

SR50AH
Sonic Ranging Sensor
Heater Option

Instruction Manual

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SR50AH Sonic Ranging Sensor Heater Option

This manual describes the optional heater for the SR50A sensor. It is provided as an addendum to the SR50A manual which should be referred to for general operating instructions.

1 Heater Introduction

The heater option on the SR50AH is intended for installations where rime ice is problematic. The heater will help to prevent the ice from forming on the transducer, which can impair proper operation of the sensor.

The heater option is easily identifiable as the transducer housing contains a cable port for the heater supply cable.

For battery operated solar powered sites it is recommended that the power to the heater be turned off when icing conditions are not occurring to reduce power requirements. The heater power must be turned off when operating at temperatures of 25°C or more.

2 Specifications

Heater Resistance:	75 Ohms
Nominal Operating Voltage	12 Volts (AC or DC) ^{Note1}
Maximum Rated Wattage:	3 Watts
Maximum Rated Voltage:	15 Volts (AC or DC)
Maximum Operating Temperature:	25°C ^{Note2}

2.1 Heating Cable Requirements

Type:	2 conductor (twisted pair), Shielded
Diameter:	4-6mm (0.16 - 0.24 inches)
Recommended Gauge:	22 AWG for lengths less than 30 metres (100 feet)

NOTE

1: It is important to use a properly conditioned low noise power source. A noisy power source or use of unscreened cable may affect operation of the sensor.

NOTE

2: It is recommended that some form of control be used to turn the heater power off at warmer temperatures. Damage to the sensor may result from operation at elevated temperatures.

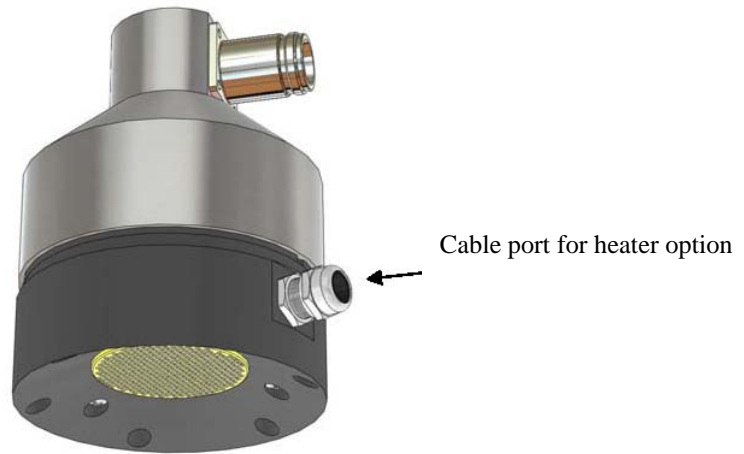


Figure 1 SR50AH Heater option

3 Maintenance

The same maintenance procedures apply to the SR50AH as the regular SR50A sensor. Please refer to the SR50A manual for maintenance information.

The transducer and desiccant replacement is slightly different for the SR50AH as it is for the SR50A. When ordering replacement transducers ensure that the SR50AH part# C2370 is ordered.

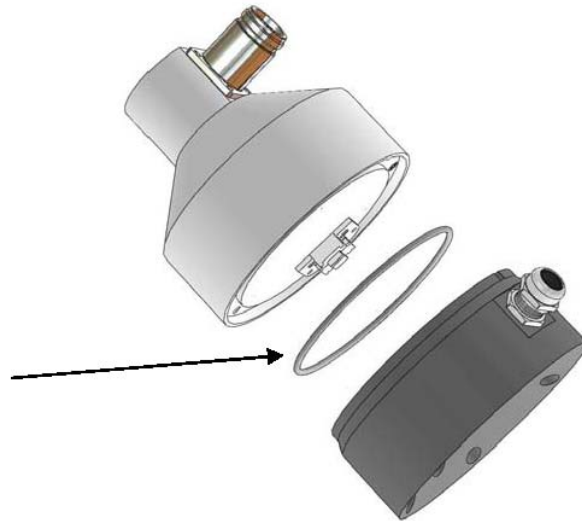
The procedure to disassemble the SR50AH for desiccant replacement or transducer replacement is as follows:

1. Remove the 6 slotted screws on the outermost hole pattern.

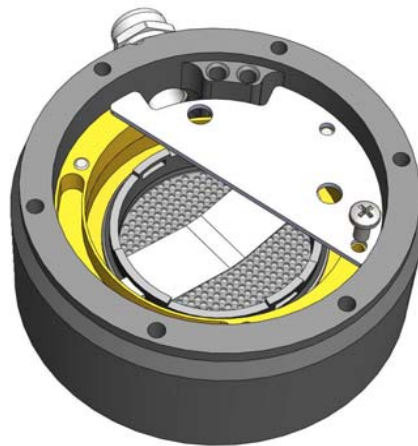


2. Separate the housing from the sensor body and disconnect the connector from the transducer to the main sensor body.

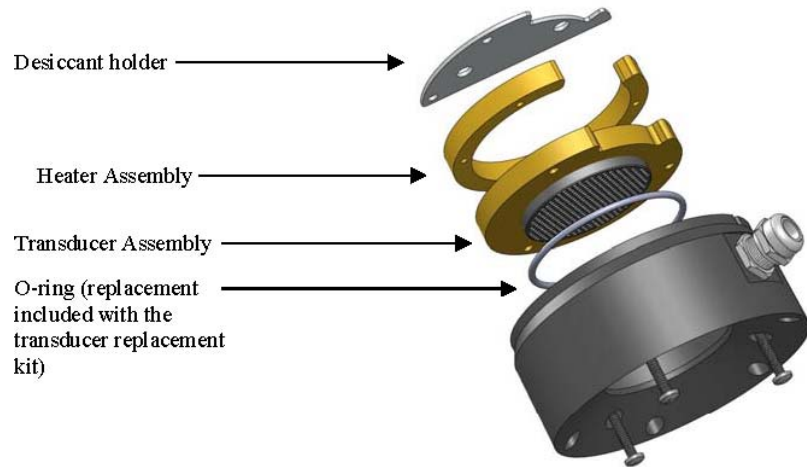
A replacement o-ring is included with the transducer replacement kit



3. To replace the desiccant remove the desiccant holder plate with the Philips 4-40 screw. Cutting the tie strap will allow the old packets to be removed for replacement. During reassembly ensure that the desiccant does not come in contact with the metal backing of the transducer. If only the desiccant is being inspected or replaced, step 4 and 5 are not required. Steps 4 to 6 are required to replace the transducer only.



4. Your transducer kit comes with a replacement for the o-ring that seats between the main sensor body and the plastic transducer housing. Ensure that the new o-ring is used when reassembled.
5. Remove the 3 screws from the innermost hole pattern as shown.



1. Replace the transducer assembly and the second o-ring that seats under the transducer assembly.
2. Reassemble the sensor in the reverse order. Please observe the orientation of the parts, wiring and desiccant.



Figure 2 Complete transducer assembly with power connection

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