Honeywell

# Wireless Panel-Mount Monitor

## Limitless™ Monitor

**DESCRIPTION**

The new Limitless™ product line combines the best of MICRO SWITCH™ limit switches with the latest commercial off-the-shelf wireless technology. The Wireless Panel Mount Monitor will provide a visual, audio and NPN output based on a signal received from a Limitless™ switch. The Wireless Panel Mount Monitor will provide immediate indication of an actuator position change of the wireless limit switch.

**FEATURES**

**Wireless electrical design**

- Radio (license-free and global): WPAN 802.15.4, 2.4 GHz, point-to-point
- FCC 15, IC, ACMA and ETSI approvals
- RoHS compliant
- EMI immunity
- Up to 304 m [1000 ft] line-of-sight communication range when used with a Limitless™ switch (sold separately)
- Reliable, flexible, and secure wireless transmission
- 10 Vdc to 30 Vdc supply with NPN Normally Open output
- Diagnostics options
- Can potentially monitor up to 16 wireless switches
- Field pairing function allows for rapid configuration (add or subtract switches)

**Mechanical design**

- 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
- Direct or remote mount antenna

**BENEFITS**

- Ability to reconfigure and network multiple switches, or point-to-point with personalized addresses which allows for adding, subtracting or relocating Limitless™ switches easily
- Reduced installation/maintenance costs with no wiring to Limitless™ switches, conduit, strain relief, clips, connectors, connection boxes, etc.
- Snap-in panel or screw mount design allows flexibility in mounting locations
- LEDs/buzzer indicate Limitless™ switch actuation, low battery, RF signal loss, pairing function as well as diagnostic functions
- Communication security per the IEEE 802.15.4 standard (16-bit PAN (network) ID, 16-bit address and 128-bit security key)

**POTENTIAL APPLICATIONS**

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

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# Limitless™ Series

| Description | Parameter |
|---|---|
| **Product type** | Limitless™ Panel Mount Monitor Series |
| **Series name** | WPMM Series |
| **Availability** | Global, license-free bands |
| **Housing material** | LCP, VECTRA E130i |
| **Housing type** | Snap-in panel or screw mount design |
| **Radio type** | WPAN 802.15.4, 2.4 GHz |
| **Antenna type** | Direct mount or remote antenna options; Omni directional |
| **Signal range** | Nominal 304 m* for International use (Europe and Australia due to signal restrictions); Nominal 1000 ft* for use in US and Canada<br>*clear line of sight between Limitless™ switch and WPMM when using 2.2 dBi integral antenna |
| **Supply voltage** | 10 Vdc to 30 Vdc |
| **Supply current** | 750 mA |
| **Output type** | NPN current sinking; normally open |
| **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);<br>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- 5g |
| **Operating temperature** | -40 °C to 85 °C [-40 °F to 185 °F] |
| **Agency approvals and standards** | FCC 15.247<br>Industry Canada RSS 210<br>ETSI, CE mark<br>ACMA, C-Tick mark |
| **UNSPSC code** | 20142601 |
| **UNSPSC commodity** | 20142601 |

* Actual range will vary depending on antenna, cables, and site topography.

**STANDARD LIMITLESS™ WPMM LISTINGS**

| Part Number | Description |
|---|---|
| WPMM1A02A | Limitless™ WPMM Series Monitor, 2.2 dBi omni antenna (tilt & swivel design), for use in US/Canada |
| WPMM1A03A | Limitless™ WPMM Series Monitor, 3.0 dBi omni antenna with remote adhesive mounting with 9.8 ft cable, for use in US/Canada |
| WPMM1A04A | Limitless™ WPMM Series Monitor, 5.5 dBi omni antenna (tilt & swivel design) with remote magnetic mounting with 5 ft cable, for use in US/Canada |
| WPMM1A05A | Limitless™ WPMM Series Monitor, 5.5 dBi omni antenna (tilt & swivel design) with remote magnetic mounting with 10 ft cable, for use in US/Canada |



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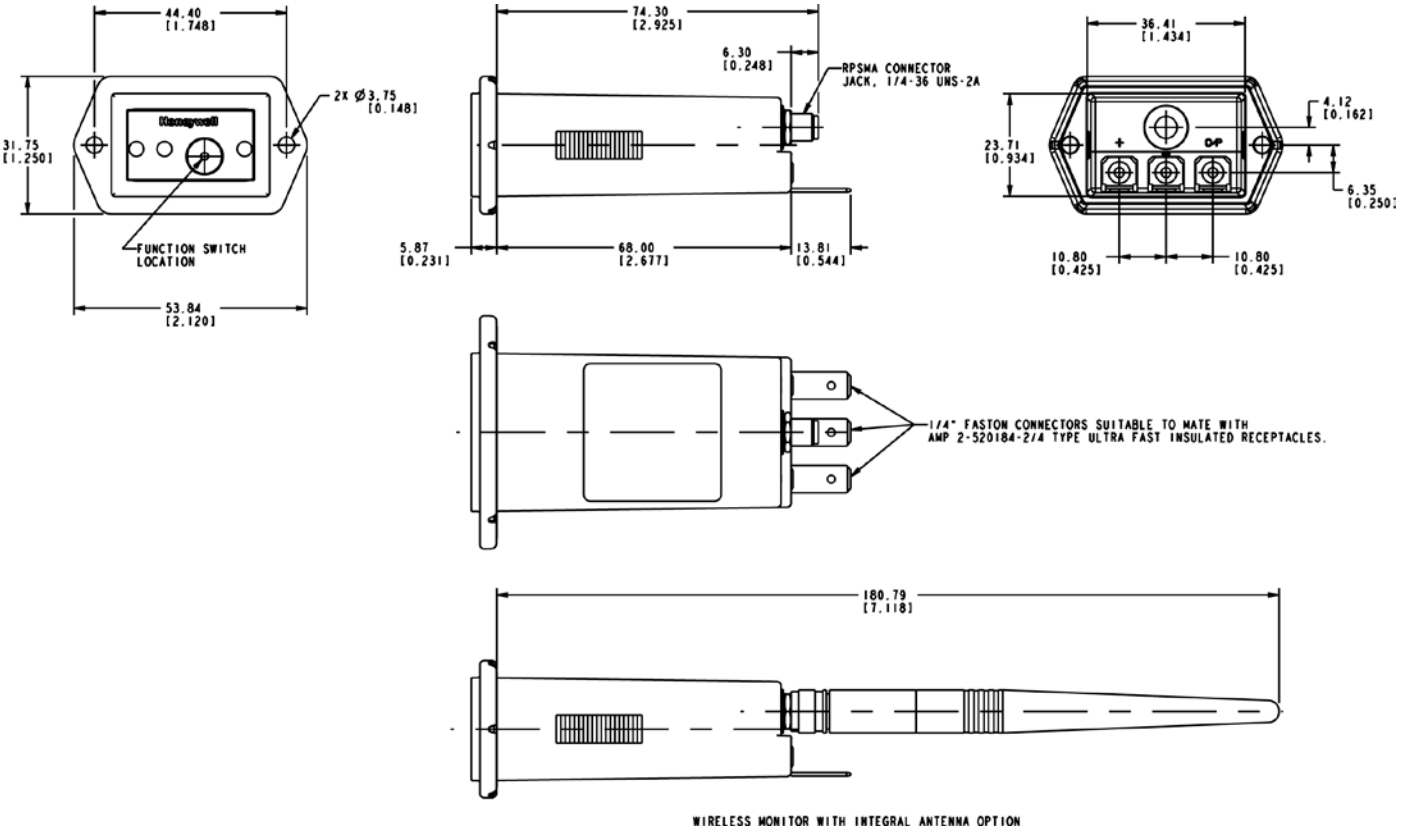
## LIMITLESS WPMM DIMENSIONS




WIRELESS MONITOR WITH INTEGRAL ANTENNA OPTION

## WPMM MONITOR NOMENCLATURE

| WPMM | 1 | A | 00 | A | ___ ___ ___ |
|---|---|---|---|---|---|
| **Monitor type** | **Software version** | **RF Code** | **Antenna type code** | **Country use code** | **Specials** |
| **WPMM** Series Monitor | 1 Version 1 | A 2.4 GHz; IEEE 802.15.4 | 00 No antenna; RP-SMA connector jack<br>01 2.2 dBi omni with switch mount; straight design<br>02 2.2 dBi omni with switch mount; tilt and swivel design<br>03 3.0 dBi omni with remote adhesive mount/9.8 ft cable<br>04 5.5 dBi omni w/ remote mag. mount, tilt&swivel/5 ft cable<br>05 5.5 dBi omni w/ remote mag. mount, tilt&swivel/10ft cable<br>06 9.0 dBi omni w/ remote mag. mount, tilt&swivel/5 ft cable<br>07 9.0 dBi omni w/ remote mag. mount, tilt&swivel/10ft cable<br>08 8.0 dBi omni w/ remote bkt. mount, str. design/3 ft cable<br>09 8.0 dBi omni w/ remote bkt. mount, str. design/11 ft cable<br>10 2.2 dBi omni w/ remote mag. mount, tilt&swivel/10 ft cable | A US, Canada<br>B European Countries*<br>C Australia | Use only if monitor has a special feature. |

*Antenna type codes 00-03, 05, 10; usage also allowed in country codes A & C.



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# Limitless™ Series

**LIMITLESS™ MOUNTING OPTIONS**

| WAM | M | 100 | RSP– | 005 | ___ |
|---|---|---|---|---|---|
| **Mounting** | **Type Code** | **Cable Type** | **Connector Code** | **Length Code** | **Specials** |
| **WAM** Series Antenna Mount | M Magnetic | 100 100 Series Coax | RSP Reverse polarity SMA plug | Not applicable<br>005 5 ft cable length<br>010 10 ft cable length | Use only if mount has a special feature. |

| WPR | 1 | WPB | 1 |
|---|---|---|---|
| **Mounting** | **Type Code** | **Mounting** | **Type Code** |
| **WPR** Series Panel Mount Retainer | 1 Snap-in mounting clip | **WPB** Series WPMM Mounting Bracket | 1 Mounting bracket |

**WAMM100RSP-005/010 Magnetic Antenna Mount**

**WPR1 Panel Mount Retainer**

**WPB1 WPMM Mounting Bracket**

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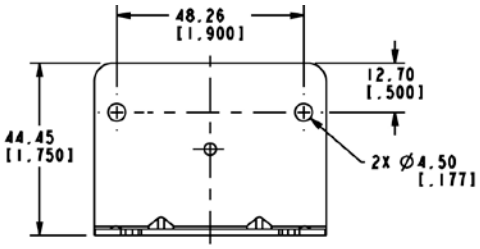
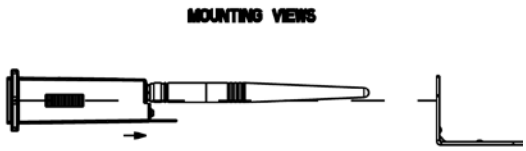
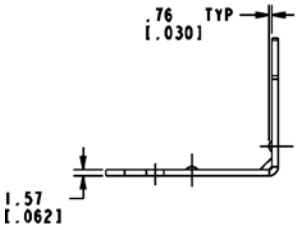
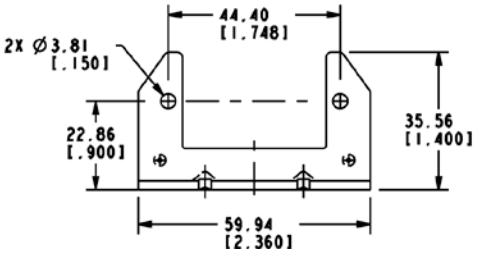
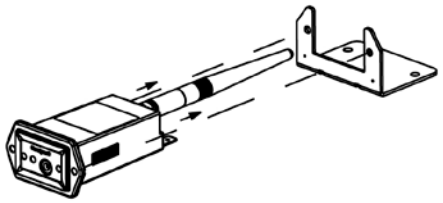
**LIMITLESS™ WPB BRACKET**



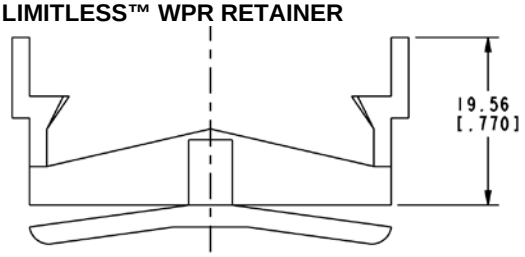



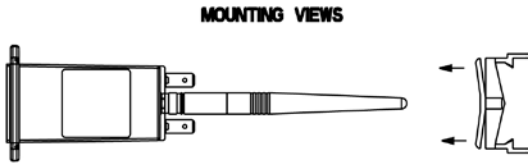



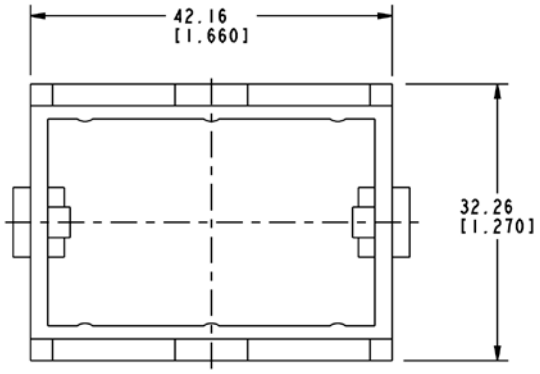



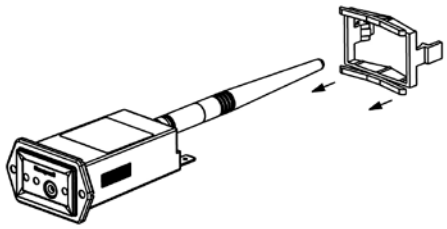



**LIMITLESS™ WPR RETAINER**





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# Limitless™ Series

**LIMITLESS™ ANTENNA OPTIONS**

| WAN | 01 | RSP | ___ ___ ___ |
|---|---|---|---|
| **Antenna type** | **Antenna type code** | **Connector Code** | **Specials** |
| **WAN** Series Antenna | 01 2.2 dBi omni; straight design<br>02 2.2 dBi omni; tilt & swivel des.<br>03 3.0 dBi omni with adhesive mount & 9.8 ft cable<br>04 5.5 dBi omni;*** tilt & swivel des.<br>05 9.0 dBi omni;*** tilt & swivel des.<br>06 8.0 dBi omni w/ bracket, straight des. 1 ft cable | RNJ Reverse polarity N jack**<br>RSP Reverse polarity SMA plug | Use only if antenna has a special feature. |

** Only used with 06 antenna type code
*** Limited outdoor exposure. Protect against direct rain, salt, snow, ice, etc.

**LIMITLESS™ ANTENNAS**

| WAN01RSP Straight Design Direct Mount Connector | WAN02RSP Tilt and Swivel Design, Direct Mount Antenna | WAN05RSP with WAMM100RSP-005 Tilt and Swivel Design, Magnetic Mount Antenna | WAN03RSP Flat Design, Adhesive Mount Antenna | WAN06RNJ Straight Design, Bracket Mount Antenna |
|---|---|---|---|---|
| | | | | |



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**LIMITLESS™ ANTENNA CABLE OPTIONS**

| WCA | 200 | RNP | RSP– | 010 | ___ ___ ___ |
|---|---|---|---|---|---|
| **Cable type**<br>**WCA** Series Cable | **Cable Type**<br>200 200 Series Coax | **Connector Code**<br>RNP Reverse polarity N plug | **Connector Code**<br>RSP Reverse polarity SMA plug | **Length Code**<br>Not applicable<br>002 2 ft cable length<br>010 10 ft cable length | **Specials**<br>Use only if cable has a special feature. |

**LIMITLESS™ CABLE ACCESSORIES**

**WCA200RNPRSP-002/010 Cable Assembly**

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# Limitless™ Series

## ⚠ 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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