HOBO
Data Loggers

RXW-UCC-900 • RXW-UCC-868 • RXW-UCC-922 • RXW-UCC-921

HOBOnet Pulse Input - Electronic Switch Sensor

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

Important Information
Compatible with electronic switch closures, such as FET or open-collector outputs, or CMOS-level logic signals. A complete system requires at least one HOBO RX3000 Remote Monitoring Station, a HOBOnet Wireless Manager, and a HOBOnet Wireless Sensor, OR one HOBO 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 120 Hz (120 pulses per second)
- Electronic solid-state switch closure or CMOS-level digital output

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 HOBO 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 - Electronic Switch Sensor
- Zip ties and screws for mounting

Contact Us

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

- Email sales@onsetcomp.com
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

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

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

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HOBOnet Pulse Input - Electronic Switch Sensor (RXW-UCC-xxx) Specifications

Sensor

Measurement Input Frequency	120 Hz (120 pulses per second)
Measurement Range	0-65,533 pulses per logging interval
Resolution	1 pulse
Lockout Time	45 µs ±10%
Recommended Input Type	Mechanical contact closure (example: reed switch in a tipping-bucket rain gauge)
Preferred Switch State*	Active low input
Edge Detection	Falling edge, Schmitt Trigger buffer (logic levels: low =2.7 V)
Minimum Pulse Width	1 ms
Input/Output Impedance	100 K?
Open Circuit Input Voltage	3.3 V
Maximum Input Voltage	3.6 V
User Connection	24 AWG wires, 2 leads: white(+), black(-)

Wireless Mote

Operating Temperature Range	-25° to 60°C (-13° to 140°F) with rechargeable batteries -40 to 70°C (-40 to 158°F) with lithium batteries
Radio Power	12.6 mW (+11 dBm) non-adjustable
Transmission Range	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
Wireless Data Standard	IEEE 802.15.4
Radio Operating Frequencies	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
Modulation Employed	OQPSK (Offset Quadrature Phase Shift Keying)
Data Rate	Up to 250 kbps, non-adjustable
Duty Cycle	<1%
Maximum Number of Motes	Up to 50 wireless sensors or 336 data channels per one HOBO RX station
Logging Rate	1 minute to 18 hours
Number of Channels	2
Battery Type/ Power Source	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)
Battery Life	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
Memory	16 MB
Dimensions	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)
Weight	Cable: 250 g (9 oz) Mote: 223 g (7.87 oz)
Materials	Mote: PCPBT, silicone rubber seal
Environmental Rating	Mote: IP67, NEMA 6