

Wireless Heavy-Duty Limit Switch with Side Eyelet Head (WLS Series)



Limitless™ Switch

DESCRIPTION

The new Limitless™ product line combines the best of MICRO SWITCH™ heavy-duty limit switches with state-of-the-art wireless technology. Wireless-enabled limit switches can now be used for position sensing and presence/absence detection for an endless number of applications.

FEATURES

Wireless design

- Radio (license-free and global): WPAN 802.15.4, 2.4 GHz, point-to-point
- FCC 15, IC, ACMA, ETSI, COFETEL, WPC, & IDA
- Up to 1000 ft [305 m] line of sight communication range when used with a Limitless™ wireless monitor or receiver module (sold separately)
- Reliable, flexible, and secure wireless transmission
- Long-life standard replaceable battery
- Direct or remote mount antenna options

Mechanical design

- IP67; NEMA 1, 3, 4, 12, 13
- Unique all-metal drive train
- Zinc head and body are phosphate treated and epoxy finished
- Captive head and body screws

The Limitless™ Series is especially beneficial for remote monitoring applications where wiring or wire maintenance is not physically possible or economically feasible. Combining this greater flexibility with proven harsh duty packaging can result in increased efficiencies and improved safety for machines, equipment, OEMs, and operators.

BENEFITS

- Enables presence/absence detection in remote parts of application/machinery, where wiring is an issue or not feasible
- Ability to reconfigure and network multiple switches, or point-to-point with personalized addresses, which allows for adding, subtracting or relocating Limitless™ switches easily
- Reduces installation/maintenance costs with no wires, conduit, strain relief, clips, connectors, or connection boxes
- Eliminates issues with wire connection integrity on moving equipment
Consumes ultra-low power to prolong battery life

APPLICATIONS

- Derrick trucks
- Cranes
- Lifts
- Ag/construction equipment
- Door actuation (up/down) switch
- Industrial machines

Limitless™ Series

Description	Parameter
Series name	WLS Series
Product type	Limitless™ Heavy-Duty Limit Switches
Operating characteristics	Operating force: 7 lb approx.
Actuator	Eyelet-pull operating head
Housing material	Zinc head and body are phosphate treated and epoxy finished
Housing type	WLS
Radio type	WPAN 802.15.4; 2.4GHz
Communication agency approvals/certificates*	<ul style="list-style-type: none"> - FCC 15.247: United States of America - IC RSS 210: Canada - ETSI, CE mark: European countries - ACMA, C-TICK: Australia, New Zealand - IDA: Singapore - COFETEL: Mexico - WPC: India
Antenna type	Direct or remote mount antenna options; omni-directional
Signal range	In excess of 305 m [1000 ft] line-of-sight communication between Limitless™ switches and monitor/receiver when using 2.2 dBi integral antenna
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size (Est. life >1yr) Manufactured by Uniwell, part number DEV-10-0009; or Green Energy, part number ER14335M
Sealing	IP67; NEMA 1, 3, 4, 12, 13
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; 10-500Hz w/ 0,35 mm peak-to-peak, 58-500 Hz- 5g
Operating temperature	-40 °C to 85 °C [-40 °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.

Wireless Heavy-Duty Limit Switch with Side Eyelet Head

NOMENCLATURE TREES

Limitless™ WLS Side Eyelet Head Switch Nomenclature

WLS	1	A	00	A	A	—	3	POI
Switch type	Gen Code	RF Code	Antenna type code	Country use code	Operating head code		Modification code	Specials
WLS Series Wireless	1 Version 1	A 2.4 GHz; IEEE 802.15.4	00 No antenna; RP-SMA connector jack	A US, Canada, Mexico	Q See specials		Head assembled with actuator towards nameplate surface	POI Eyelet pull operating head (low force, 7 lb ret.)
			01 2.2 dBi omni w/switch mount; straight design	B All other approved countries ^{1,2,3}		3 Head assembled with actuator to right side		
			02 2.2 dBi omni w/switch mount; tilt/swivel	¹ Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also allowed in Country Code A.		4 Head assembled with actuator to left side		
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable	² Some countries require specific communication certifications. Contact Honeywell for existing certification information.		5 Head assembled with actuator to mounting surface		
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable	³ If Limitless devices are used on machinery that may shipped globally, use country code "B".				
			05 5.5 dBi omni w/remote mag. mount, tilt/swivel 10ft cable					
			06 9.0 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable					
			07 9.0 dBi omni w/remote mag. mount, tilt/swivel 10ft cable					
			08 8.0 dBi omni w/remote bkt. mount, str. design 3 ft cable					
			09 8.0 dBi omni w/remote bkt. mount, str. design 11 ft cable					
			10 2.2 dBi omni w/remote mag. mount, tilt/swivel 10 ft cable					
			11 0 dBi omni w/switch mount, straight design					

Limitless™ WPMM Monitor Nomenclature

WPMM	1	A	00	A
Switch type	Gen Code	RF Code	Antenna type code	Country use code
WPMM Series Monitor	1 Version 1	A 2.4 GHz; IEEE 802.15.4	00 No antenna; RP-SMA connector jack	A US, Canada, Mexico
			01 2.2 dBi omni w/switch mount; straight design	B All other approved countries ^{1,2,3}
			02 2.2 dBi omni w/switch mount; tilt/swivel	¹ Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also allowed in Country Code A.
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable	² Some countries require specific communication certifications. Contact Honeywell for existing certification information.
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable	³ If Limitless devices are used on machinery that may shipped globally, use country code "B".
			05 5.5 dBi omni w/remote mag. mount, tilt/swivel 10ft cable	
			06 9.0 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable	
			07 9.0 dBi omni w/remote mag. mount, tilt/swivel 10ft cable	
			08 8.0 dBi omni w/remote bkt. mount, str. design 3 ft cable	
			09 8.0 dBi omni w/remote bkt. mount, str. design 11 ft cable	
			10 2.2 dBi omni w/remote mag. mount, tilt/swivel 10 ft cable	

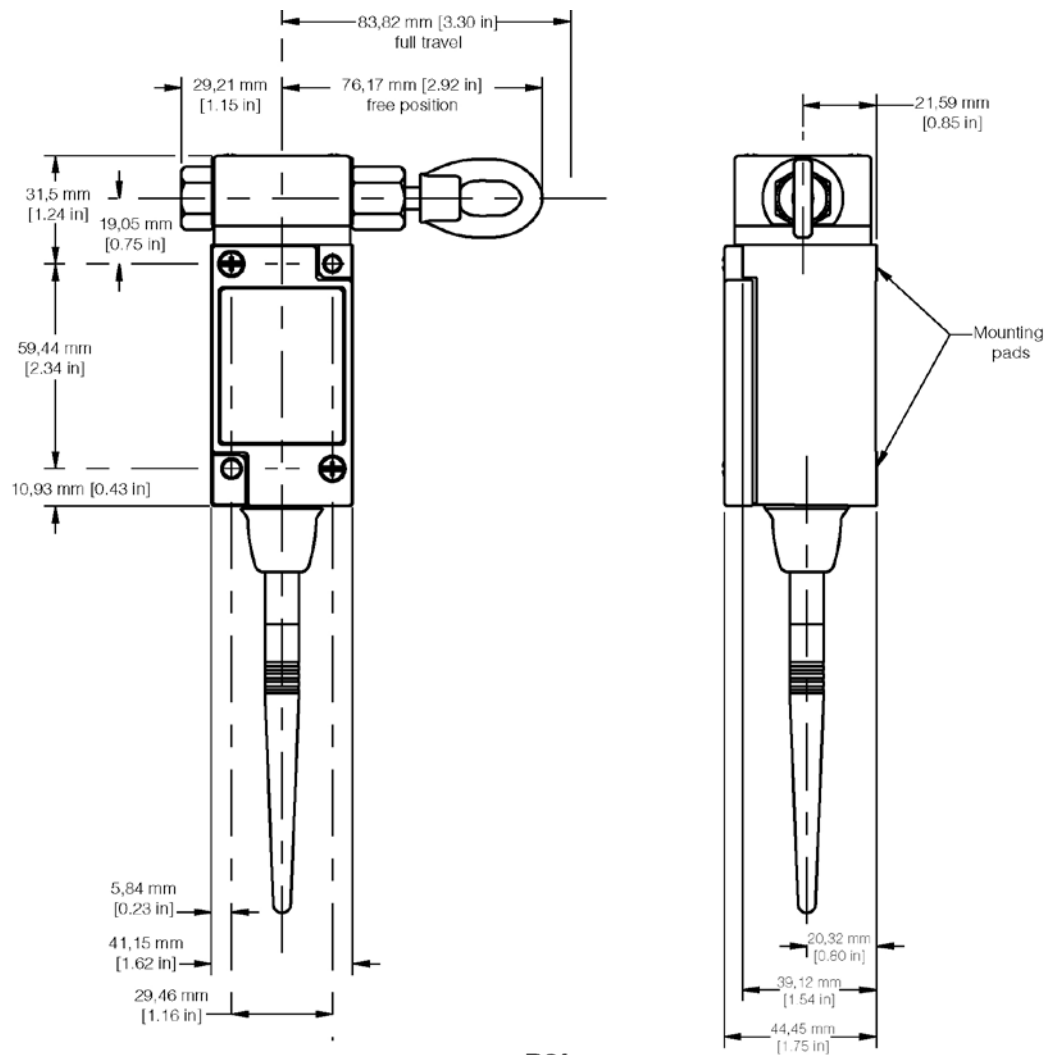
Limitless™ Series

Limitless™ WDRR Din-Rail Receiver Nomenclature

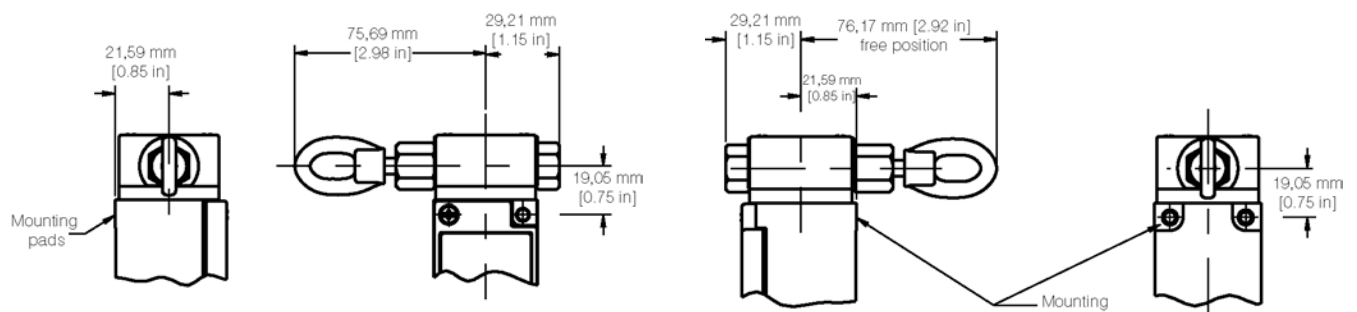
WDRR	1	A	00	A	0	A
Switch type	GEN code	RF Code	Antenna type code	Country use code	Output code	Channel code
WDRR Series Din-Rail Receiver	1 Version 1	A 2.4 GHz; IEEE 802.15.4	00 No antenna; RP-SMA connector jack	A US, Canada Mexico	0 NPN/PNP selectable	A 14 channels
			01 2.2 dBi omni w/switch mount; straight design	B All other approved countries ^{1,2,3}		
			02 2.2 dBi omni w/switch mount; tilt/swivel	¹ Use with antenna type codes 00 - 03, 05, 10, 11 only; usage allowed in Country Code A.		
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable	² Some countries require specific communication certifications. Contact Honeywell for existing certification information.		
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable	³ If Limitless™ devices are used on machinery that may be shipped globally, use country code "B".		
			05 5.5 dBi omni w/remote mag. mount, tilt/swivel 10 ft cable			
			06 9.0 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable			
			07 9.0 dBi omni w/remote mag. mount, tilt/swivel 10 ft cable			
			08 8.0 dBi omni w/remote bkt. mount, str. design 3 ft cable			
			09 8.0 dBi omni w/remote bkt. mount, str. design 11 ft cable			
			10 2.2 dBi omni w/remote mag. mount, tilt/swivel 10 ft cable			

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DIMENSIONS



**P01
WITH EYELET PULL OPERATING HEAD
ASSEMBLED PER MODIFICATION CODE 3**



**P01
WITH EYELET PULL OPERATING HEAD
ASSEMBLED PER MODIFICATION CODE 4**

**P01
WITH EYELET PULL OPERATING HEAD
ASSEMBLED PER MODIFICATION CODE 5**

Limitless™ Series

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			
				

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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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