

Acoustic Snow Depth Sensor 5600-0805 (SR50A)



The 5600-0805 (SR50A) was designed to meet the stringent requirements of measuring depths and uses a multiple echo processing algorithm to help ensure measurement reliability.

The sensor's non-contact method for determining snow or water depth is facilitated by its emitting of an ultrasonic pulse and then measuring the elapsed time between the emission and return of the pulse. An air temperature measurement is required to correct for variations of the speed of sound in air.



MOUNTING OPTIONS

The sensor is typically mounted to a tripod mast, tower leg or user supplied pole to achieve an unobstructed view for the acoustic beam.

The sensor may also be attached to the crossarm using a mounting stem and cross over fitting or right angle mount. Mounting kits are available sold separately.

Specifications

Measurement Time:	<1.0 second
Output Options:	SDI-12 version 1.3, RS-232, RS-485 (output options selected by configuring internal jumpers)
Baud Rates (RS-232, RS-485 modes):	1200 to 38400 bps
Power Requirements:	9 to 18 Vdc (typically powered by datalogger's 12 Vdc power supply)
Power Consumption	
Active (typical):	250 mA
Quiescent	
SDI-12 mode:	<1.0 mA
RS-232/RS485 modes:	<1.25 mA (baud rates \leq 9600 bps); <2.0 mA (baud rates > 9600 bps)
Measurement Range:	1.6 to 32.8 ft (0.5 to 10 m)
Beam Acceptance:	\sim 30°
Resolution:	0.01 inch (0.25 mm)
Accuracy:	\pm 0.4 inch (1 cm) or 0.4% of distance to target (whichever is greatest); requires external temperature compensation.
Operating temperature:	-45° to +50°C
Dimensions	
Length:	4.0 inch (10.1 cm)
Diameter:	3 inch (7.5 cm)
Maximum Cable Length	
SDI-12:	200 ft (60 m)
RS-232:	200 ft (60 m); baud rates \leq 9600 bps
RS-485:	984 ft (300 m); cable lengths greater than 60 m require a heavier gauge wire if the power supply drops below 11 Vdc.
Weight:	2.2 lbs (1.0 kg)