

*Maximum
Sensor Protection*

temperature
humidity



Model 43408

Aspirated Radiation Shield

The Aspirated Radiation Shield provides maximum sensor protection from incoming short wave solar radiation and outgoing long wave radiation.

The shield employs concentric downward facing intake tubes and a small canopy shade to isolate the sensor from direct and indirect radiation. A continuous duty blower draws ambient air through the intake tubes and across the sensor minimizing heat transfer to the sensor. Compact shield components reduce radiation-absorption and improve aspiration efficiency. Specially selected plastic materials provide high reflectivity, low conductivity, and maximum weatherability.

The versatile DC blower is designed for continuous duty of 80,000 hours at 25° C. Brushless electronic commutation is achieved using dependable solid state circuitry.



The Temperature Probe is a precision Platinum RTD encased in a stainless steel protective sheath. The sensing element is secured in a convenient junction box that fits YOUNG radiation shields. The probe is available with various output options. The 4-20 mA current output is useful in high noise, industrial settings or for long cable lengths. The 0-1 VDC option provides a calibrated voltage output signal.

The Relative Humidity/Temperature Probe combines a high-accuracy humidity sensor and temperature sensor into one compact unit. The probe is available with 0-1 VDC or 4-20 mA outputs to satisfy a wide variety of applications.



Specifications

Sensor Types:

Accommodates temperature and humidity sensors up to 19 mm (.75 in) diameter

Radiation Error:

@ 1000 W/m² intensity
Ambient Temperature: 0.2° C (0.4° F) RMS
Delta T: 0.05° C (0.1° F) RMS with like shields equally exposed.

Aspiration Rate:

3.4 to 7.6 m/s (11 to 25 fps) depending on sensor size.

Construction:

UV stabilized thermoplastic shield, white.
Aluminum cross tube & mounting brackets, white painted.
Stainless Steel U-bolt clamp

Dimensions:

Length: 110-190 cm (43-75 in) adjustable.
Shield: 34 mm (1.3 in) dia. x 10 cm (4 in) length.
Blower Housing: 15 cm (5.9 in) dia. x 9 cm (3.5 in) length.
Mounting: Adjustable V-blocks and U-bolts fit vertical, horizontal or diagonal tower members 25-50 mm (1-2 in) dia.

Power Requirement:

12 VDC @ 500 mA for blower.
AC adapter included.

Weight:

Net weight- 2.4 kg (5.3 lb)
Shipping weight- 5.9 kg (13 lb)

MODEL 41342 Platinum Temp. Probe

Sensor Type:

1000 Ω Platinum RTD

Range:

Temperature:.....-50° C to +50° C (-50° to +150° F)

Accuracy:

±0.3° C at 0° C(standard)
±0.1° C at 0° C(optional)

Available Outputs:

4 wire RTD 41342
4-20 mA 41342L
0-1 VDC 41342V

MODEL 41382 Rel. Humidity/Temp. Probe

Sensor Type:

Temperature:.....100 Ω Platinum RTD
Humidity:Capacitive Polymer

Range:

Temperature:.....-50° C to +50° C (-50° to +150° F)
Humidity: 0 to 100% RH

Accuracy:

Temperature:±0.3° C
Humidity:±2% RH

Available Outputs: (Power Requirement)

4-20 mA (10-28 VDC, 20 mA) 41382L
0-1 VDC (10-28 VDC, 8 mA) 41382V

Ordering Information

MODEL

GILL ASPIRATED RADIATION SHIELD- WITH 110V / 60 HZ AC ADAPTER	43408
GILL ASPIRATED RADIATION SHIELD- WITH 230V / 50-60 HZ AC ADAPTER	43408H
<i>Note: Standard unit supplied with blank mounting plug. Plug may be drilled to order (26 mm max.)</i>	
TEMPERATURE PROBE- RTD OUTPUT	41342
4-20 mA OUTPUT*	41342L*
0-1 VDC OUTPUT*	41342V*
RELATIVE HUMIDITY/TEMPERATURE PROBE*	
4-20 mA OUTPUT*	41382L*
0-1 VDC OUTPUT*	41382V*
ACCESSORY JUNCTION BOX Specify sensor diameter (10 mm max.)	41390

*SPECIFY TEMPERATURE SCALING:

-50 to +50° C **ADD SUFFIX C**
-50 to +150° F **ADD SUFFIX F**



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