Limitless™ Din-Rail Receiver

WDRR Series



DESCRIPTION

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 then communicates the Limitless™ digital input status (i.e. switch open or closed) to a PLC (programmable logic controller) or any 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 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.

FEATURES

Wireless/Electrical design

- Selectable NPN or PNP-type output
- Configurable normally open or normally closed output for up to 14 Limitless™ inputs
- Reliable, flexible, and secure wireless transmission
- Radio (license-free and global): WPAN 802.15.4, 2.4 GHz, point-to-point
- Up to 1000 ft [305 m] communication range
- FCC 15, IC, ACMA & ETSI, COFETEL, and WPC
- Field pairing allows for rapid adding or subtracting inputs for quick configuration
- 10 Vdc to 28 Vdc supply
- Diagnostic functions including RF and low battery

Mechanical design

- Din-Rail or screw mount via tabs
- Cage clamp screw terminal blocks for input/output connections
- Sealed to IP20
- Multiple LED function/status indicators
- LED RF signal strength indication for up to 14 Limitless™ inputs
- Direct or remote mount antenna options

BENEFITS

- Enables presence/absence detection in remote parts of application/machinery, where wiring is costly or not feasible
- Ability to reconfigure and network multiple inputs, 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™ inputs, conduit, strain relief, clips, connectors, connection boxes, etc.
- Eliminates issues with wire connection integrity on moving equipment
- LEDs indicate change of status, low battery, RF signal loss, pairing function, & diagnostic functions
- Communication security per the IEEE 802.15.4 standard (16-bit PAN ID, 16-bit address and 128-bit security key)

POTENTIAL APPLICATIONS

- Valve position
- Crane boom/jib/skew position
- Lifts
- Material handling
- Presses
- Construction/Ag machines
- Conveyors
- Remote or temporary equipment
- Movable machinery
- Grain diverters or flaps
- Door position
- Hose attachment verification
- Specialty machines

Limitless™ Din-Rail Receiver

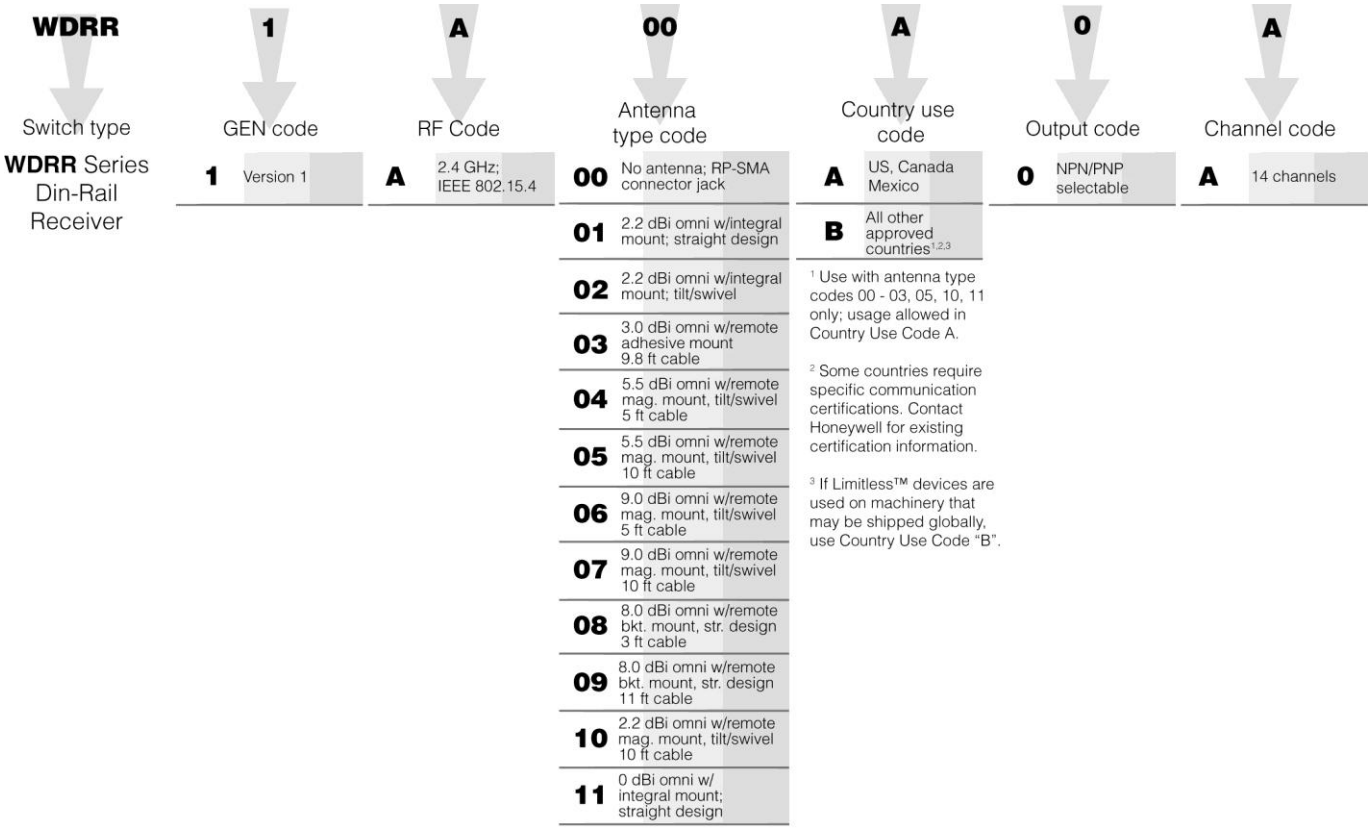
Description	Parameter
Series name	WDRR
Product type	Limitless™ DIN Rail Receiver
Housing material	Flame retardant ABS (Acrylonitrile Butadiene Styrene)
Housing type	DIN or screw mount design
Housing size	88,9 mm H x 152,4 mm W x 38,1 mm D [3.5 in H x 6 in W x 1.5 in D] ref.
Radio type	WPAN 802.15.4, 2.4G Hz
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
Antenna connection/type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication	Configuration LEDs: green, amber, red Output LEDs: green, amber, 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
Leakage current	100 μA
Voltage drop	2.0 Vdc max. @ max. load @ 25 °C [77 °F]
Reverse polarity protection	Yes
Short circuit 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, 10g, 6mS, 3 axis
Vibration	IEC 60068-2-6; 10-500Hz w/ .35 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.

NOMENCLATURE TREE (Not all configurations are immediately available.)

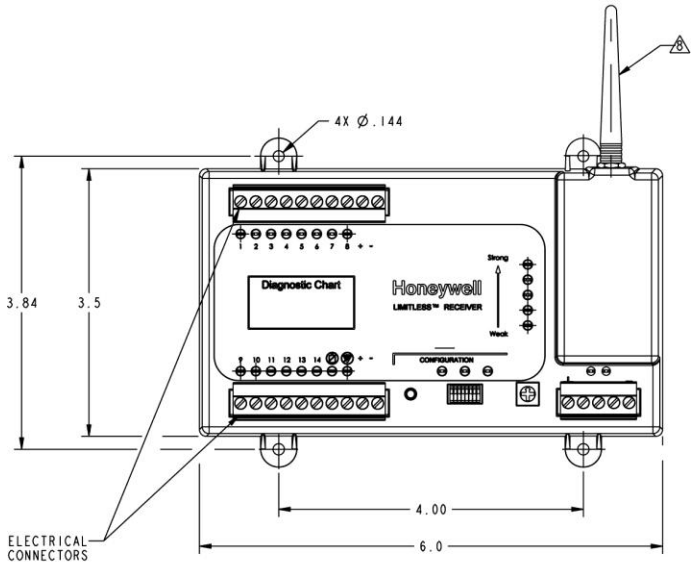


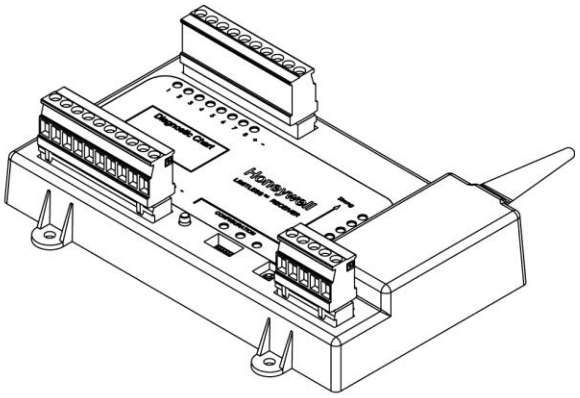
WDRR STANDARD LISTINGS

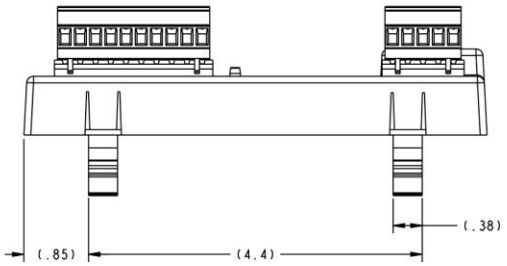
Part Number	Description
WDRR1A00A0A	Limitless™ Din-Rail receiver, no antenna, US/Canada/Mexico
WDRR1A02A0A	Limitless™ Din-Rail receiver, 2.2 dBi omni antenna with integral mount (tilt/swivel), US/Canada/Mexico
WDRR1A03A0A	Limitless™ Din-Rail receiver, 3.0 dBi omni antenna with remote adhesive mounting 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
WDRR1B00A0A	Limitless™ Din-Rail receiver, no antenna, for use in all other approved countries
WDRR1B02A0A	Limitless™ Din-Rail receiver, 2.2 dBi omni antenna with integral mount (tilt/swivel), for all other approved countries
WDRR1B03A0A	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
WDRR1B05A0A	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

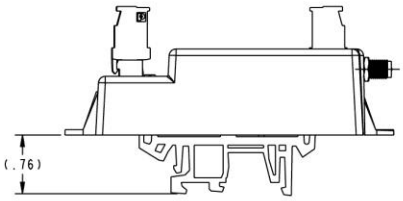
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DIMENSIONS









ANTENNA ACCESSORIES

Limitless™ Antennas

WAN01RSP	WAN02RSP	WAN03RSP	WAN04RSP	WAN07RSP
Straight wireless antenna with 2.2 dBi gain, reverse polarity SMA plug, connector mount (RP-SMA)	Tilt/swivel wireless antenna with 2.2 dBi gain, reverse polarity SMA plug, connector mount (RP-SMA)	Flat wireless antenna with 3 dBi gain, reverse polarity SMA plug, adhesive mount with 3,05 m [10 ft] cable	Tilt/swivel wireless antenna with 5.5 dBi gain, reverse polarity SMA plug, connector mount (RP-SMA)	Straight wireless antenna with 0 dBi gain, reverse polarity SMA plug, connector mount 0 dBi straight w/RP-SMA plug
				

WAN06RNJ	WAN05RSP	WAN08RSP	WAN10RSP
Straight wireless antenna with 8 dBi gain, reverse polarity N jack, bracket mount with 0,31 m [1 ft] cable	Tilt/swivel wireless antenna with 9 dBi gain, reverse polarity SMA plug, connector mount (RP-SMA)	Right angle wireless antenna with 0 dBi gain, reverse polarity SMA plug, connector mount 0 dBi straight w/RP-SMA plug	Straight antenna with 5.0 dBi gain, reverse polarity SMA plug, mobile magnetic mount with 4,57 m [15 ft] cable
			

WAN09RSP	WAN11RSP
Low profile straight antenna with 3.0 dBi gain, reverse polarity SMA plug, mobile magnetic mount with 4,57 m [15 ft] cable	Low profile dome antenna with 4.0 dBi gain, reverse polarity SMA plug, mobile thru-hole screw mount with 3 m [9.8 ft] cable
	

Limitless™ Din-Rail Receiver

Limitless™ Cable Accessories
WCA200RNPRSP-002/010 Cable Assembly



Limitless™ Panel Mount Accessories
WAMM100RSP-005/010 Magnetic Antenna Mount



STANDARD CABLE ACCESSORIES

Part Number	Description
WCA200RNPRSP-002	200 Series coax cable assembly, reverse polarity N plug, reverse polarity SMA plug, 2 ft of cable
WCA200RNPRSP-010	200 Series coax cable assembly, reverse polarity N plug, reverse polarity SMA plug, 10 ft of cable
WAMM100RSP-005	Magnetic antenna mounting, 100 Series coax cable, reverse polarity SMA plug with 5 ft of cable
WAMM100RSP-010	Magnetic antenna mounting, 100 Series coax cable, reverse polarity SMA plug with 10 ft of cable

⚠ 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.

⚠ WARNING

Honeywell does not recommend using devices for critical control applications where there is, or may be, a single point of failure or where single points of failure may result in an unsafe condition. It is up to the end-user to weigh the risks and benefits to determine if the products are appropriate for the application based on security, safety and performance. Additionally, it is up to the end-user to ensure that the control strategy results in a safe operating condition if any crucial segment of the control solution fails.

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 web site, 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.

SALES AND SERVICE

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 or:

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