

RXW-UCD-900 • RXW-UCD-868 • RXW-UCD-922 • RXW-UCD-921

## HOBOnet Pulse Input - Contact Closure Sensor

A HOBOnet wireless pulse input sensor that connects to sensors with a pulse output; compatible with contact closures.

### Important Information

Compatible with contact closures, such as tipping-bucket rain gauges or reed switches. A complete system requires at least one HOBOnet Wireless Manager, a HOBOnet Wireless Sensor, OR one HOBOnet MicroRX Station (which has an integrated HOBOnet Wireless Manager) and a HOBOnet Wireless Sensor. HOBOnet Wireless Repeaters (RXW-RPTR-xxx or RXW-RPTR-B-xxx) can be added to extend the range.



### Supported Measurements

Pulse Input

### Features

#### Sensor Features

- Maximum input frequency 2 Hz (2 pulses per second)
- Mechanical contact closure

#### Wireless Features

- 900 MHz wireless mesh self-healing technology
- 450 to 600 meter (1,500 to 2,000 feet) wireless range and up to five hops
- Up to 50 wireless sensors or 336 data channels per HOBOnet RX station
- Simple button-push to join the HOBOnet wireless network
- Onboard memory to ensure no data loss
- Powered by rechargeable AA batteries and built-in solar panel

### What's in the box

- HOBOnet Pulse Input - Contact Closure Sensor
- Zip ties and screws for mounting

### Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email [sales@onsetcomp.com](mailto:sales@onsetcomp.com)
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Onset Computer Corporation  
470 MacArthur Boulevard  
Bourne, MA 02532

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support [www.onsetcomp.com/support/contact](http://www.onsetcomp.com/support/contact)
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

## HOBOnet Pulse Input - Contact Closure Sensor (RXW-UCD-xxx) Specifications

### Sensor

<b>Measurement Input Frequency</b>	2 Hz (2 pulses per second)
<b>Measurement Range</b>	0-65,533 pulses per logging interval
<b>Resolution</b>	1 pulse
<b>Lockout Time</b>	327 ms $\pm$ 10%
<b>Recommended Input Type</b>	Mechanical contact closure (example: reed switch in a tipping-bucket rain gauge)
<b>Preferred Switch State*</b>	Normally open
<b>Edge Detection</b>	Falling edge, Schmitt Trigger buffer (logic levels: low =2.7 V)
<b>Minimum Pulse Width</b>	1 ms
<b>Input/Output Impedance</b>	100 K $\Omega$
<b>Open Circuit Input Voltage</b>	3.3 V
<b>Maximum Input Voltage</b>	3.6 V
<b>User Connection</b>	24 AWG wires, 2 leads: white(+), black(-)

### Wireless Mote

<b>Operating Temperature Range</b>	-25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries
<b>Radio Power</b>	12.6 mW (+11 dBm) non-adjustable
<b>Transmission Range</b>	Reliable connection to 457.2 m (1,500 ft) line of sight at 1.8 m (6 ft) high Reliable connection to 609.6 m (2,000 ft) line of sight at 3 m (10 ft) high
<b>Wireless Data Standard</b>	IEEE 802.15.4
<b>Radio Operating Frequencies</b>	RXW-UCC-900 and RXW-UCD-900: 904-924 MHz RXW-UCC-868 and RXW-UCD-868: 866.5 MHz RXW-UCC-921 and RXW-UCD-921: 921 MHz RXW-UCC-922 and RXW-UCD-922: 916-924 MHz
<b>Modulation Employed</b>	OQPSK (Offset Quadrature Phase Shift Keying)
<b>Data Rate</b>	Up to 250 kbps, non-adjustable
<b>Duty Cycle</b>	<1%
<b>Maximum Number of Motes</b>	Up to 50 wireless sensors or 336 data channels per one HOBO RX station
<b>Logging Rate</b>	1 minute to 18 hours
<b>Number of Data Channels</b>	2
<b>Battery Type/ Power Source</b>	Two AA 1.2 V rechargeable NiMH batteries powered by built-in solar panel or two AA 1.5 V lithium batteries for operating conditions of -40 to 70°C (-40 to 158°F)
<b>Battery Life</b>	With NiMH batteries: Typical 3-5 years when operated in the temperature range -20° to 40°C (-4°F to 104°F) and positioned toward the sun (see Deployment and Mounting), operation outside this range will reduce the battery service life With lithium batteries: 1 year, typical use
<b>Memory</b>	16 MB
<b>Dimensions</b>	Cable length: 6.5 m (21.3 ft.) Mote: 16.2 x 8.59 x 4.14 cm (6.38 x 3.38 x 1.63 inches)
<b>Weight</b>	Cable: 250 g (9 oz) Mote: 223 g (7.87 oz)
<b>Materials</b>	Mote: PCPBT, silicone rubber seal
<b>Environmental Rating</b>	Mote: IP67, NEMA 6

