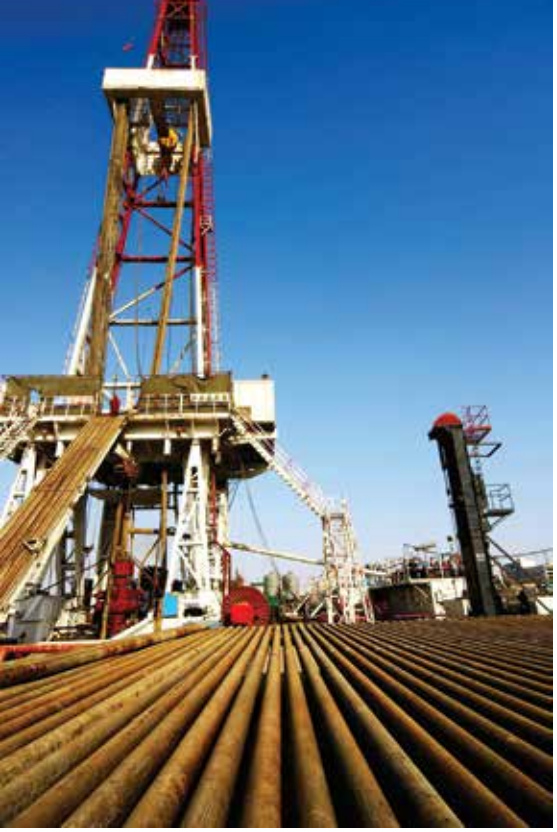
Honeywell | Safety and Productivity Solutions

Product Range Guide

Limitless™ Wireless Solutions

Honeywell's Wireless Solutions are based on a simple idea... applying the power of cutting edge wireless technology with the switching and sensing expertise of Honeywell.

Honeywell's Limitless™ Series of switches and sensors frees applications from the restrictions of wired installations while offering increased reliability and reduced lifetime cost. Compared to traditional wired solutions, Honeywell's Limitless™ platform offers greater flexibility in terms of remote actuation, faster response, flexibility, and a minimized costs over wired options. The simplicity of the system means no wiring, conduits, clips, or connectors to purchase or install, which increase system reliability, easier installation, and eliminates errors.



Honeywell's Limitless™ Solutions deliver more...

- More distance means more **location flexibility**

  Limitless™ devices have up to a 305 m [1000 ft] line-of-sight range without using repeaters, depending upon the antenna type

- More durability means more **environment options** (rain, sleet, snow, dust, harsh environments, etc.)

  Limitless™ Series' offerings include versions with all-metal body and drive train, low-temperature capability, hazardous-area approvals, and/or enclosure with an anti-corrosion epoxy coating

- More savings means **minimized retrofit costs,** plumbing costs, or electrician costs

  Limitless™ switches can greatly minimize the costs of wiring, installation, and maintenance for all devices and equipment

- More security means your **critical data is safeguarded**

  Limitless™ products conform to the international IEEE 802.15.4 standard and feature 16-bit address and 128-bit AES security keys

- More flexibility means you can **adapt your footprint at any time** as needed

  Because you are no longer tethered by wire, you can reconfigure and network multiple switches, easily adding, subtracting, or relocating Limitless™ switches

- More diagnostics means **enhanced incident reporting** and industry compliance

  Provides time stamping and shower triggering notification to aid in OSHA-required checks, certifications and requirements; Limitless™ user-friendly software provides information on battery health, and signal strength for each specific input

- More standard options means easy maintenance with **generally available replacement options**

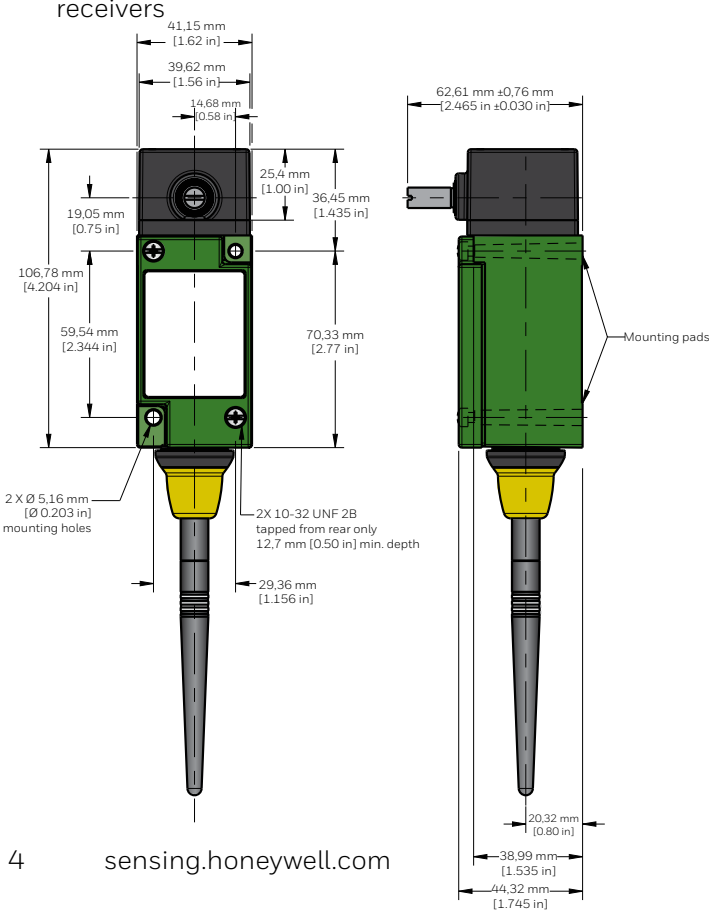
  - Limitless™ products use a global, license-free, 802.15.4 radio and commercially available battery for easy replacement anywhere in the world

Differentiator: Limitless™ WLS switches feature the EN50041 characteristics, IP67/IP68 sealing, and are well suited for heavy-duty applications where the switch's zinc head and body can stand up to harsh environmental contaminants.

The WLS Series offers a broad range of actuator styles available within the product line. Actuator heads on most models can be rotated in 90° increments to allow for flexibility in applications.

Key Features:

- Operating head rotary tested in excess of 50 million cycles for enhanced reliability
- Diaphragm seal between head and body cavity provides sealing protection
- Twin shaft seals (rotary) protect head and internal components from corrosion and debris
- Sintered bronze bearings provide extended mechanical life
- Works with Limitless™ WMPR, WDRR, and WPMM receivers



WLS Series

Product type	Limitless™ heavy-duty limit switches
Availability	Global, license-free RF bands*
Actuator type	Side rotary, top plunger, side plunger, top roller plunger, top adjustable plunger, wobble stick
Housing material	Zinc head and body are phosphate treated and epoxy finished
Housing type	WLS (EN 50041)
Radio	WPAN 802.15.4; 2.4 GHz point-to-point; specific country communication agency approval required
Antenna type	Direct or remote-mount antenna options; omni-directional
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size manufactured by Green Energy p/n ER14335M *WBT3 shall be used with -HSV Specials Code*
Sealing	IP67, IP68; NEMA 1, 3, 4, 6, 6P, 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, 50 g, 6 mS, 3 axis *For -HSV specials Code: 100 g, 6 mS* *MIL-STD-202 Shock Method 213, Test Condition I*
Vibration	IEC 60068-2-6; 10 Hz to 58 Hz w/ 0,35 mm peak-to-peak, 58 Hz to 500 Hz, 5 g *For -HSV specials Code: 20 g, 10 Hz to 2000 Hz.* *MIL-STD-202, Vibration Method 204A; Test Condition D*
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F] -30 °C to 85 °C [-22 °F to 185 °F] (wobble sticks)
Agency approvals and standards	FCC 15.247; Industry Canada RSS 210; ETSI, CE mark; ACMA, C-Tick mark; COFETEL; IDA; ANATEL; SRRC; KCC; WPC

Applications

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

WLS Series Nomenclature

WLS | **1** | **A** | **00** | **A** | **A** | **1** | **3** – | **HSV**

Switch type	Gen Code	RF Code	Antenna type code	Country use code	Operating head code	Actuator 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	**A** Side rotary, momentary	See WLS actuator code table for details.	Not applicable	**HSV** High shock & vibration
			01 2.2 dBi omni w/switch mount; straight design	**B** All other approved countries[1, 2, 3]	**C** Top plunger, plain	Actuators for operating head code "A" only, insert actuator code from table below.	**3** Head assembled with actuator to right side	HSV code is available with listing WLS1A11AA1A only. The product listing becomes WLS1A11AA1A-HSV
			02 2.2 dBi omni w/switch mount; tilt/swivel		**D** Top plunger, roller	OR	**4** Head assembled with actuator to left side	
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable		**E** Side plunger, momentary	Order actuator catalog listing separately for reduced delivery time.	**5** Head assembled with actuator to mounting surface	
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable		**J** Wobble stick		**6** Roller perpendicular to mounting surface	
			05 5.5 dBi omni w/remote mag. mount, tilt/swivel 10ft cable		**N** Side rotary, maintained			
			06 9.0 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable		**V** Top plunger, adjustable			
			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					

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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 shipped globally, use country code "B".

NOTE: Not all combinations available. For further information on establishing any of the above listings, please contact Honeywell Sensing and Productivity Solutions or your local sales office.

EXAMPLE: WLS1A01AA1A (ordered with lever included)
Limitless™ heavy-duty limit switch, 2.2 dBi straight antenna, momentary, standard lever with nylon roller

EXAMPLE: WLS1A01AA (order lever separately)
Limitless™ heavy-duty limit switch, 2.2 dBi straight antenna, momentary. LSZ51A (standard lever with nylon roller) ordered separately,

WLS Series Actuator Code Table

Code	Catalog Listing	Material	Roller Dia. (in)	Roller Width (in)	Roller Mounting
Fixed 1.5 inch radius					
1		Rollerless	n/a	n/a	n/a
1A	LSZ51A	Nylon	0.75	0.25	Front
1B	LSZ51B	Steel	0.75	0.25	Front
1C	LSZ51C	Nylon	0.75	0.25	Back
1D	LSZ51D	Steel	0.75	0.25	Back
1F	LSZ51F	Nylon	1.0	0.520	Front
1G	LSZ51G	Nylon	1.5	0.25	Front
1J	LSZ51J	Nylon	1.0	0.520	Back
1L	LSZ51L	Ball bearing	0.75	0.25	Back
1M	LSZ51M	Nylon	0.75	1.25	Back
1N	LSZ51N	Steel	0.75	1.25	Front
1P	LSZ51P	Nylon	0.75	0.50	Front
Adjustable 1.5 in to 3.5 in radius					
2		Rollerless	n/a	n/a	n/a
2A	LSZ52A	Nylon	0.75	0.25	Back
2B	LSZ52B	Steel	0.75	0.25	Back
2C	LSZ52C	Nylon	0.75	0.25	Front
2D	LSZ52D	Steel	0.75	0.25	Front
2E	LSZ52E	Nylon	0.75	1.30	Front
2J	LSZ52J	Nylon	1.0	0.50	Front
2K	LSZ52K	Nylon	1.5	0.25	Front
2L	LSZ52L	Ball bearing	0.75	0.25	Front
2M	LSZ52M	Nylon	2.0	0.25	Front
2N	LSZ52N	Nylon	0.75	0.50	Front
Yoke – 1.5 in radius					
3A	LSZ53A	Nylon	0.75	0.25	Front/Back
3B	LSZ53B	Steel	0.75	0.25	Front/Back
3D	LSZ53D	Steel	0.75	0.25	Front/Front

Code	Catalog Listing	Material	Roller Dia. (in)	Roller Width (in)	Roller Mounting
Yoke – 1.5 in radius , continued					
3E	LSZ53E	Nylon	0.75	0.25	Back/Front
3M	LSZ53M	Nylon	0.75	1.25	Back/Front
3P	LSZ53P	Steel	0.75	0.25	Back/Back
3S	LSZ53S	Nylon	0.75	0.25	Back/Back
Rod					
4		Hub only	n/a	n/a	n/a
4M	LSZ54M	Alum, 5.5 in	n/a	n/a	n/a
4N	LSZ54N	Stainless, 13 in	n/a	n/a	n/a
4R	LSZ54R	Spring Wire, 12 in	n/a	n/a	n/a
4V	LSZ54V	Flex cable, 4.8 in	n/a	n/a	n/a
Offset – 1.5 in radius					
5		Rollerless	n/a	n/a	n/a
5A	LSZ55A	Nylon	0.75	0.25	Back
5B	LSZ55B	Steel	0.75	0.25	Back
5C	LSZ55C	Nylon	0.75	0.25	Front
5D	LSZ55D	Steel	0.75	0.25	Front
5E	LSZ55E	Nylon	0.75	0.50	Front
5K	LSZ55K	Nylon	1.5	0.25	Front
Wobble stick					
7A	LSZ1JGA	Delrin™ rod, 5.5	n/a	n/a	n/a
7M	LSZ1JGM	Spring wire, 13.0	n/a	n/a	n/a
7N	LSZ1JGN	Cable, 5.5 in.	n/a	n/a	n/a
Short fixed - 1.3 in radius					
9A	LSZ59A	Nylon	0.75	0.25	Front
9B	LSZ59B	Steel	0.75	0.25	Front
9C	LSZ59C	Nylon	0.75	0.25	Back
9D	LSZ59D	Steel	0.75	0.25	Back

Differentiator: Limitless™ WGLA switches feature EN50041 characteristics, IP67 sealing, and are well suited for applications requiring a basic wireless switch.

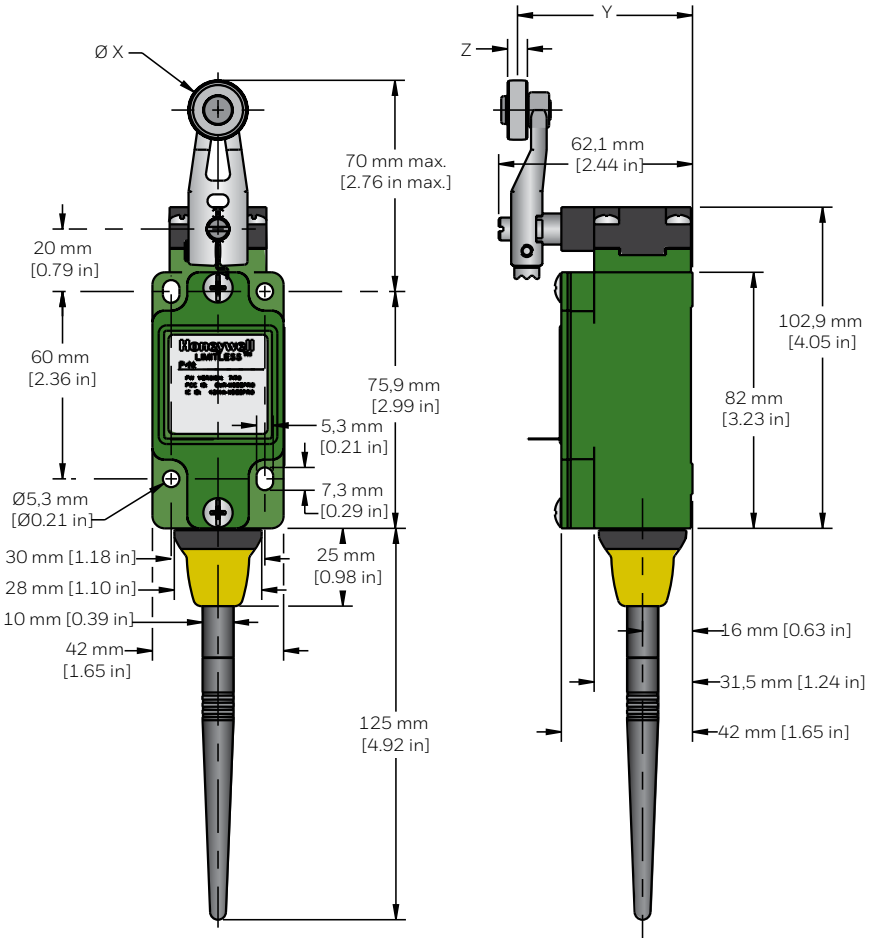
The WGLA Series features IP67, NEMA 1, 4, 12, and 13 sealing. It's sealed zinc die-cast and powder coated enclosure are designed to meet the common dimensions and characteristics defined in EN50041 for easy installation and compatibility with other products in the field.

Key Features:

- EN 50041 metal enclosure
- IP67; NEMA 1, 4, 12, 13
- Full complement of operating heads and levers
- Modular construction of components
- Standard replaceable battery with ultra-low power consumption
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

WGLA Series

Product type	Limitless™ global limit switches
Availability	Global, license-free RF bands*
Actuator type	Side rotary, top plunger, top roller, top roller lever
Housing material	Zinc head and body are phosphate treated and epoxy finished
Housing type	EN 50041
Radio	WPAN 802.15.4; 2.4 GHz point-to-point; specific country communication agency approval required
Antenna type	Direct or remote-mount antenna options; omni-directional
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size manufactured by Green Energy p/n ER14335M
Sealing	IP67; NEMA 1, 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 Hz to 500 Hz with 0,35 mm peak-to-peak, 58 Hz to 500 Hz, 5 g
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F] (side rotary and side plunger) -25 °C to 85 °C [-13 °F to 185 °F] (all other actuators)
Agency approvals and standards	FCC 15.247 Industry Canada RSS 210 ETSI, CE mark ACMA, C-Tick mark COFETEL IDA; ANATEL; SRRC; KCC; WPC



Lever	Roller Material	X Dim	Y Dim	Z Dim
GLZ51A	Nylon	19,1 mm [0.75 in]	55,9 mm [2.2 in]	6,4 mm [0.25 in]
GLZ51B	Steel	19,1 mm [0.75 in]	55,9 mm [2.2 in]	6,4 mm [0.25 in]
GLZ51T	Stainless Steel	19,1 mm [0.75 in]	56,8 mm [2.24 in]	8,8 mm [0.35 in]
GLZ51Y	Rubber	50,0 mm [1.97 in]	66,1 mm [2.60 in]	10,0 mm [0.39 in]

Applications

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

WGLA

Switch type

WGLA Series Wireless

1

Gen Code

1	Version 1

A

RF Code

A	2.4 GHz; IEEE 802.15.4

00

Antenna type code

00	No antenna; RP-SMA connector jack
01	2.2 dBi omni w/switch mount; straight design
02	2.2 dBi omni w/switch mount; tilt/swivel
03	3.0 dBi omni w/remote adhesive mount 9.8 ft cable
04	5.5 dBi omni w/remote mag. mount, tilt/swivel, 5 ft cable
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 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

A

Country use code

A	US, Canada, Mexico
B	All other approved countries[1, 2, 3]

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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 shipped globally, use country code "B".

A

Operating head code

A	Side rotary, momentary
B	Top pin plunger
C	Top roller plunger
D	Top roller lever

1

Lever code[4]

	Not applicable
1	Standard fixed length
2	Adjustable roller
3	Yoke roller
4	Adjustable rod
5	Offset

[4]Additional levers on page 8.

A

Roller code mm[in]

	Not applicable
A	19 x 6,35 [0.75 x 0.25] nylon
B	19 x 6,35 [0.75 x 0.25] steel
D	38,1 x 6,35 [1.5 x 0.25] nylon
J	200 mm aluminum adjustable rod
K	140 mm aluminum adjustable rod
N	318 mm stainless steel adjustable rod
W	40,0 x 12,7 [1.5 x 0.5] rubber
Y	50,9 x 12,7 [2.0 x 0.5] rubber
T	19 x 8,76 [0.75 x 0.345] stainless steel

3

Modification code

	Not applicable
3	Head assembled with actuator to right side
4	Head assembled with actuator to left side
5	Head assembled with actuator to mounting surface
6	Roller perpendicular to mounting surface

NOTE: Not all combinations available.
For further information on establishing any of the above listings, please contact Honeywell Sensing and Productivity Solutions or your local sales office.

Differentiator: Limitless™ WLS switches are designed with an eyelet-pull operating head for attaching a rope, cable or chain. The switch is sealed to IP67/68 to stand up to dirty, dusty industrial environments.

Limitless™ WLS Series Heavy Duty Wireless Limit Switches with an eyelet-pull operating head can be used to attach a rope, cable or chain. It also can be used on cranes as an anti-two-block (A2B) switch. Combining this greater flexibility with proven harsh-duty packaging can result in increased efficiencies and improved safety for machines, equipment, OEMs, and operators.

Key Features

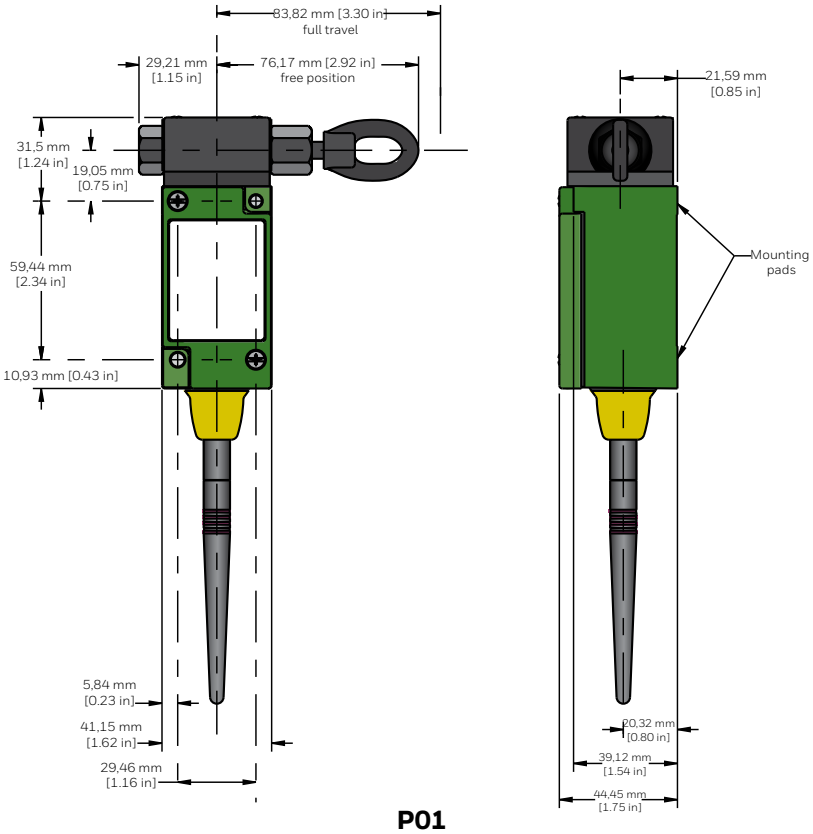
- Unique all-metal drive train
- Tested to 750 lb of pull force
- Zinc head and body are phosphate treated and epoxy finished
- Captive head and body screws
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

WLS Series with Eyelet Pull

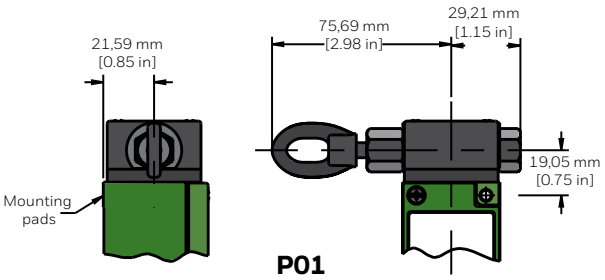
Product type	Limitless™ Wireless Heavy-Duty Limit Switches
Operating characteristics	Operating force: 7 lb approx. or 18 lb approx.
Actuator type	Eyelet-pull operating head (pull eyelet in-line with shaft to prevent damage)
Housing material	Zinc head and body are phosphate treated and epoxy finished
Housing type	WPAN 802.15.4; 2.4 GHz
Radio	RP-SMA jack for direct or remote-mount antenna options; omni-directional
Antenna type	Direct or remote-mount antenna options; omni-directional
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size (Est. life >1 year) Manufactured by Green Energy, part number ER14335M
Sealing	IP67/IP68; NEMA 1, 4, 6, 6P, 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- 5 g
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F]
Agency approvals and standards	FCC 15.247; IC RSS 210: Canada; ETSI, CE mark; ACMA, C-TICK; IDA; COFETEL; WPC; ANATEL; SRRC; KCC

Applications

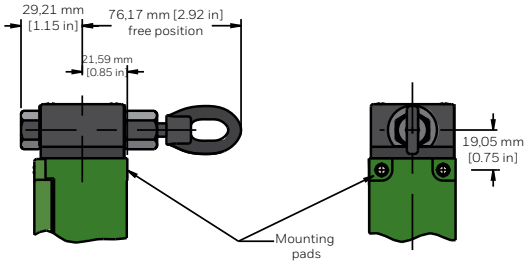
- Cranes: A2B (anti-two block) switch
- Rope-pull: door activation switch
- Cable pull for production stop applications (e.g., quality, broken tool, maintenance, out of parts); not applicable to human safety-stop applications



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

WLS Series with Eyelet Pull Nomenclature

WLS	1	A	00	A	A	–	3	PO1
Switch type	Gen Code	RF Code	Antenna type code	Country use code	Operating head code		Modification code	Specials

WLS Series Wireless

Gen Code	
1	Version 1

RF Code	
A	2.4 GHz; IEEE 802.15.4

Antenna type code	
00	No antenna; RP-SMA connector jack
01	2.2 dBi omni w/switch mount; straight design
02	2.2 dBi omni w/switch mount; tilt/swivel
03	3.0 dBi omni w/remote adhesive mount 9.8 ft cable
04	5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable
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
11	0 dBi omni w/ switch mount; straight design

Country use code	
A	US, Canada, Mexico
B	All other approved countries[1, 2, 3]

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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".

Operating head code	
Q	See specials

Modification code	
	Head assembled with actuator towards nameplate surface
3	Head assembled with actuator to right side
4	Head assembled with actuator to left side
5	Head assembled with actuator to mounting surface

Specials	
PO1	Eyelet-pull operating head (low force, 7 lb ref.)
PO2	Eyelet-pull operating head (high force, 18 lb ref.)

NOTE: Not all combinations available.
For further information on establishing any of the above listings, please contact Honeywell Sensing and Productivity Solutions or your local sales office.

Differentiator: Limitless™ WLS Series Single Switch Adapter is used to convert an electromechanical switch with low-energy contacts (i.e., gold) into a wireless switch.

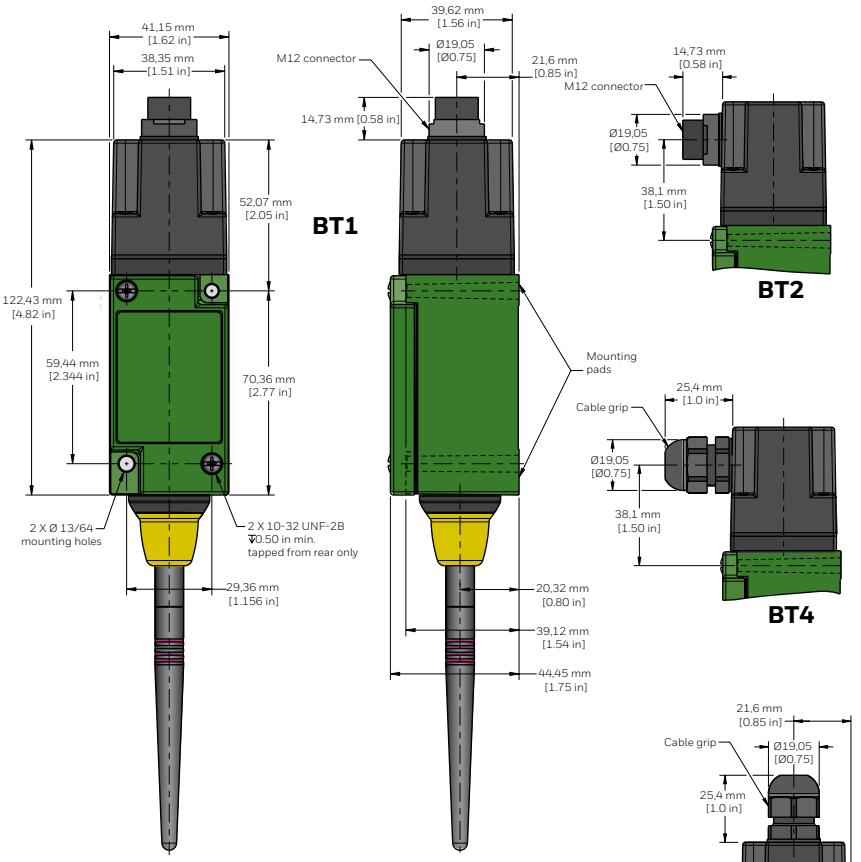
A user-supplied electromechanical switch is simply wired to the WLS Series Single Switch Adapter via the internal or external connections to then become a wireless-enabled switch for use with the Limitless™ WPMM or WDRR Series of monitors/receivers. The Limitless™ Single Switch Adapter can be used in a variety of industrial wireless limit switch applications such as reed, contact, pressure, door actuator, and more.

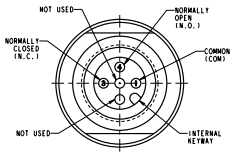
Key Features

- IP67; NEMA 1, 4, 12, 13
- 4-pin M12 micro-change receptacle, cable grip with internal connector wiring options
- Internal battery power
- Body phosphate treated and epoxy finished with a 30 % glass-filled PBT plastic head
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

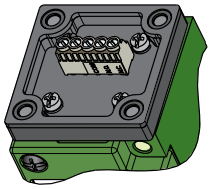
WLS Series Single Switch Adapter

Product type	Limitless™ Single Switch Adapter
Availability	Global, license-free bands
Housing material	Zinc body is phosphate treated and epoxy filled; 30 % glass-filled PBT plastic head
Radio	WPAN 802.15.4; 2.4 GHz
Antenna type	RP-SMA jack for direct or remote-mount antenna options; omni-directional standard
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size (Est. life >1 year) Manufactured by Green Energy, part number ER14335M
Sealing	IP67, NEMA 1, 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, 50 g, 6 mS, 3 axis
Vibration	IEC 60068-2-6; 10-500Hz w/ 0,35 mm peak-to-peak, 58-500 Hz- 10 g
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F]
Electromechanical switch	SPDT (Form C) switch with low-energy contacts (i.e., gold) capable of reliably controlling a 3.6 Vdc @ 30 mA electrical load to ensure proper operation
Electrical connections	• 4-pin M12 micro-connector with three-pole, single keyway female receptacle • Cable grip with internal screw connector Note: Maximum cable length 3 m [9.84 ft]
Communication Agency Approvals/Certificates*	FCC 15.247; IC RSS 210; COFETEL; ETSI, CE mark; ACMA, C-TICK; IDA; WPC





Micro Connector Pin Out BT1 and BT2



Cable Grip Pin Out BT3 and BT4

Applications

- Agricultural equipment
- Construction equipment
- Door actuation (up/down) switch
- Industrial machines
- Lifts
- Machine tools
- Packaging machinery
- Wireless warehouse operations
- Wireless electromechanical switch applications (i.e., pressure switch, reed switch, basic switch and/or limit switch)

WLS Series Single Switch Adapter Nomenclature

WLS	1	A	00	A	Q		BT1
Switch type	Gen Code	RF Code	Antenna Type Code	Country Use Code	Operating Head Code	Modification Code (BT2 & BT4 only)	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 cable grip/connector to label side	**BT1** Internal battery w/ micro-connector on top of head
			02 2.2 dBi omni w/switch mount; tilt/swivel	**B** All other approved countries[1, 2, 3]		**3** Head assembled with cable grip/connector to right side	**BT2** Internal battery w/ micro-connector on side of head
			11 0 dBi omni w/ switch mount; straight design			**4** Head assembled with cable grip/connector to left side	**BT3** Internal battery w/ cable grip on top of head
						5 Head assembled with cable grip/connector to mounting surface	**BT4** Internal battery w/ cable grip on side of head

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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 shipped globally, use country code "B".

NOTE: Not all combinations available.
For further information on establishing any of the above listings, please contact Honeywell Sensing and Productivity Solutions or your local sales office.

Differentiator: Limitless™ WLS Series Non-Contact Switch provides for "non-contact" actuation.

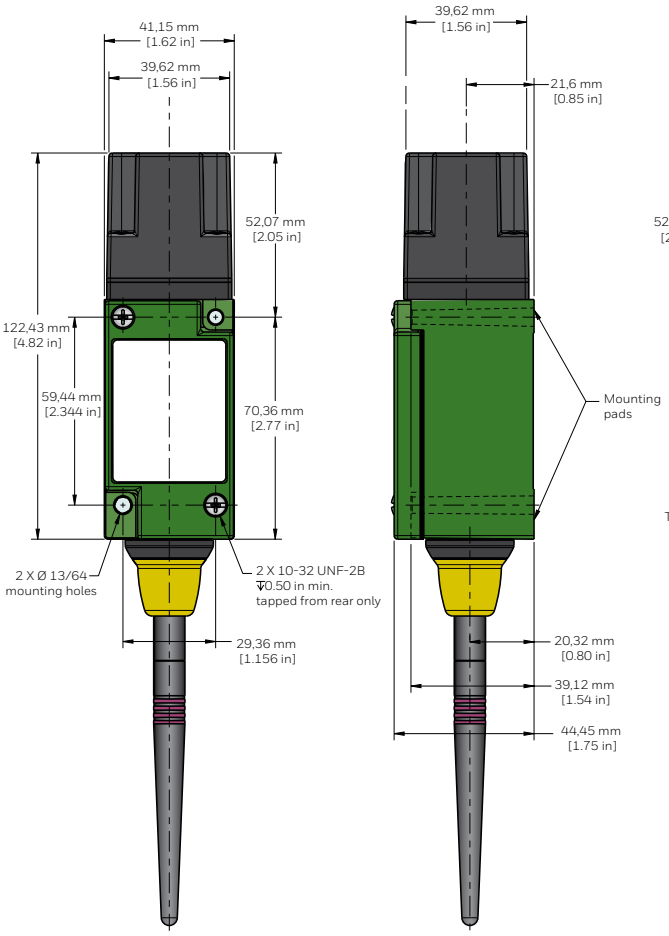
Honeywell's Limitless™ Wireless Non-Contact Switch that provides non-contact presence/absence detection of a variety of different magnet styles and magnetic actuators installed on the end-users' product, machine, equipment, etc. The Limitless™ WLS Non-Contact Switch's design features an industrial grade reed switch. Customers can choose how the reed switch is oriented within the switch's plastic head, i.e., either top- or side-sensing.

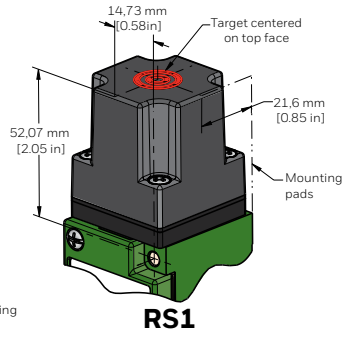
Key Features:

- Allows "non-contact" actuation
- IP67; NEMA 1, 4, 12, 13
- Top and side sensing heads
- Zinc head and body are phosphate treated and epoxy finished
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

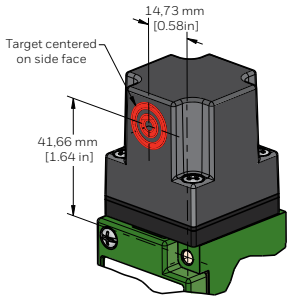
WLS Series Non-Contact Switch

Product type	Limitless™ Wireless Non-Contact Switch
Availability	Global, license-free bands
Operating characteristics	Operating point: 3,81 mm [0.15 in] min.; Release point: 15,24 mm [0.60 in] max. with use of WMG1 magnet (included with WLS Series Non-Contact Switch)
Sensing target	Top and side of head
Housing material	Zinc head and body are phosphate treated and epoxy finished; 30% glass-filled PBT plastic head
Radio	WPAN 802.15.4; 2.4 GHz
Antenna type	RP-SMA jack for direct or remote-mount antenna options; omni-directional standard
Battery	3.6 Vdc Lithium Thionyl Chloride; 2/3 AA size (Est. life >1 year) Manufactured by Green Energy, part number ER14335M
Sealing	IP67; NEMA 1, 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; 10-58 Hz w/ 0,35 mm peak-to-peak - 5g
Operating temperature	-40 to 85 °C [-40 °F to 185 °F]
Communication Agency Approvals/Certificates*	FCC 15.247; IC RSS 210; COFETEL; ETSI, CE mark; ACMA, C-TICK; IDA; WPC





RS1



RS2

Applications

- Machine tools
- Packaging machinery
- Lifts
- Ag/construction equipment
- Industrial machines

WLS Series Non-Contact Switch Nomenclature

WLS	1	A	00	A	Q		RS2
Switch Type	Gen Code	RF Code	Antenna Type Code	Country Use Code	Operating Head Code	Modification Code (RS2 only)	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 target to label side	**RS1** Internal battery w/ reed switch target on top of head
			02 2.2 dBi omni w/switch mount; tilt/swivel	**B** All other approved countries[1,2,3]		**3** Head assembled with target to right side	**RS2** Internal battery w/ reed switch target on side of head
			11 0 dBi omni w/ switch mount; straight design			**4** Head assembled with target to left side	
						5 Head assembled with target to mounting surface	

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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 shipped globally, use country code "B".

NOTE: Not all combinations available.
For further information on establishing any of the above listings, please contact Honeywell Sensing and Productivity Solutions or your local sales office.

Differentiator: Limitless™ WBX hazardous area switches carry cULus, ATEX (CE), IEC Ex, FCC, IC, and ETSI approvals. Their harsh-duty, explosion-proof packaging is intrinsically safe, and can result in increased efficiencies and improved safety for machines, equipment, and operators.

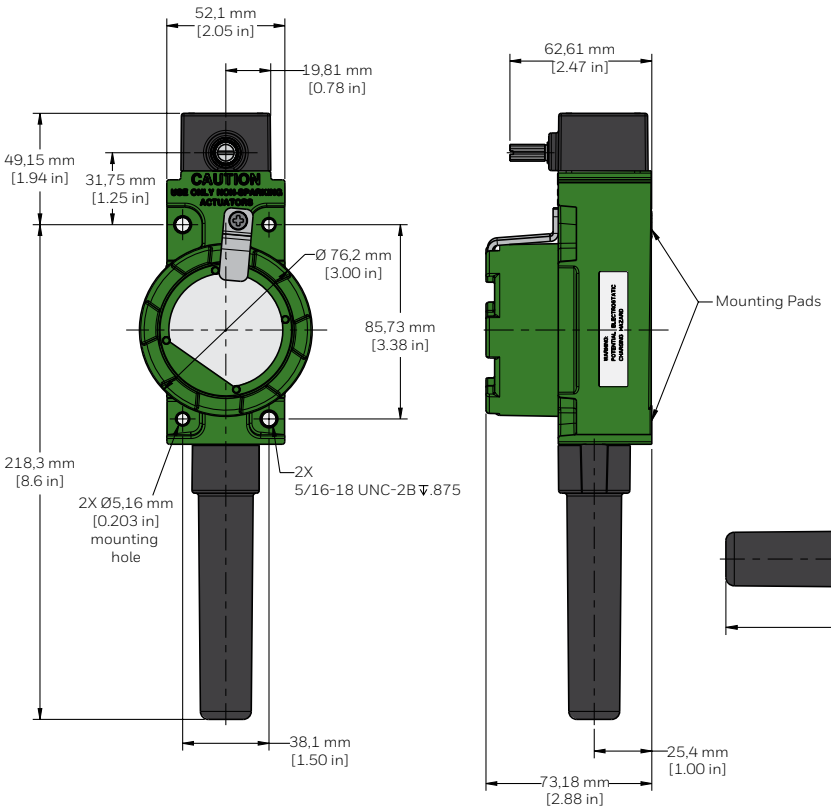
Designed to be used where other wireless products can not. Hazardous location approvals allow it to be used in a wide range of classified atmospheres, allowing for greater flexibility, making the Limitless™ WBX product application adaptable. Powder-coated aluminum housing enhances durability and resistance to corrosion.

Key Features:

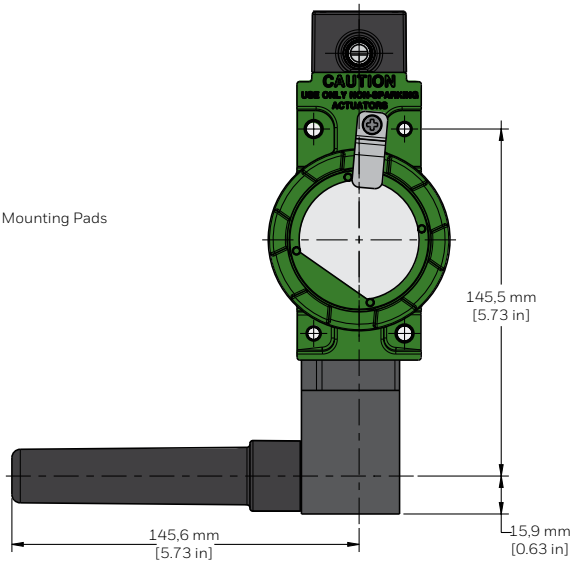
- Hazardous location approvals: cULus, ATEX, IEC Ex
- IP67 (self certified), NEMA 4 sealed metal enclosure
- Intrinsically safe
- Able to reconfigure multiple WBX Series switches
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

WBX Hazardous Area Switch

Product type	Limitless™ Hazardous Area Limit Switches	
Actuator type	Side rotary, top plunger, wobble stick	
Housing material	Powder-coated die-cast aluminum body	
Radio	IEEE 802.15.4, 2.4 GHz radio	
Data rate	250 kbps	
Operating frequency	ISM 2.4 GHz	
Module transmit power	Country use code A: 14 dBm max. Country use code B: 8 dBm max.	
Periodic update interval (seconds)	Field programmable interval: 1, 5, 10, 30, or 60 second intervals	
Sealing	NEMA 1, 3, 4, 13; IP67 (self-certified)	
EMC	Latest applicable standards: EN 300 328, V1.8.1; EN 61326-1 (2012); EN 301 489-1, V1.9.2; EN 301 489-17, V2.2.1	
Shock	IEC 60068-2-27; half sine, 50 g, 6 mS	
Vibration	IEC 60068-2-6: 10 Hz to 58 Hz with 0,35 mm peak-to-peak, 58 Hz to 500 Hz, 10 g	
Operating temp.	-40 °C to 70 °C [-40 °F to 158 °F]	
Communication agency approvals and standards	FCC 15.247 and 15.209 Industry Canada RSS 210 Gen Issue 8 ETSI, CE mark, ACMA, C-tick mark	
cULus standards and certifications	Standards: UL913 8th edition; CAN/CSA-C22.2 No. 157-92 (R2012) UL 60079-0 edition 6; UL 60079-11 edition 6 CSA C22.2 No. 60079-11 : 14 edition 2; CSA C22.2 No. 60079-0 : 11 edition 2	
	Class I, Div 1, Groups A, B, C, D T4 Class I, Zone 1 AEx ia IIC T4 Ga Class I, Zone 1 Ex ia IIC T4 Ga Class II, Zone 21 AEx ia IIIC T135°C Da	Class II, Div 1, Groups E, F, G Class I, Zone 0 AEx ia IIC T4 Ga Class I, Zone 0 Ex ia IIC T4 Ga Class II, Zone 20 AEx ia IIIC T135°C Da Tambient -40°C to 70°C
ATEX certification	Standards: EN 60079-0 : 2012+ A11 : 2013; EN 60079-11 : 2012; EN 60079-26 : 2007	
	Zone 1 Ex ia IIC T4 Ga Zone 21 Ex ia IIIC T135°C Da	Zone 0 Ex ia IIC T4 Ga Zone 20 Ex ia IIIC T135°C Da
IEC Ex certification	Standards: IEC 60079-0 edition 6.0; IEC 60079-11 edition 6.0; IEC 60079-26 edition 2.0	
	Zone 1 Ex ia IIC T4 Ga Zone 21 Ex ia IIIC T135°C Da	Zone 0 Ex ia IIC T4 Ga Zone 20 Ex ia IIIC T135°C Da



Operating Head Code "A"
Straight Antenna



Operating Head Code "A"
90° Antenna

WBX Nomenclature

WBX – Switch type: **WBX** Series Wireless

1 – Gen Code

1	Version 1

A – RF Code

A	2.4 GHz; IEEE 802.15.4

For "**B**" coded versions, refer to WBX ISA100 datasheet, 50095584.

00 – Antenna type code

00	No antenna; RP-SMA connector jack
12	2.0 dBi omni w/switch mount; straight design with radome
14	2.0 dBi omni w/switch mount; 90° metal elbow with radome

A – Country use code

A	US, Canada, Australia
B	All approved countries

A – Zone use code

A	Zone 0, Zone 20
B	Zone 1, Zone 21

Refer to Zone Use Classification.

A – Operating head code

A	Side rotary, momentary
C	Top plunger, plain
J	Wobble stick

1A – Actuator code

1	Fixed, rollerless 1.5 in radius	3S	Yoke, 0.75 in x 0.25 in nylon roller, back/back
1A	Fixed 0.75 in x 0.25 in nylon roller, front mount	04	Hub only
1C	Fixed 0.75 in x 0.25 in nylon roller, back mount	4M	Hub rod, 5.5 in, aluminum
2	Adjustable, rollerless	5	Offset, rollerless
2A	Adjust. 0.75 in x 0.25 in nylon roller, back mount	5A	Offset, 0.75 in x 0.25 in nylon roller, back mount
2C	Adjust. 0.75 in x 0.25 in nylon roller, front mount	5C	Offset, 0.75 in x 0.25 in nylon roller, front mount
2J	Adjust. 1 in x 0.5 in nylon roller, front mount	7A	Delrin™ rod, 5.5 inches*
2K	Adjust. 1.5 in x 0.25 in nylon roller, front mount	9A	Short fixed, 0.75 x 0.25 in nylon roller, front mount
3E	Yoke, 0.75 in x 0.25 in nylon roller, back/front	9C	Short fixed, 0.75 x 0.25 in nylon roller, back mount
3M	Yoke, 0.75 in x 1.25 in nylon roller, back/front		

* 7A to be assembled to operating head code J only.

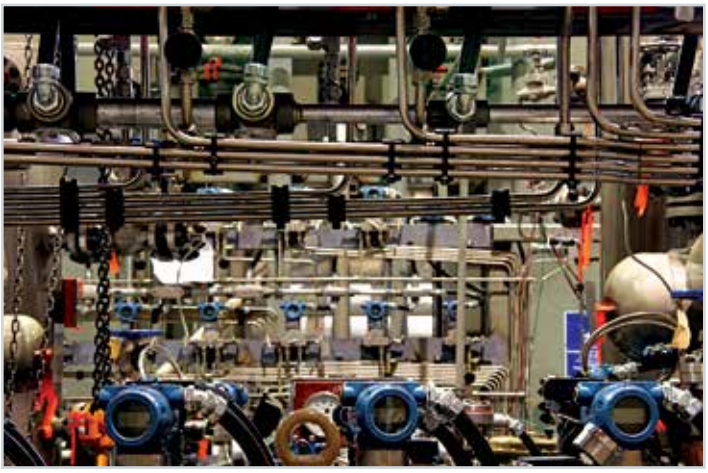
3 – Modification code

	Head assembled with actuator to nameplate side
3	Head assembled with actuator to right side
4	Head assembled with actuator to left side
5	Head assembled with actuator to mounting surface

Zone Use Classifications
Zones refer to classified atmosphere ratings. Single digit indicators (Zone 0 or 1) refer to degree of protection from explosive gases. Double digit indicators (Zone 20 or 21) refer to degree of protection from explosive dusts.
Zone 0: An area in which an explosive gas is present continuously or for long periods.
Zone 20: An area in which an explosive dust is present continuously or for long periods.
Zone 1: An area in which an explosive gas is likely to occur in normal operation.
Zone 21: An area in which an explosive dust is likely to occur in normal operation.

Applications

- Agriculture machines
- Grain diverters or flaps
- Material handling
- Pipeline pigs
- Remote or temporary equipment
- Valve position
- Door position
- Hose attachment verification
- Paint robotics
- Pump stroke count
- Safety shower alarming



Differentiator: Limitless™ WPS Series is designed to replace applications that are currently wired, or that are used in 1) new applications where wired devices are not economical/feasible (i.e., wireless transmitters); 2) where wiring and connections cause reliability issues; or 3) where increased functionality can be realized by eliminating wires

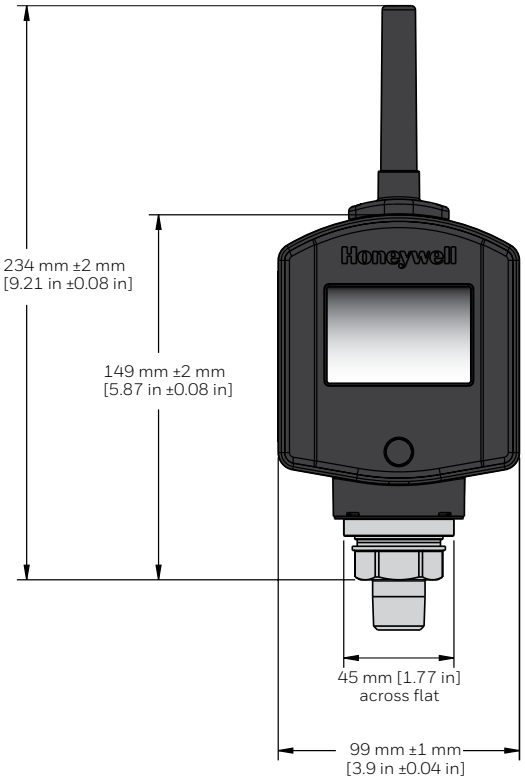
In process, oil & gas and factory floor environments, wireless pressure sensors are already commonly used. These sensors are accurate, reliable and offer increased levels of customization (battery life, firmware/software); however, these features have created products that are costly ($1200+) for many applications, and many features are not typically needed. The WPS Series provide a lower cost option to expensive wireless alternatives while offering the advantages of wireless over the next best alternative (a wired solution). The WPS Series provide wireless benefits without the expensive features the customer's application often does not need.

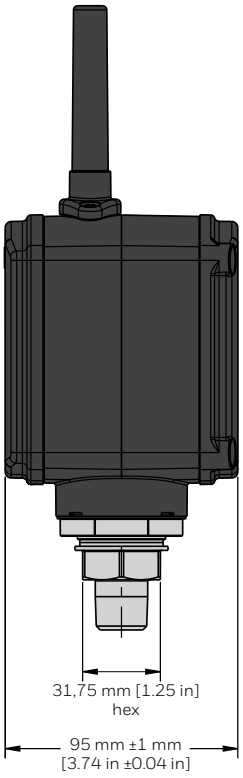
Key Features:

- 0 to 50 psi, 200 psi, 500 psi, 1000 psi, 1500 psi, 5000 psi, or 10,000 psi
- WPAN 802.15.4, 2.4 GHz, P2P
- Measures gage and absolute pressures
- Global availability due to a variety of inputs with Ethernet/IP™ PLC connections
- Total Error Band ±2.0 %
- IP67 sealed plastic enclosure with 316L Port and Hastelloy® C-276 diaphragm
- Direct, remote or built-in antenna options
- Sensor's body can be rotated/swiveled 350° about the port axis
- Works with Limitless™ WMPR multi-protocol receiver

WPS Wireless Pressure Sensor

Product type	Wireless Pressure Sensor
Availability	Global, license-free bands
Process connections	1/4 in NPT female connection is integral to 1/2 in NPT male or 3/4 in NPT male
Measurement accuracy	Better than ±2.0 % Total Error Band (TEB), full scale, full temperature range. Example 100 psi is ±2 psi
Housing and wetted material	Polycarbonate plastic enclosure, 316L stainless steel port, Hastelloy® C-276 diaphragm
Output	Digital output via wireless, end-user configurable as psi, bar, kPa, and Pa local LCD variant also available
Antenna type	Direct mount antenna with radome or remote-mount antennas available
Total error band (TEB)	±2.0 %FSS
Module transmit power	Country code A: 16 dBm max.; Country code B: 8 dBm max.
Sensor output resolution	0.04 %FS
Sealing	IP65, IP67
EMC	Latest applicable standards: EN 300 328, V1.8.1; EN 61326-1 (2012); EN 301 489-1, V1.8.1; EN 301 489-17, V2.2.1
Shock	40 g per IEC 60068-2-27
Vibration	5 Hz to 200 Hz, 4 g, Sinusoidal as per IEC 60068-2-6
Operating and storage temp. range	-40 °C to 70 °C [-40 °F to 158 °F]
Agency approvals and standards	16 dBm: FCC 15.247 and 15.209, Industry Canada RSS 210 Issue 8, ACMA (C-Tick mark) 8 dBm: ETSI EN 300 328 V1.8.1 (CE mark)





Applications

- Process monitoring of important pressures
- Gauge placement
- Liquid level sensing (corrosive or non-corrosive)
- Leak detection (detection of pressure drop)
- Process pump failure monitoring
- Well head monitoring
- Irrigation water pressure monitoring
- Equipment health monitoring
- Tank level monitoring (water or corrosive liquids)

WPS Nomenclature

WPS	1	A	12	A	GP	1	PD	P	1	N	
Type	Gen Code	RF Code	Antenna Type Code	Country Use Code	Pressure Type	Connection Type	Pressure Range (refer to Table 3: Pressure range chart)	Enclosure Type	Display	Protection	Specials
WPS Series Wireless Pressure Sensor	**1** Version 1	**A** 2.4 GHz, IEEE 802.15.4	**00** No antenna; RP-SMA jack	**A** US, Canada, Australia	**AP** Absolute pressure	**1** 1/2 in NPT male	**P**	**D**	**P** Plastic	**0** No LCD	**N** Not intrinsically safe
		For "**B**" coded versions, refer to WPS ISA100 datasheet, 50095585.	**12** 2.0 dBi omni antenna	**B** All other approved countries	**GP** Gage pressure	**2** 3/4 in NPT male	**B**	**E**		**1** with LCD	
						1/4 in NPT female connection is integral to 1/2 in NPT male or 3/4 in NPT male connections.	**K**	**F**			
								G			
								H			
								J			
								K			

Table 3. Pressure Range Conversion Chart

Unit Code	Description	Pressure Range						
		D	E	F	G	H	J	K
P	psi	0 to 50	0 to 200	0 to 500	0 to 1000	0 to 1500	0 to 5000	0 to 10000
B	Bar	0 to 3.45	0 to 13.8	0 to 34.5	0 to 68.9	0 to 103.4	0 to 344.7	0 to 689.5
K	Kpa	0 to 344.7	0 to 1379	0 to 3447.4	0 to 6894.7	0 to 10342	0 to 34473	0 to 68947

Differentiator: Intrinsically safe, the Limitless™ WPS Series is designed to replace applications that are currently wired, or that are used in 1) new applications where wired devices are not economical/feasible (i.e., wireless transmitters); 2) where wiring and connections cause reliability issues; or 3) where increased functionality can be realized by eliminating wires

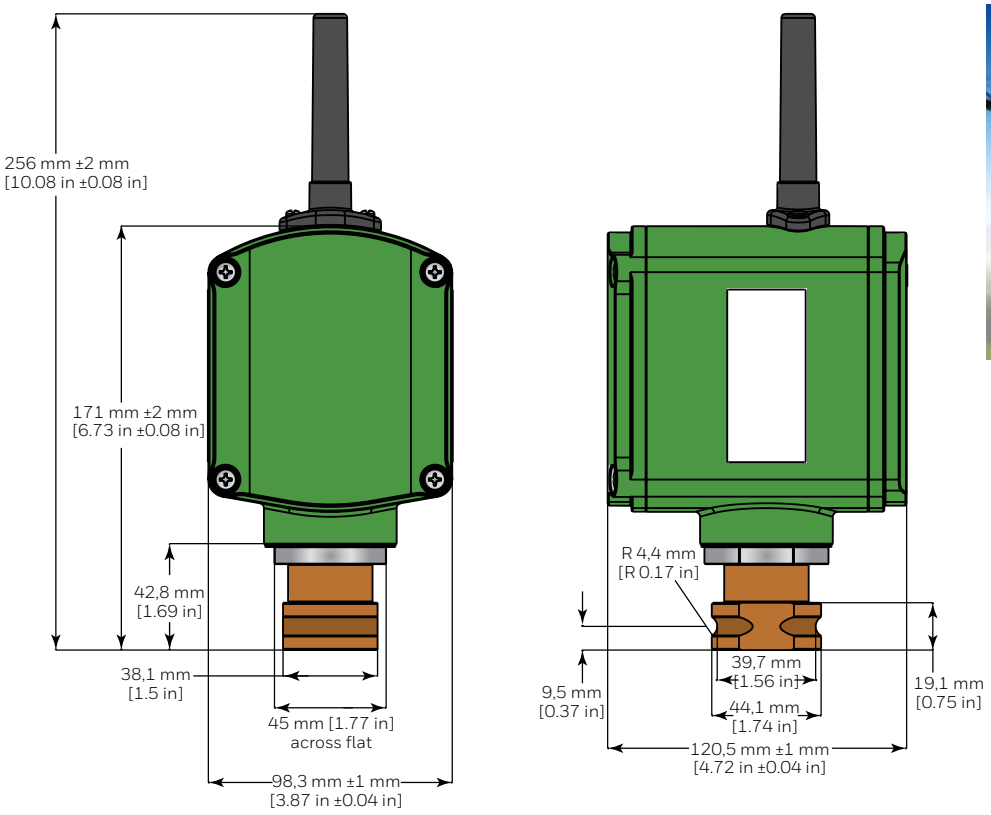
In process, oil & gas and factory floor environments, wireless pressure sensors are already commonly used. These sensors are accurate, reliable and offer increased levels of customization (battery life, firmware/software); however, these features have created products that are costly ($1200+) for many applications, and many features are not typically needed. The WPS Series provide a lower cost option to expensive wireless alternatives while offering the advantages of wireless over the next best alternative (a wired solution). The WPS Series provide wireless benefits without the expensive features the customer's application often does not need.

Key Features:

- Measures gage or absolute pressure ranging from 0 psi to 500 psi through 0 psi to 15,000 psi
- WPAN 802.15.4, 2.4 GHz, P2P
- Intrinsically safe: cULus, ATEX, and IEC Ex approvals
- Configurable platform: Designed for global availability
- Total Error Band ±2.0 %
- IP67 sealed aluminum alloy metal enclosure/ Hastelloy® C276 or 15-5PH SS or Crucible A-286 diaphragm
- Direct, remote or built-in antenna options
- Sensor's body can be rotated/swiveled 350° about the port axis
- Works with Limitless™ WMPR multi-protocol receiver

IS-WPS Wireless Pressure Sensor

Product type	Wireless Pressure Sensor, Intrinsically Safe
Availability	Global, license-free bands
Process connections	1/2 in NPT male and 1/4 in NPT female 3/4 in NPT male and 1/4 in NPT female 1/4 in NPT female, 9/16-18 UNF female
Measurement accuracy	Better than ±2.0 % Total Error Band (TEB), full scale, full temperature range. Example 100 psi is ±2 psi
Housing and wetted material	Aluminum alloy metal enclosure/ Hastelloy® C276 or 15-5PH SS or Crucible A-286 diaphragm
Output	Digital output via wireless, end user configurable as psi, bar, kPa and Pa, local LCD variant also available
Antenna type	Direct mount antenna with radome or remote-mount antennas available
Total error band	±2 %FSS for > 50 psi
Module transmit power	Country code A: 16 dBm max.; Country code B: 8 dBm max.
Sensor output resolution	0.04 %FS
Sealing	IP65, IP67 (self certified by Honeywell)
EMC	Applicable standards: EN 300 328, V1.8.1; EN 61326-1 (2006); EN 301 489-1, EN301 489-17, V2.1.1
Shock	40 g per IEC 60068-2-27
Vibration	5 Hz to 200 Hz, 4 g, Sinusoidal per IEC 60068-2-6
Operating temp.	-40 °C to 70 °C [-40 °F to 158 °F]
cULus	Class I, Div I, Groups A, B, C, D T4 Class I, Zone 1 AEx ia IIC T4 Ga Class I, Zone 1 Ex ia IIC T4 Ga Class I, Zone 0 AEx ia IIC T4 Ga Class I, Zone 0 Ex ia IIC T4 Ga Tambient -40° C to +70 C°
ATEX	Zone 1 Ex ia IIC T4 Ga; Zone 0 Ex ia IIC T4 Ga
IEC Ex	Zone 1 Ex ia IIC T4 Ga; Zone 0 Ex ia IIC T4 Ga



Applications

- Process monitoring of important pressures
- Gauge replacement
- Liquid level sensing (corrosive or non-corrosive)
- Leak detection (detection of pressure drop)
- Process pump failure monitoring
- Well head monitoring
- Irrigation water pressure monitoring
- Equipment health monitoring
- Tank level monitoring (water or corrosive liquids)

WPS Nomenclature

WPS	1	A	12	A	GP	1	PF	M	1	X
Type	Gen Code	RF Code	Antenna Type Code	Country Use Code	Pressure Type	Connection Type	Pressure Range (refer to Table 3: Pressure range chart)	Enclosure Type	Display	Protection Code
WPS Series Intrinsically Safe Wireless Pressure Sensor	1 Version 1	A 2.4 GHz, IEEE 802.15.4 For "B" coded versions, refer to WPS ISA100 datasheet, 32317842.	00 No antenna; RP-SMA jack 12 2.0 dBi omni antenna	A US, Canada, Australia B All other approved countries	AP Absolute pressure GP Gage pressure	1 1/2 in NPT male & 1/4 in NPT female 2 3/4 in NPT male & 1/4 in NPT female 3 1/4 in NPT female 4 9/16-18 UNF female	P B K	F J K L M	M Metal	0 No LCD 1 with LCD	X Intrinsically safe, Zone I Y Intrinsically safe, Zone 0

Table 4. Pressure Range Conversion Chart

Unit Code	Description	Pressure Range						
		D	E	F	G	H	J	K
P	psi	0 to 50	0 to 200	0 to 500	0 to 1000	0 to 1500	0 to 5000	0 to 10000
B	Bar	0 to 3.45	0 to 13.8	0 to 34.5	0 to 68.9	0 to 103.4	0 to 344.7	0 to 689.5
K	Kpa	0 to 344.7	0 to 1379	0 to 3447.4	0 to 6894.7	0 to 10342	0 to 34473	0 to 68947

Differentiator: Limitless™ WOI Series is a human interface device that provides operator indication with a pushbutton.

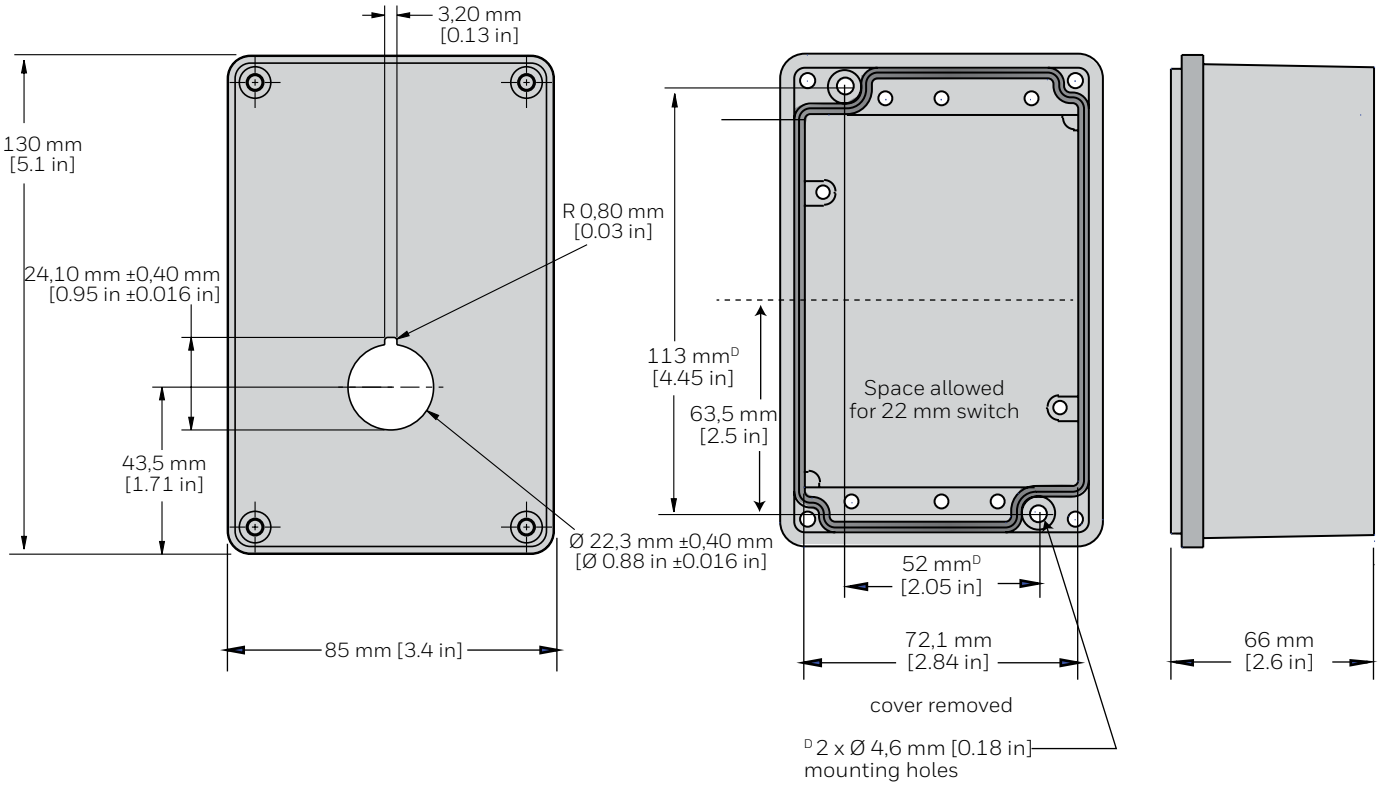
With both momentary and maintained contacts, the Limitless™ Wireless Operator Interface (WOI) can be used by an operator to provide indication via a pushbutton or another user-chosen operator type (i.e. 22 mm rotary switch, 22 mm key switch, etc.). The WOI Series adds a human interface device to the product-driven interfaces of Limitless™ switches and receivers – wireless control from both person and position.

Key Features:

- Aluminum enclosure
- IP65 sealing
- 22 mm flush, 29 mm mushroom, & 40 mm mushroom (push-pull) round pushbutton operators available
- User chosen/installed operator type is allowable
- Momentary and maintained contact options
- Design for ease of installation
- Works with Limitless™ WMPR, WDRR, and WPMM receivers

WOI Series Operator Interface

Product type	Limitless™ Operator Interface Switches
Availability	Global, license-free bands
Operating force	Momentary pushbutton: 6,2 N ±2 N [1.4 lb ±0.45 lb] Maintained pushbutton: 7,0 N ±2 N [1.6 lb ±0.45 lb]
Actuator type	Pushbutton operators • 22 mm round flush momentary • 29 mm mushroom head momentary • 40 mm mushroom head maintained (push-pull); No operator option available for use with user supplied 22 mm operator and contact blocks
Actuator/contact blocks (if user supplied)	22 mm switch design (i.e. 22 mm rotary switch, 22 mm key switch, etc.) /gold contact, normally open and normally closed contact blocks capable of reliably controlling a 30 mA @ 3.6 Vdc electrical load
Actuator colors	Black, Green, Red*, Yellow * not available for the 29 mm mush-room, & 40 mm mushroom (push-pull) pushbuttons
Housing material	Powder-coated aluminum
Radio	WPAN 802.15.4; 2.4 GHz
Antenna type	Direct or remote-mount antenna op-tions; Omni directional
Sealing	IP65
EMC	Latest applicable stnds: 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, 50 g, 6 mS, 3 axis
Vibration	IEC 60068-2-6; 10-500Hz w/ 0,35 mm peak-to-peak, 58-500 Hz- 10 g
Operating temp.	-25 °C to 50 °C [-13 °F to 122 °F]
Agency approv-als and stan-dards	FCC 15.247; Industry Canada RSS 210 ETSI, CE mark; ACMA, C-Tick mark



WOI Nomenclature

WOI	1	A	00	A	PA	G
Module type	GEN code	RF code	Antenna type code	Country use code	Actuator type	Actuator color
WOI Series Operator Interface	**1** Version 1	**A** 2.4 GHz; IEEE 802.15.4	**00** No antenna; RP-SMA connector jack	**A** US, Canada Mexico	None; open hole in enclosure	None
			02 2.2 dBi omni w/switch mount; tilt/swivel	**B** All other approved countries[1,2]	**PA** Pushbutton only 22 mm round flush button, momentary	**B** Black
			11 0 dBi omni w/ switch mount; str. design		**PB** Pushbutton only[3] 29 mm mushroom head, momentary	**G** Green
					PC Pushbutton only[3] 40 mm mushroom head, maintained/push-pull	**R** Red
						Y Yellow

NOTE: Not all combinations available.
For further information on establishing any of the above listings, please contact Honeywell Safety and Productivity Solutions or your local sales office.

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

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

[3] NOT AVAILABLE IN RED

Applications

Industrial

- CNC action
- Conveyors
- Door/Gate action
- Lifts
- Material handling
- Motor drives
- Presses
- Pumps
- Quality control buttons
- Specialty machines
- Stop/Start machinery
- Stop/Start production
- Valve action

Transportation

- Agricultural equipment
- Movable machinery

Differentiator: Limitless™ WPMM Monitors deliver output based on a signal from a Limitless™ device.

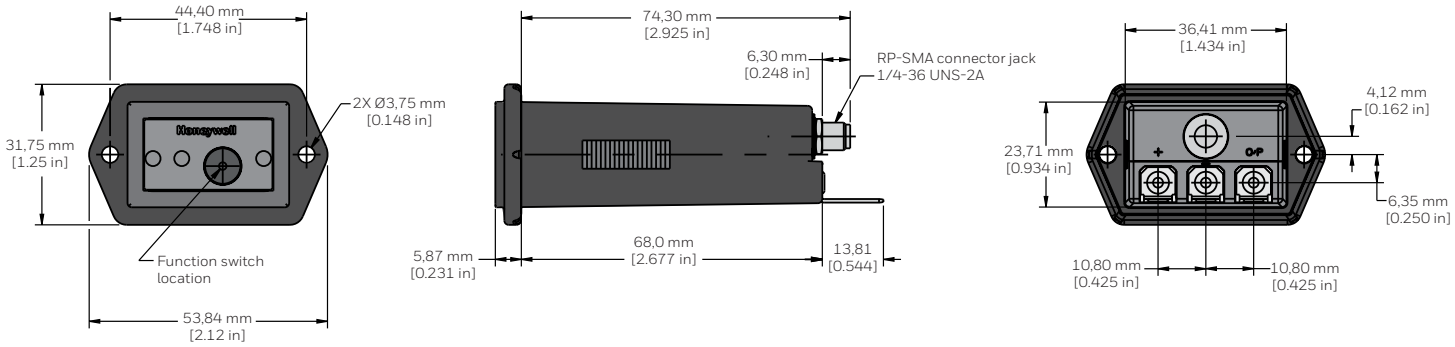
Limitless™ WPMM Series wireless panel-mount monitors provide a visual, audio, and output based on a signal received from a Limitless™ input. Limitless™ WPMM monitors offer quick indication of an actuator position change on a paired Limitless™ wireless limit switch.

Key Features:

- 10 Vdc to 30 Vdc supply with one NPN output configurable normally open or normally closed output
- Diagnostic functions include lost RF and low battery indication
- Designed primarily for single switch applications, but can monitor multiple wireless switches (sold separately)
- Field pairing function allows for rapid configuration
- Panel-mount enclosure (snap-in or screw mount)
- Polycarbonate, shock resistant, tamper-proof case
- Sealed to IP67
- Multiple LED function/status indicators with audible buzzer (configurable to silent)
- Direct or remote-mount antenna

WPMM Series Monitor

Product type	Limitless™ wireless panel mount monitor
Series name	WPMM Series
Availability	Global, license-free RF bands*
Housing material	LCP, VECTRA E130i
Housing type	Snap-in panel or screw-mount design
Radio type	WPAN 802.15.4, 2.4 GHz point to point
Antenna type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication	Three LEDs: green, yellow, red Power indication: green Output indication: red Config./diagnostic: green, yellow, red Buzzer w/ silent option
Supply voltage	10 Vdc to 30 Vdc
Supply current	750 mA max.
Output types	NPN, PNP, solid-state relay
Load current	5 mA to 200 mA
Leakage current	50 uA max.
Voltage drop	1.75 Vdc max. @ max. load @ 25 °C [77 °F]
Terminal(s)	3
Termination	Quick connect, 0.25 in male blade
Sealing	IP67
Reverse polarity protection	Yes
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 500 Hz w/ 0,35 mm peak-to-peak, 58 Hz to 500 Hz- 5 g
Operating temp.	-40 °C to 85 °C [-40 °F to 185 °F]
Agency approvals and standards	FCC 15.247; IC RSS 210, ETSI, CE mark; ACMA, C-TICK; COFETEL; IDA; ANATEL; WPC; SRRC; KCC
Size	31,87 mm H x 44,40 mm W x 74,30 mm D [1.25 in H x 1.748 in W x 2.925 in D] ref.



WPMM 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	
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable	
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable	
			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	

[1]Use with antenna type codes 00 - 03, 05, 10, 11 only; usage also 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 shipped globally, use country code "B".

Applications

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

Differentiator: WDRR receiver 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.

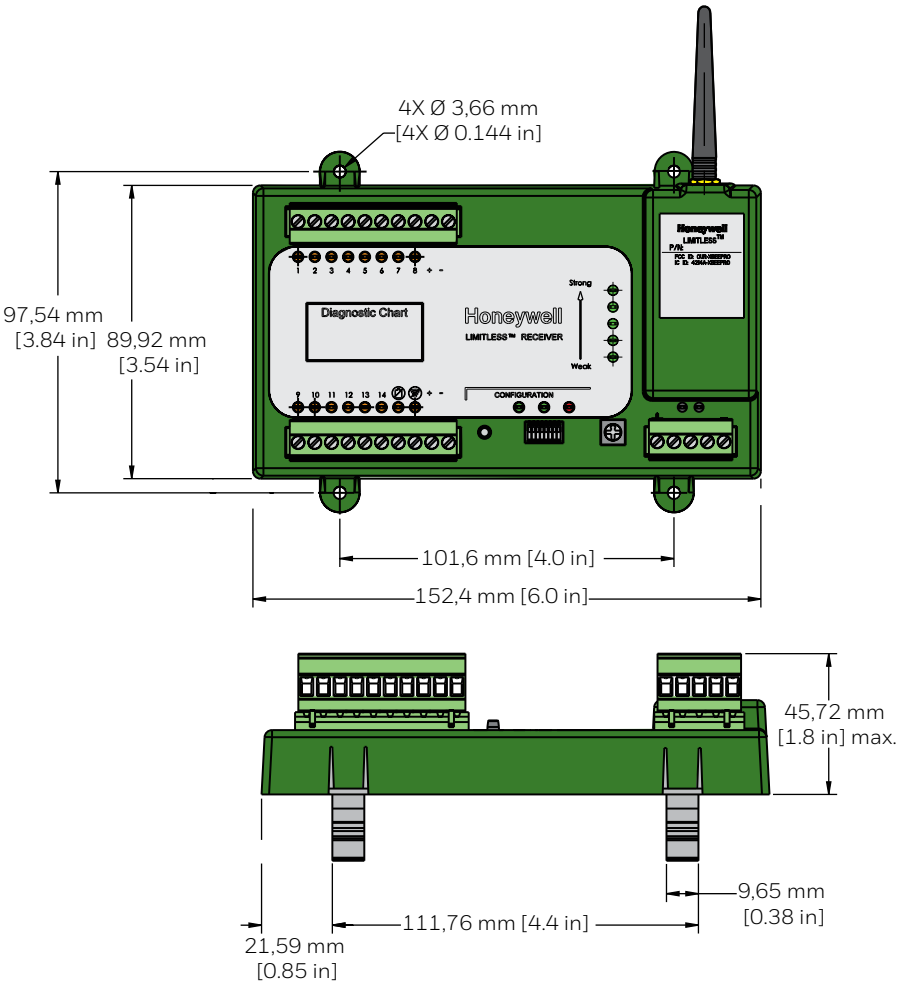
The WDRR Series is a reliable din-rail or panel-mountable receiver that is designed to receive a wireless signal from a Limitless™ digital input. Accommodating up to 14 Limitless™ digital inputs, the WDRR Series is for applications requiring multiple wireless inputs. These inputs communicate to a PLC 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.

Key Features:

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

WDRR Series Receiver

Product type	Limitless™ wireless din-rail receiver (PLC interface)
Series name	WDRR Series
Availability	Global, license-free RF bands*
Housing material	Flame retardant ABS
Housing type	DIN Rail or screw-mount design
Radio type	WPAN 802.15.4, 2.4 GHz point-to-point
Antenna type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication	Configuration LEDs: green, yellow, red 14 output/diagnostic LEDs: green, yellow, red. Low battery & lost RF output LEDs: red, green. RF signal strength LEDs: blue
Supply voltage	10 Vdc to 28 Vdc
Supply current	500 mA max.
Output type	Selectable: NPN-type current sinking open collector or NPN-type “totem pole”; PNP-type current sourcing open collector or PNP-type “totem pole”
Load current	10 mA max.
Leakage current	100 uA max.
Voltage drop	2.0 Vdc max. @ max. load @ 25 °C [77 °F]
Terminal(s)	18 usable
Termination	Cage-clamp screw terminal blocks
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; 10-500Hz w/ 0,35 mm peak-to-peak, 58-500 Hz- 5 g
Operating temp.	-20 °C to 70 °C [-4 °F to 158 °F]
Agency approvals and standards	FCC 15.247; IC RSS 210, ETSI, CE mark; ACMA, C-TICK; COFETEL; IDA; ANATEL; WPC; SRRC; KCC
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.



Applications

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

WDRR 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			
			03 3.0 dBi omni w/remote adhesive mount 9.8 ft cable			
			04 5.5 dBi omni w/remote mag. mount, tilt/swivel 5 ft cable			
			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			

[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".

Differentiator: WMPR multi-protocol receiver 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).

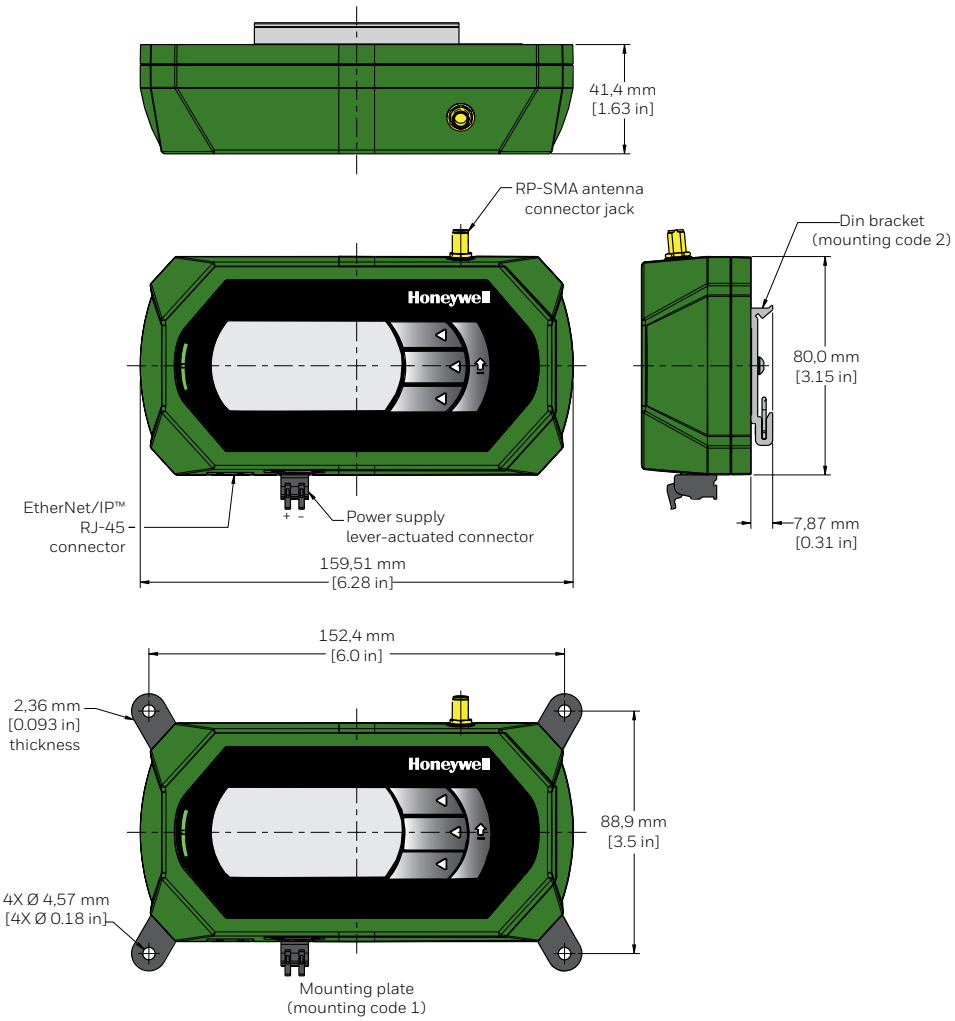
The WMPR Series is a reliable din-rail or panel-mountable receiver. Accommodating up to 14 Limitless™ digital or analog nodes, the WMPR Series is designed for applications requiring multiple wireless inputs. The WMPR Series receiver is menu driven through the use of function buttons and an easy-to-read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

Key Features:

- LCD's 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.
- Output is ODVA certified – EtherNet/IP Conformance Tested™
- Indication for up to 14 Limitless™ **digital or analog nodes**
- DIN Rail or screw mount
- Direct or remote-mount antenna

WMPR Series Multi-Protocol Receiver

Product type	Limitless™ wireless multi-protocol receiver
Availability	Global
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
Radio type	WPAN 802.15.4, 2.4 GHz
Antenna type	RP-SMA jack for direct mount or remote antenna options; omni-directional standard
Indication	LCD display with function button navigation of a menu program Configuration LEDs: green, blue, red
Supply voltage	10 Vdc to 30 Vdc
Supply current	500 mA max.
Output type	EtherNet/IP™ (ODVA - EtherNet/IP Conformance Tested™)
Output connector	RJ-45 connector
Supply connector	Lever actuating connector
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, 58-500 Hz @ 5g
Operating temp.	-20 °C to 70 °C [-4 °F to 158 °F]
Agency approvals and standards	FCC 15.247: United States of America IC RSS 210: Canada ETSI, CE mark: European
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.



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

WMPR Nomenclature

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
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	
			02 2.2 dBi omni w/receiver mount; tilt/swivel	**B** All other approved countries			**2** DIN bracket, aluminum	

Antenna Accessories

	Part number	Replacement antenna mount or cable	Antenna design	Ant. gain (max.)	Connector/ mounting	Dimensions	Antenna material	Cable material/type	Mount material
	WAN01RSP	–	straight	2.2 dBi	RP-SMA plug/direct mount	Ø 9,91 mm x 112,78 mm L [Ø 0.39 in x 4.44 in L]	UV stable ABS plastic	–	–
	WAN02RSP	–	tilt/swivel	2.2 dBi	RP-SMA plug/direct mount	Ø 9,91 mm x 112,78 mm L [Ø 0.39 in x 4.44 in L]	UV stable ABS plastic	–	–
	WAN03RSP	–	flat	3.0 dBi	RP-SMA plug/adhesive mount	115 mm L x 22,1 mm W x 4,57 mm D [4.53 in L x 0.87 in W x 0.18 in D] 3 m [9.8 ft] cable	UV stable ABS	UV stable PVC/ RG-174 coax	–
	WAN04RSP	WAMM100RSP-005 base with 1,52 m [5 ft] of cable	tilt/swivel	5.5 dBi	RP-SMA plug/direct mount	Ø 12,7 mm x 208,28 mm L [Ø 0.50 in x 8.20 in L]	UV stable molded polyure-thane	UV stable PVC/ RG-174 coax	UV stable black ABS
	WAN04RSP	WAMM100RSP-010 base with 3,05 m [10 ft] of cable	tilt/swivel	5.5 dBi	RP-SMA plug/direct mount	Ø 12,7 mm x 208,28 mm L [Ø 0.50 in x 8.20 in L]	UV stable molded polyure-thane	UV stable PVC/ RG-174 coax	UV stable black ABS
	WAN05RSP	WAMM100RSP-005 base with 1,52 m [5 ft] of cable	tilt/swivel	9.0 dBi	RP-SMA plug/direct mount	Ø 12,7 mm x 384,05 mm L [Ø 0.50 in x 15.12 in L]	UV stable molded polyure-thane	UV stable PVC/ RG-174 coax	UV stable black ABS
	WAN05RSP	WAMM100RSP-010 base with 3,05 m [10 ft] of cable	tilt/swivel	9.0 dBi	RP-SMA plug/direct mount	Ø 12,7 mm x 384,05 mm L [Ø 0.50 in x 15.12 in L]	UV stable molded polyure-thane	UV stable PVC/ RG-174 coax	UV stable black ABS
	WAN06RNJ	WCA200RN-PRSP-002 coax cable assembly 0,682 m [2 ft]	straight	8.0 dBi	RP-N jack/ bracket	Ø 33,5 mm x 427,9 mm L [Ø 1.32 in x 16.85 in L]	UV stable fiberglass	UV stable PVC/RG-316 coax, UV stable Polyethylene/200 Series coax	300 series SST aluminum alloy
	WAN06RNJ	WCA200RN-PRSP-010 coax cable assembly 3,05 m [10 ft]	straight	8.0 dBi	RP-N jack/ bracket	Ø 33,5 mm x 427,9 mm L [Ø 1.32 in x 16.85 in L]	UV stable fiberglass	UV stable PVC/RG-316 coax, UV stable Polyethylene/200 Series coax	300 series SST aluminum alloy
	WAN07RSP	–	straight	0 dBi	RP-SMA plug/direct mount	Ø 8,0 mm x 30 mm L [Ø 0.32 in x 1.18 in L]	UV stable	–	–
	WAN08RSP	–	90°	0 dBi	RP-SMA plug/direct mount	Ø 8,0 mm x 29 mm L [Ø 0.34 in x 1.14 in L]	UV stable	–	–
	WAN09RSP	–	low profile mobile	3.0 dBi	RP-SMA plug/mag-netic	Ø 76,2 mm x 115 mm L [Ø 3.0 in x 4.54 in L] 3,05 m [10 ft] cable	UV stable ABS plastic	UV stable black PVC	Nickel-plated steel
	WAN10RSP	–	straight	5.0 dBi	RP-SMA plug/mag-netic	Ø 76,2 mm x 230,1 mm L [Ø 3.0 in x 9.06 in L] 4,57 m [15 ft] cable	Nickel-plated steel	UV stable black PVC	Nickel-plated steel
	WAN11RSP	–	low profile mobile	4.0 dBi	RP-SMA plug/thru-hole screw	Ø 39 mm x 42,4 mm L [Ø 1.54 in x 1.67 in L]	UV stable black PVC	UV stable black PVC	Nickel-plated steel
	WAN12RSP	–	straight	2.0 dBi	RP-SMA plug/direct mount	Ø 10 mm x 79,5 mm L [Ø 0.39 in. x 3.13 in. L]	UV stable ABS plastic	–	–

Limitless™ Compatibility & Approvals Matrices

Limitless™ Solution Compatibility Matrix

(which Limitless™ switches and sensors work with which receivers)

Available output	Series	WGLA	WLS	WLS-EP	WLS-SSA	WLS-NC	WBX	WPS	WOI
NPN, PNP, solid state relay	**WPMM**	✓	✓	✓	✓	✓	✓		✓
NPN, PNP selectable	**WDRR**	✓	✓	✓	✓	✓	✓		✓
Ethernet/IP™	**WMPR**	✓	✓	✓	✓	✓	✓	✓	✓

Limitless™ Approvals Matrix

(which Limitless™ switches and sensors are approved to work in which country)

Country	Approval	WGLA	WLS	WLS-EP	WLS-SSA	WLS-NC	WBX	WPS	WOI	WPMM	WDRR	WMPR
United States	**FCC**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Canada	**IC**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Europe	**ETSI**	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Australia/New Z.	**ACMA**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Mexico	**COFETEL**	✓	✓	✓	✓	✓				✓	✓	
Singapore	**IDA**	✓	✓	✓	✓	✓				✓	✓	
Brazil	**ANATEL**	✓	✓	✓						✓	✓	
China	**SRRC**	✓	✓	✓						✓	✓	
South Korea	**KCC**	✓	✓	✓						✓	✓	
India	**WPC**	✓	✓		✓	✓				✓	✓	
Intrinsically safe							✓					

There's an advantage for taking the bold step. For seeing the possibilities. And seizing the opportunity.

At Honeywell, we work hard to lead the way. To develop technologies that are ahead of the curve. To deliver solutions that anticipate your needs. And sometimes that innovative mind set allows you to be the market leader. That's why Limitless™ switches are the leading wireless switch brand on the market.

And you can rest assured, Limitless™ solutions are the right product at the right time to help you maximize efficiency and minimize cost. Because it's a Honeywell product, backed by world-class service and support.

Part Innovation. Part Engineering. Total Solutions.

Limitless™ Solutions

- Wireless global limit switches
- Wireless heavy-duty switches
- Wireless hazardous location switches
- Wireless monitors and receivers
- Wireless operator interface
- Wireless pressure sensors

Potential Applications

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

Find Out More

To learn more about Limitless™ wireless solutions, contact a Honeywell representative today at **1-800-537-6945** or visit **honeywell.com/limitless**

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