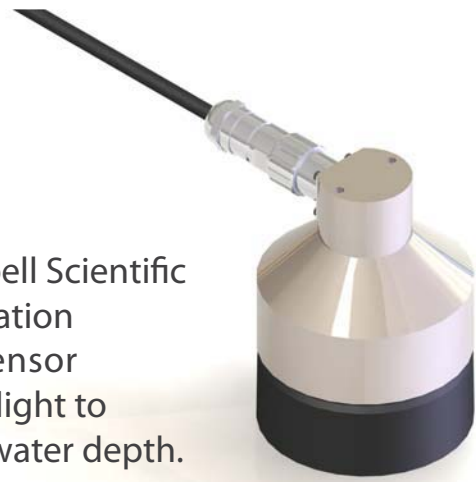


distance sensor

SR50A



The SR50A is Campbell Scientific Canada's new generation acoustic distance sensor measuring time of flight to determine snow or water depth.



The SR50A was designed to meet the stringent requirements of measuring snow depths and uses a multiple echo processing algorithm to help ensure measurement reliability. The SR50A is compatible with all current Campbell Scientific dataloggers as well as many other data acquisition systems.

An air temperature measurement is required to correct for variations of the speed of sound in air. Either the SR50AT or an existing on-site air temperature sensor can be used. The SR50A is available with a heater option for locations where rime ice is a problem.

The SR50AT is an identical unit to the SR50A with the addition of an external temperature sensor. The temperature sensor comes with a standard ten foot lead and requires a 6-plate gill radiation shield. The SR50AT will output a temperature corrected distance reading, eliminating the need for further post-processing, as well as a separate temperature reading.

An optional stainless steel chassis is available in sensor models SR50A-316SS and SR50AT-316SS. The stainless steel chassis is meant to operate in environments where corrosion is a concern (ie. marine).



*SR50A with mounting bracket
part #C2169*



Power Requirements:

Power Consumption:

Measurement Time:

Measurement Range:

Selectable Outputs:

Accuracy:

Resolution:

Beam Acceptance Angle:

Operating Temperature:

Dimensions:

Weight:

Temperature Measurement:

Maximum Cable Length:

Cable Type:

Heater Specifications:

9-18 Volts D.C.

Quiescent: SDI-12 mode <1.0mA
RS-232/RS485 mode <2.0mA *

Active: 250 mA typical

Less than 1.0 second

0.5 to 10 meters (1.6 to 32.8 ft)

SDI-12 (version 1.3)

RS-232 (1200 to 38400 BAUD)

RS-485 (1200 to 38400 BAUD)

±1 cm (.4 in) or 0.4% of distance to target (whichever is greater)

Requires external temperature compensation or
SR50AT version of the sensor (with temperature probe)

.25mm (.01 in)

Approximately 30°

-45°C to +50°C (-49°F to +122°F)

Length 10.1 cm (4 in) Diameter 7.6 cm (3 in)

SR50A - 375g (13.2oz), SR50A-316SS - 795g (28oz)

(SR50AT) 0°C to +50°C (32°F to +122°F) ±0.2° accuracy
-45°C to 0°C (-49°F to 32°F) ±0.75° accuracy

SDI-12 60 meters (200 ft)

RS-232 (9600 BAUD or less) 60 meters (200 ft)

RS-485 300 meters (984 ft) **

4 conductor, 2-twisted pair, 22 AWG, Santoprene (Part # L9720)

Heater Resistance = 75Ω

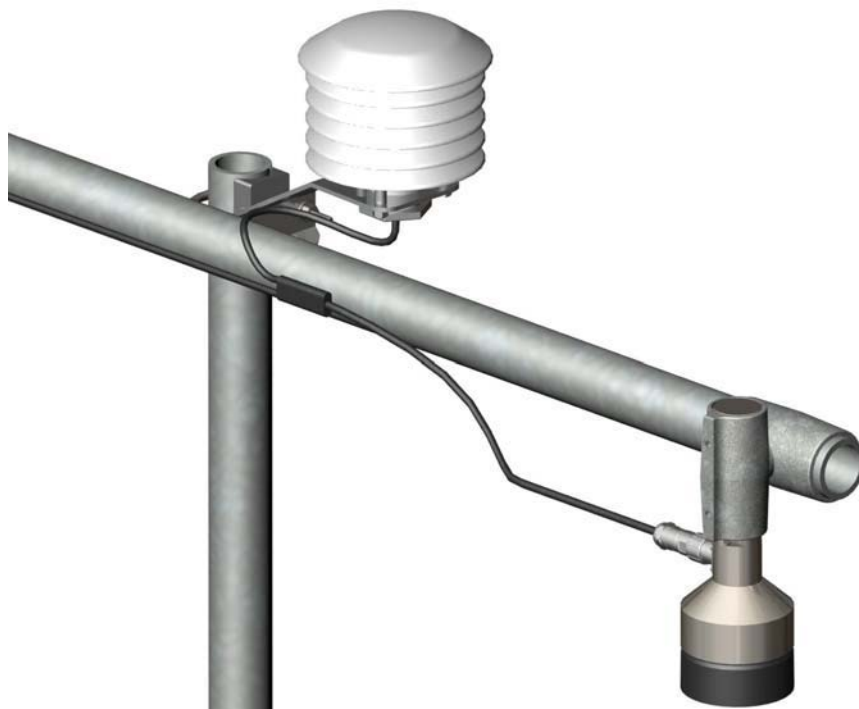
Nominal Operating Range = 12V (AC or DC)

Max Rated Wattage = 3W

* The quiescent current draw is less than 1.25 mA if the BAUD
rate is 9600 BAUD or less

** Power supply must not drop below 11.00 Volts or heavier
gauge wire is required for cable lengths over 60 meters

SR50AT



Additional crossarm mounting options:

SR50ATOM

SR50ATRIM

Optional as required:

C2152 stem

41303-5A 6-plate gill radiation shield



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