

260-700 Ultrasonic Snow Depth Sensor

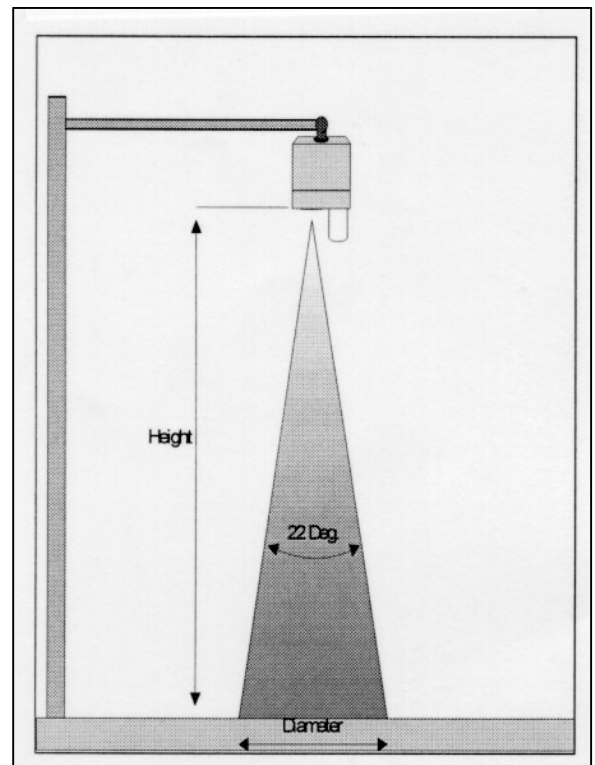
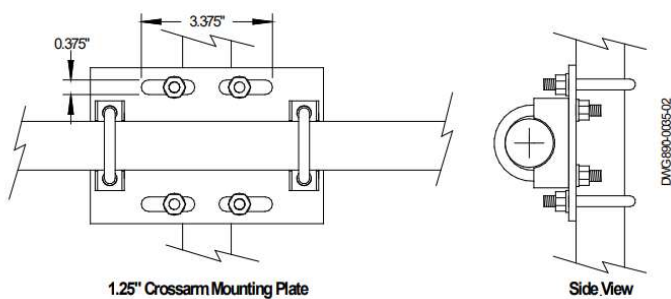
The **260-700 Ultrasonic Snow Depth Sensor** is an inexpensive solution for remotely measuring snow depth or water levels. The sensor works by measuring the time required for an ultrasonic pulse to travel to and from a target surface. An integrated temperature probe with solar radiation shield provides an air temperature measurement for properly compensating the distance measured. An embedded microcontroller calculates temperature compensated distance and performs error checking.



Both distance and air temperature are output as an analog signal between 0 to 2.5 Volts or 0 to 5 Volts. Measurements can be output digitally as serial ASCII. Specify analog or digital output at the time of order. Due to the simplified interface, the depth sensor can interface with any data logger or control system that can delay at least 3 seconds after powering up before measuring the output.

Features

- Snow level or water level measurement
- Range 0.5 to 10 meters (1.6 to 32.8 feet)
- Beam angle ~22 degrees
- Optional mounting arm



Ordering Information

| | |
|-------------|--|
| 260-700-2.5 | Ultrasonic Snow Depth Sensor, Analog 0-2.5 V output, includes 25' cable |
| 260-700-5 | Ultrasonic Snow Depth Sensor, Analog 0-5.0 V output, includes 25' cable |
| 260-700-D | Ultrasonic Snow Depth Sensor, Digital 1200 baud serial ASCII, includes 25' cable |
| 260-700-C | Additional Signal Cable, per foot |
| 260-700-TM | Tower Mounting Arm with 5' Horizontal Mast |
| 260-700-TM2 | Tower Mounting Arm with Two 3' Mast Sections |

| Analog Ultrasonic Snow Depth Sensor | 260-700-2.5 | 260-700-5 |
|--------------------------------------|---|-------------------|
| Analog output | 0 - 2.5 Vdc | 0 - 5 Vdc |
| Scale factor, centimeters | 500 cm/volt | 250 cm/volt |
| Scale factor, inches | 196.85 inches/volt | 98.43 inches/volt |
| Air Temperature scale factor, Kelvin | 200°K / volt | 100°K / volt |
| Range | 0.5 to 10 meters (1.6 to 32.8 feet) | |
| Range accuracy | 1 cm or 0.4% distance to target | |
| Range resolution | 3 mm (0.12 inches) | |
| Temperature range | -40°C to +70°C (-40°F to +158°F) | |
| Temperature sensor accuracy | 1°C, -40°C to +85°C | |
| Temperature sensor resolution | 0.5 °C | |
| Beam angle | ~22 degrees | |
| Electrical | | |
| Power | +12 to +24 Vdc, 50 mA (maximum sample time 2.6 seconds) | |
| Cable | 25 feet (7.6 meters). Maximum cable length 1000' (304 meters) | |
| Environmental | | |
| Enclosure | Enclosure rating IP66 | |
| Mounting | 1/2" NPT female pipe coupling | |
| Operating temperature range | -40°C to +70°C (-40°F to +158°F) | |
| Shipping | | |
| Dimensions | 3" x 3" x 5" (8 x 8 x 13 cm) | |
| Weight | 1.70 lb (0.77 kg) | |
| Weight of additional cable (25') | 0.55 lb (0.25 kg) | |

| Digital Ultrasonic Snow Depth Sensor | 260-700-D |
|--------------------------------------|---|
| Serial output | RS232, 1200 baud (8N1), ASCII characters |
| Range | 0.5 to 10 meters (1.6 to 32.8 feet) |
| Range accuracy | 1 cm or 0.4% distance to target |
| Range resolution | 3 mm (0.12 inches) |
| Temperature range | -40°C to +70°C (-40°F to +158°F) |
| Temperature sensor accuracy | 1°C, -40°C to +85°C |
| Temperature sensor resolution | 0.5 °C |
| Beam angle | ~22 degrees |
| Electrical | |
| Power | +12 to +24 Vdc, 50 mA (maximum sample time 2.6 seconds) |
| Cable | 25 feet (7.6 meters). Maximum cable length 250' (76 meters) |
| Environmental | |
| Enclosure | Enclosure rating IP66 |
| Mounting | 1/2" NPT female pipe coupling |
| Operating temperature range | -40°C to +70°C (-40°F to +158°F) |
| Shipping | |
| Dimensions | 3" x 3" x 5" (8 x 8 x 13 cm) |
| Weight of sensor with 25' cable | 1.70 lb (0.77 kg) |
| Weight of additional cable (25') | 0.55 lb (0.25 kg) |