.

RUGGED THERMOPLASTIC (ABS) HOUSING

Sealed to IP20 and designed with a combination of **din-rail or through-hole mount** for installation ease. Cage clamp screw terminal blocks deliver **finger protection** when installing input/output connections.

Potential Applications

with elements of control, notification, and/or setup







INDUSTRIAL

- Valve position
- Lifts
- Material handling
- Presses
- Conveyors
- Remote or temporary equipment
- Grain diverters or gates
- Door or gate position
- Hose attachment verification
- Specialty machines

TRANSPORTATION

- Construction/Ag machines
- Crane boom/jib/skew position
- Movable machinery

Limitless™ Wireless Din-Rail Receiver

Table 1. Specifications

Characteristic	Parameter
Series name	WDRR Series
Product type	Limitless™ wireless din-rail receiver
Housing material	Flame retardant ABS (Acrylonitrile Butadiene Styrene)
Housing type	Din-rail or through-hole mount design, 3,5 mm [#6] machine screws
Housing size	88,9 mm H x 152,4 mm W x 38,1 mm D [3.5 in H x 6 in W x 1.5 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 COFETEL: Mexico ETSI, CE mark: European countries ACMA, C-TICK: Australia WPC: India KCC: Korea ANATEL: Brazil IDA: Singapore SRRC: China
Antenna connection/type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication	Configuration LEDs: green, yellow, red Output LEDs: green, yellow, red RF signal LEDs: blue
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 28 Vdc
Supply current	500 mA max.
Output type	selectable NPN-type current sinking or totem pole (current sinking); PNP-type current sourcing or PNP totem pole (current sourcing); selectable normally open/closed
Output voltage	supply voltage minus 1.4 Vdc
Load current	10 mA max.
Leakage current	100 µA max.
Voltage drop	2.0 Vdc max. @ max. load @ 25 °C [77 °F]
Reverse polarity protection	Yes
Sealing	IP20
EMC	Latest applicable standards: EN 300 328, V1.7.1; EN 61326-1 (2006); EN 301 489-1, V1.8.1; EN 301 489-17, V2.1.1
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, 58-500 Hz @ 5g
Operating temperature	-20 °C to 85 °C [-4 °F to 185 °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

CAUTION

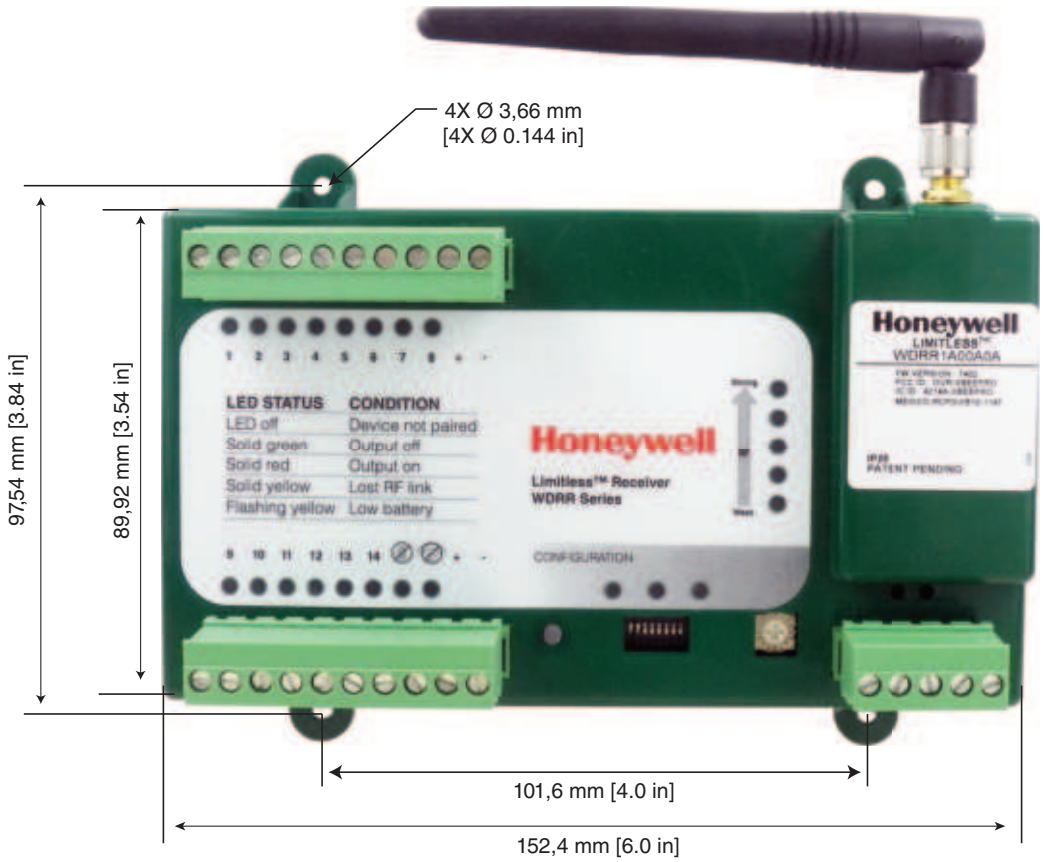
The WDRR receiver offers optimal performance when paired with Limitless™ inputs that have a firmware version of 7170 or a greater number (i.e., FW7170 will be printed on the Limitless™ input label). If the Limitless™ input is paired with older firmware (FW7170 or a lesser number), the WDRR may exhibit delayed responses under simultaneous operation.

WDRR Series

WDRR SERIES ORDER GUIDE (STANDARD LISTINGS)

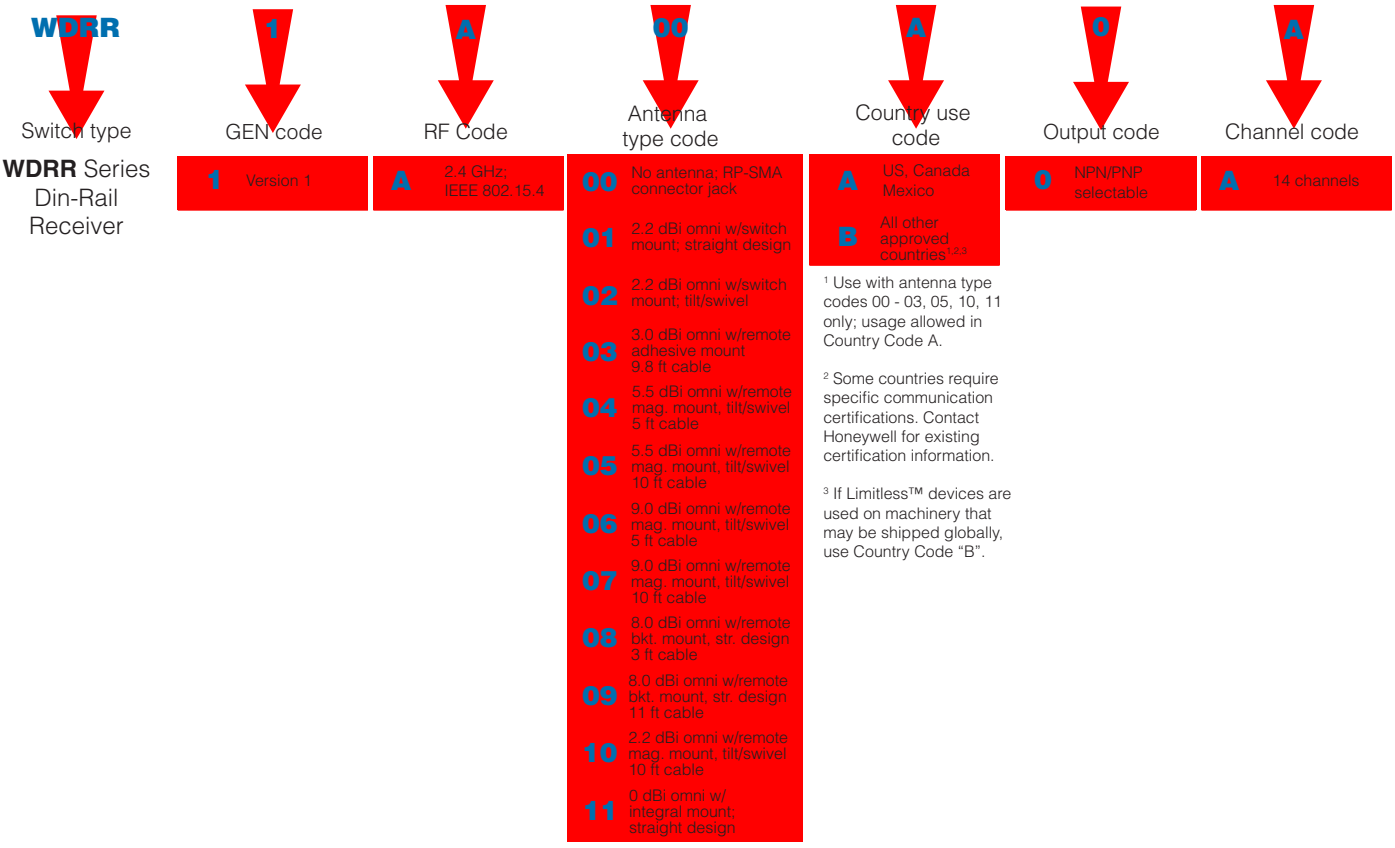
Part number	Description
WDRR1A00A0A	Limitless™ Din-Rail receiver, no antenna, US/Canada/Mexico
WDRR1A02A0A	Limitless™ Din-Rail receiver, 2.2 dBi omni antenna with integral mount (tilt/swivel), US/Canada/Mexico
WDRR1A03A0A	Limitless™ Din-Rail receiver, 3.0 dBi omni antenna with remote adhesive mounting with 9.8 ft cable, US/Canada/Mexico
WDRR1A05A0A	Limitless™ Din-Rail receiver, 5.5 dBi omni antenna (tilt/swivel design) with remote magnetic mounting with 10 ft cable, US/Canada/Mexico
WDRR1A00B0A	Limitless™ Din-Rail receiver, no antenna, for use in all other approved countries
WDRR1A02B0A	Limitless™ Din-Rail receiver, 2.2 dBi omni antenna with integral mount (tilt/swivel), for all other approved countries
WDRR1A03B0A	Limitless™ Din-Rail receiver, 3.0 dBi omni antenna with remote adhesive mounting with 9.8 ft cable, for use in all other approved countries
WDRR1A05B0A	Limitless™ Din-Rail receiver, 5.5 dBi omni antenna (tilt/swivel design) with remote magnetic mounting with 10 ft cable, for use in all other approved countries

PRODUCT DIMENSIONS



Limitless™ Wireless Din-Rail Receiver

PRODUCT NOMENCLATURE



[1] Use with antenna type codes 00 - 03, 05, 10, 11 only; usage allowed in Country Code A.

[2] Some countries require specific communication certifications. Contact Honeywell for existing certification information.

[3] If Limitless™ devices are used on machinery that may be shipped globally, use Country Code “B”.

WDRR Series

ANTENNA OPTIONS



WAN07RSP
straight design,
direct mount
connector



WAN01RSP
straight design,
direct mount
connector



WAN02RSP
tilt & swivel design,
direct mount
connector



WAN05RSP &
WAMM100RSP-005
T/S, magnetic mount



WAN03RSP
flat design,
adhesive mount



WAN06RNJ
straight design,
bracket mount



WPB1
WPMM mounting
bracket



WAN10RSP
straight mobile
antenna,
magnetic mount



WAN11RSP
low-profile dome antenna,
through-hole screw mount



WAN09RSP
low-profile mobile antenna,
magnetic mount

Limitless™ Wireless Din-Rail Receiver

This Honeywell datasheet supports the following Limitless WDRR Series Listings

WDRR1A00A0A
WDRR1A00B0A
WDRR1A01A0A
WDRR1A01B0A
WDRR1A02A0A
WDRR1A02B0A
WDRR1A03A0A
WDRR1A03B0A
WDRR1A04A0A
WDRR1A05A0A
WDRR1A05B0A
WDRR1A06A0A
WDRR1A07A0A
WDRR1A08A0A
WDRR1A09A0A
WDRR1A10A0A
WDRR1A10B0A
WDRR1A11A0A
WDRR1A11B0A

ADDITIONAL INFORMATION

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)
  - 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
  - Sensors and Switches Used in Valve Actuators and Valve Positioners
  - Sensors and Switches for Industrial Manual Process Valves
  - Sensors and Switches in Mobile Cranes

⚠WARNING
PERSONAL INJURY

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.

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

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell website, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office.

To learn more about Honeywell's sensing and control products, call **+1-815-235-6847 or 1-800-537-6945**, visit **sensing.honeywell.com,** or e-mail inquiries to **info.sc@honeywell.com**

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