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Ultrasonic Snow Depth Sensor

Part Number - 82305

The Ultrasonic Snow Depth Sensor transmits an ultrasonic pulsed sound wave through the air to meet a reflective object, such as snow. When the sound wave makes contact with the target it bounces back toward the sensor. The sensor records the time required for the sound wave to travel to the target and return. Using the speed of sound, the sensor calculates the distance to the object.

Technical Specifications:

Operating Conditions

0.50 to 35 ft. (0.15 to 10.67 m)

Operating Temp: -40° to +140°F (-40° to +60°C)

Electrical

Beam Pattern: 9° off axis

Internal Temperature Compensation

Frequency: 50 kHz

Accuracy: ±0.25% of detected range

Resolution: 0.1 in. (2.5 mm)

Response Time: Programmable (20 ms minimum)

Output

0 to 2.5 VDC

Power

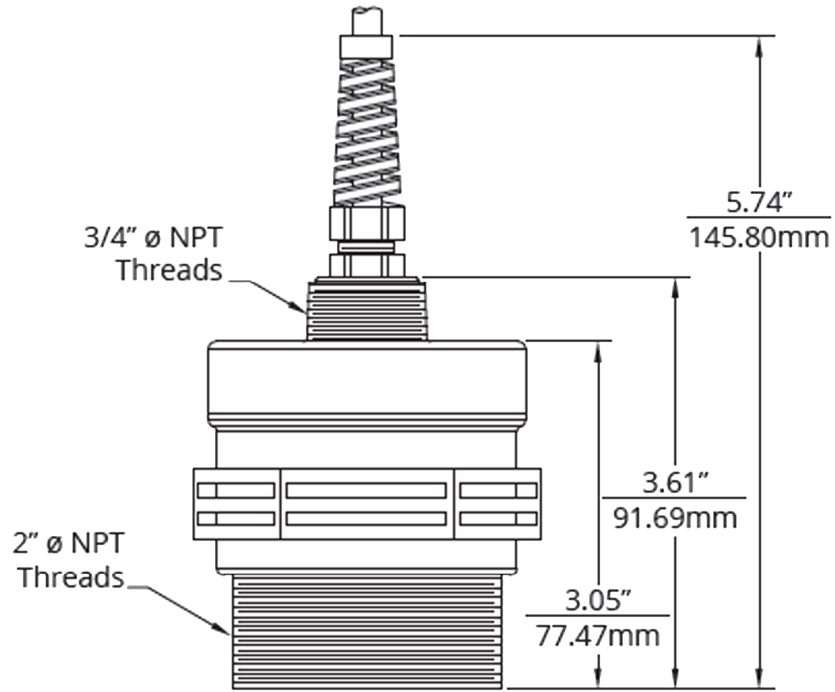
Total Current Draw: 150 mA @ 12 VDC

Supply Voltage: 12 to 28 VDC

Physical Description

- PC/PET upper housing
- PC/PET Blend Transducer
- NEMA 12

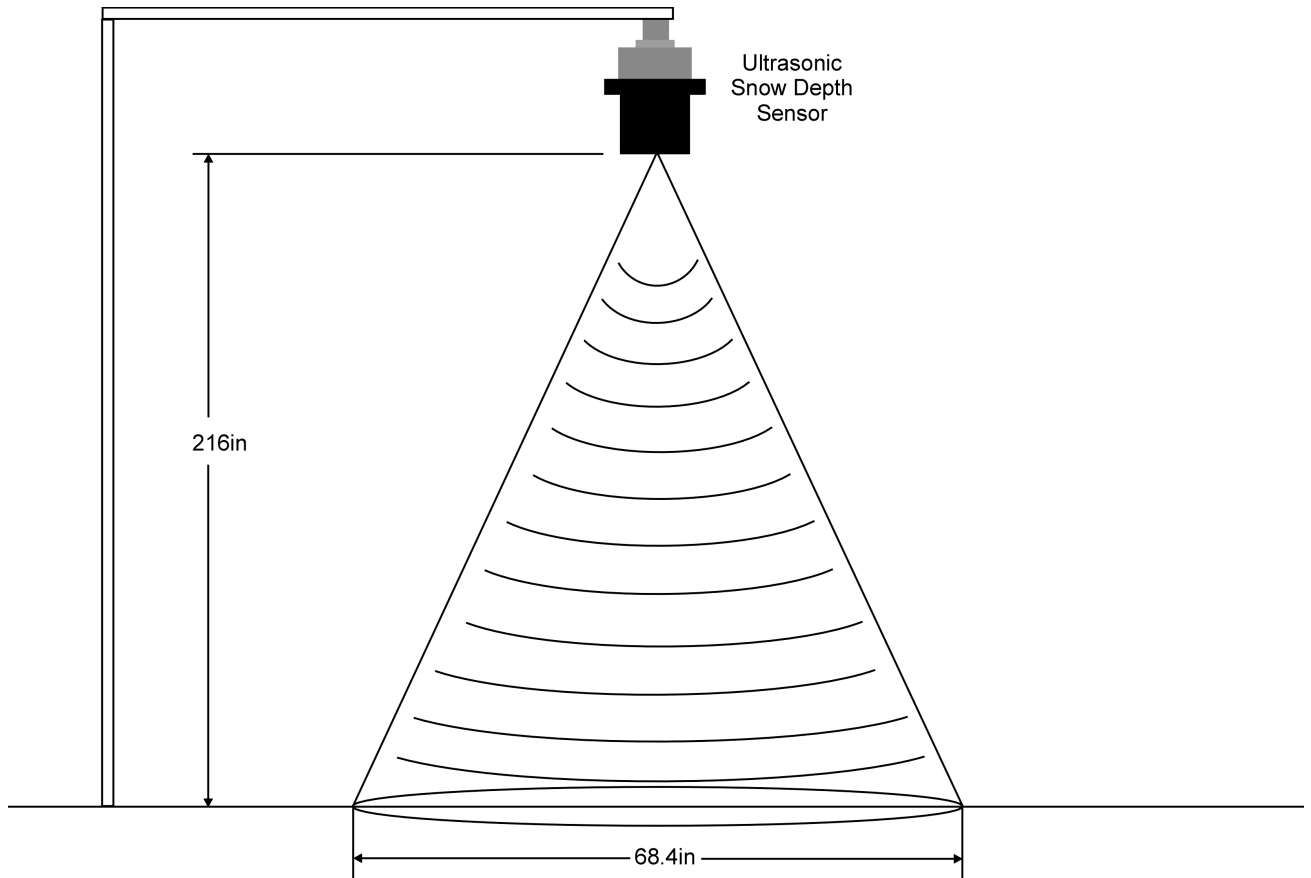
Dimensions



Installation

The sensor is programmed to be mounted at a height of 18ft (216in) from the ground.

At 18ft (216in) the sensor requires a clear area of 68.4 inches in diameter.



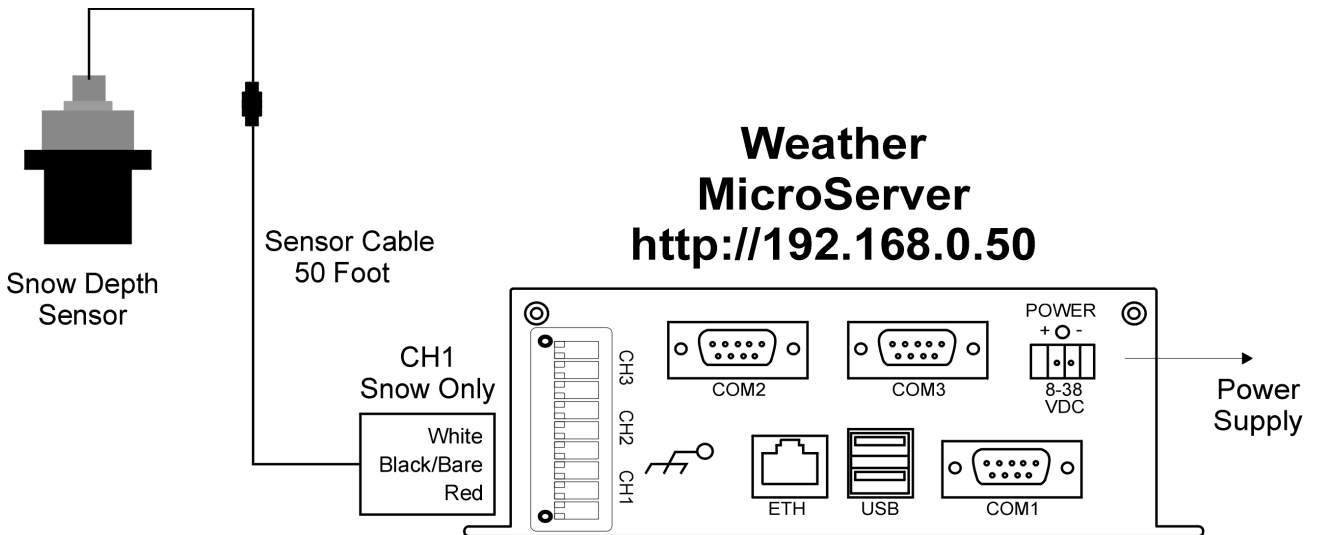
To avoid inaccurate readings the sensor should be mounted away from any obstructions in the measurement area.

The minimum height the sensor can be installed is 10ft (120in) from the ground.

If the sensor cannot be installed at 18ft (216in) an Offset will need to be entered into the MicroServer, please contact Columbia Weather Systems for more information.

Connection to the MicroServer

The MicroServer with additional analog channels is required for use with the Snow Depth Sensor.



The Snow Depth Sensor connects to Channel 1 on the MicroServer.

Connections:

- Pin 1 – Red (+12VDC)
- Pin 2 – Black/Bare (Ground)
- Pin 3 – White (Signal, 0 to 2.5VDC)

The MicroServer is configured at the factory for use with the Snow Depth Sensor with a Factor of 86.4 and a zero (0) Offset.

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