

## SD100 Ultrasonic Distance Sensor



The SD100 ultrasonic depth sensor is an inexpensive solution for remotely measuring snow depth or water levels. The sensor works by measuring the time required for an ultrasonic pulse to travel to and from a target surface. An integrated temperature probe with solar radiation shield, provides an air temperature measurement for properly compensating the distance measured. An embedded microcontroller calculates a temperature compensated distance and performs an error checking routine.

Both distance and air temperature are output as an analog signal between 0 to 2.5 Volts or 0 to 5 Volts. Measurements can also be output digitally as serial ASCII. Specify Analog or Digital output at time order.

Due to the simplified interface, the depth sensor can interface with any datalogger or control system that can delay at least 3 seconds after powering up before measuring the output.

### **Sensor Specifications**

Power: +12 to 24 VDC, 50 mA (maximum sample time 2.6 seconds)

Analog Output: 0 to 2.5 or 0 to 5 VDC

Digital Output: 1200 baud serial ASCII

Range: .5 to 10 meters (1.6 to 32.8 feet)

Beamwidth: 22 degrees

Accuracy: 1 cm or .4 % distance to target

Resolution: 3 mm (.12 inches)

Temp. range: -40 to + 70C (-40 to 158F)

Size: 8 x 8 x 13 cm (3 x 3 x 5 inches)

Weight: .6 kg (1.3 lbs.)

Mounting: 1/2 inch galvanized threaded pipe

Cable length: 7.6 meters (25 feet)

Max. cable length: 304 meters (1000 feet) for Analog output, 76 meters (250 feet) for Digital output

**Sales & Support: Intermountain Environmental, Inc. (435)755-0774 – [www.inmtn.com](http://www.inmtn.com)**