

# **WLS Series**

# Limitless™ Single Switch Adapter



Honeywell's Limitless<sup>TM</sup> product line uses the latest commercial off-the-shelf wireless technology and is now expanding the WLS Series to convert almost any 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<sup>TM</sup> WPMM or WDRR Series of monitors/receivers. The Limitless<sup>TM</sup> Single Switch Adapter can be used in a variety of industrial wireless limit switch applications such as reed, contact, pressure, door actuator, etc.

The Limitless<sup>TM</sup> 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.

### 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 305 m [1000 ft] line-of-sight communication range when used with a Limitless<sup>™</sup> WPMM Series wireless monitor or WDRR Series receiver module (sold separately)
- Reliable, flexible, and secure wireless transmission
- Standard replaceable battery with ultra-low power consumption
- Direct or remote mount antenna options

#### **Mechanical Design**

- 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

### **BENEFITS**

- Allows almost any type of electromechanical switch with low-energy contacts (i.e., gold) to become "wireless"
- Enables presence/absence detection in remote parts of application/machinery, where wiring is an issue or not feasible
- Ability to reconfigure multiple switches, which easily allows for adding, subtracting or relocating of the Limitless™ WLS Single Switch Adapters
- Reduced installation/maintenance costs with no wires, conduit, strain relief, clips, connectors, connection boxes, etc.
- Eliminates issues with wire connection integrity on moving equipment
- Consumes ultra-low power to prolong battery life

#### POTENTIAL 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)

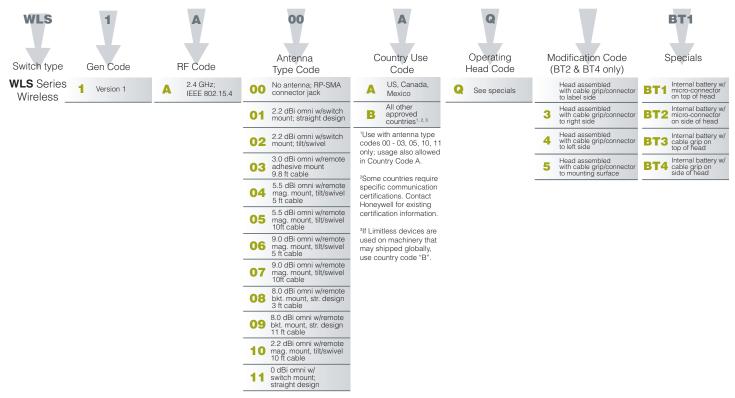
### PERFORMANCE SPECIFICATIONS

Characteristic	Measure
Series name	WLS Series
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
Housing type	WLS
Radio	WPAN 802.15.4; 2.4 GHz
Communication Agency Approvals/ Certificates*	<ul> <li>FCC 15.247: United Sates of America</li> <li>IC RSS 210: Canada</li> <li>COFETEL: Mexico</li> <li>ETSI, CE mark: European countries</li> <li>ACMA, C-TICK: Australia</li> <li>IDA: Singapore</li> <li>WPC: India</li> </ul>
Antenna type	RP-SMA jack for direct or remote mount antenna options; omni directional standard
Signal range	Nominal 305 m [1000 ft] clear line of sight between Limitless™ switch and monitor/receiver when using 2.2 dBi integral antennas
Internal power option (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, 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- 10g
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	<ul> <li>4-pin M12 micro-connector with three-pole, single keyway female receptacle</li> <li>Cable grip with internal screw connector</li> <li>Note: Maximum cable length 3 m [9.84 ft]</li> </ul>

<sup>\*</sup> Honeywell is continuing to add new Country Communication Agency Approvals as opportunities and requirements are established.

# Limitless™ Single Switch Adapter

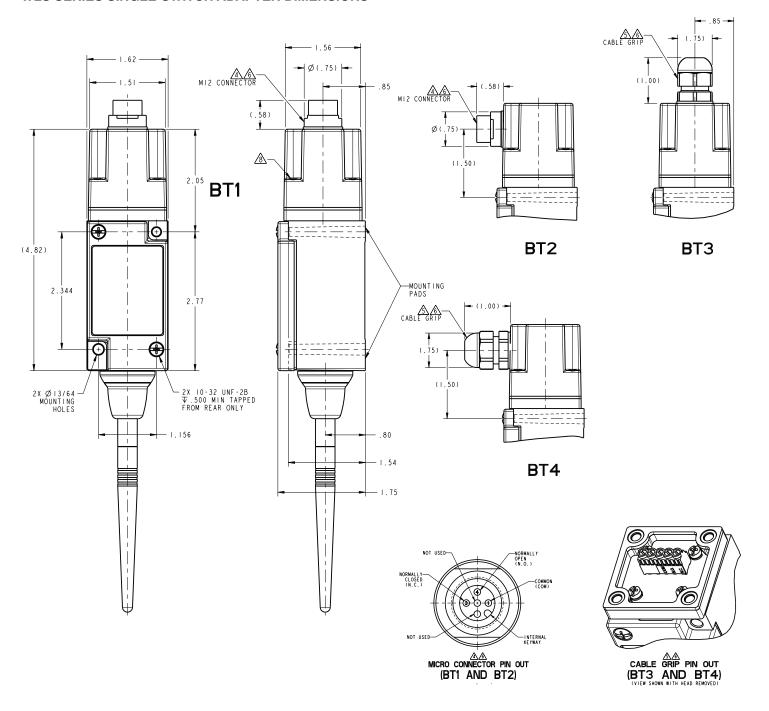
### WLS SERIES SINGLE-SWITCH ADAPTER PRODUCT NOMENCLATURE



#### STANDARD LISTINGS

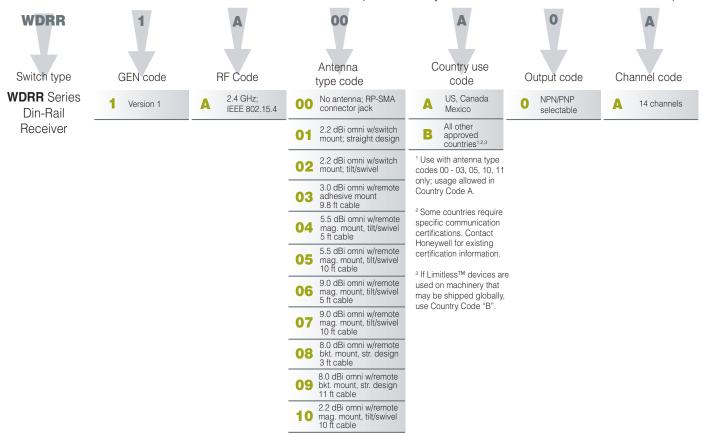
Part number	Description
WLS1A00AQBT1	Limitless™ WLS Series Single Switch Adapter, no antenna, internal battery with M12 micro-connector on top of head for use in US, Canada, and Mexico
WLS1A00BQBT1	Limitless™ WLS Series Single Switch Adapter, no antenna, internal battery with M12 micro-connector on top of head for use in all other approved countries
WLS1A02AQBT1	Limitless™ WLS Series Single Switch Adapter, 2.2 dBi tilt/swivel antenna, internal battery with M12 microconnector on top of head for use in US, Canada, and Mexico
WLS1A02BQBT1	Limitless™ WLS Series Single Switch Adapter, 2.2 dBi tilt/swivel antenna, internal battery with M12 microconnector on top of head for use in all other approved countries
WLS1A11AQBT1	Limitless™ WLS Series Single Switch Adapter, 0 dBi straight antenna, internal battery with M12 micro-connector on top of head for use in US, Canada, and Mexico
WLS1A11BQBT1	Limitless™ WLS Series Single Switch Adapter, 0 dBi straight antenna, internal battery with M12 micro-connector on top of head for use in all other approved countries
WLS1A00AQBT3	Limitless™ WLS Series Single Switch Adapter, no antenna, internal battery with cable grip on top of head for use in US, Canada, and Mexico
WLS1A00BQBT3	Limitless™ WLS Series Single Switch Adapter, no antenna, internal battery with cable grip on top of head for use in all other approved countries
WLS1A02AQBT3	Limitless™ WLS Series Single Switch Adapter, 2.2 dBi tilt/swivel antenna, internal battery with cable grip on top of head for use in US, Canada, and Mexico
WLS1A02BQBT3	Limitless™ WLS Series Single Switch Adapter, 2.2 dBi tilt/swivel antenna, internal battery with cable grip on top of head for use in all other approved countries
WLS1A11AQBT3	Limitless™ WLS Series Single Switch Adapter, 0 dBi straight antenna, internal battery with cable grip on top of head for use in US, Canada, and Mexico
WLS1A11BQBT3	Limitless™ WLS Series Single Switch Adapter, 0 dBi straight antenna, internal battery with cable grip on top of head for use in all other approved countries

### WLS SERIES SINGLE-SWITCH ADAPTER DIMENSIONS



### Limitless™ Single Switch Adapter

### WDRR SERIES RECEIVER PRODUCT NOMENCLATURE (used in conjunction with the Limitless™ WLS switch)



### WPMM SERIES MONITOR PRODUCT NOMENCLATURE (used in conjunction with the Limitless™ WLS switch)



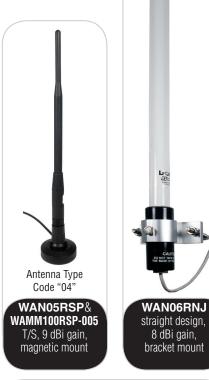
### **ANTENNA OPTIONS**













connector







8 dBi gain,





# Limitless™ Single Switch Adapter

#### **ANTENNA CABLE OPTIONS**

WCA200RNPRSP-002 Cable Assembly: 2 ft1 WCA200RNPRSP-010 Cable Assembly: 10 ft1



<sup>1</sup> use only with WAN06RNJ antenna and when extra cable is desired

WCA200RNJRSP-002 Cable Assembly: 2 feet length<sup>2</sup> WCA200RNJRSP-005 Cable Assembly: 5 feet length<sup>2</sup> WCA200RNJRSP-010 Cable Assembly: 10 feet length<sup>2</sup> WCA200RNJRSP-015 Cable Assembly: 15 feet length<sup>2</sup> WCA200RNJRSP-020 Cable Assembly: 20 feet length<sup>2</sup>

 $^2\,\mbox{Use}$  when extra cable length is desired and allows connection from RP-SMA jack to RP-SMA plug

#### **MOUNTING OPTIONS**

Limitless™ Panel Mount Accessories

WAMM100RSP-005 Magnetic Antenna Mount: w/ 5 ft of cable³

WAMM100RSP-010 Magnetic Antenna Mount: w/ 10 ft of cable³



 $^{\rm 3}$  Use only with WAN01RSP, WAN02RSP, WAN04RSP, WAN05RSP, or WAN08RSP antennas

### Limitless™ Single Switch Adapter

Warranty. 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 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.

#### 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/
1-800-537-6945, visit honeywell.com/limitless, or e-mail inquiries to info.sc@honeywell.com

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### **A** WARNING

### **MISUSE OF DOCUMENTATION**

- The information presented in this datasheet is for reference only. DO NOT USE this document as product installation information.
- 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 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.

### **A** 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. Honeywell customers assume full responsibility for learning and meeting the required Declaration of Conformity, Regulations, Guidelines, etc. for each country in their distribution market.





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

### Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов:
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001:
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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