



# MODEL 43502 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 a triple-walled intake tube and multiple canopy shades to isolate the sensor from precipitation and solar radiation.

A continuous duty blower draws ambient air through the intake tubes and across the sensor, minimizing radiation errors. 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 more than 80,000 hours (9 years) at 25° C (77° F). 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.



Ordering information	Model
ASPIRATED RADIATION SHIELD.	43502
TEMPERATURE PROBE- RTD OUTPUT	41342
4-20 mA OUTPUT .....	41342L
0-1 VDC OUTPUT.....	41342V
RELATIVE HUMIDITY/TEMPERATURE PROBE:	
4-20 mA OUTPUT .....	41342L
0-1 VDC OUTPUT.....	41342V
ACCESSORY JUNCTION BOX <i>Specify sensor diameter (10 mm max.)</i>	41390

## SPECIFICATIONS:

### Sensor types:

Accommodates temperature and humidity sensors up to 24 mm (.94 in) diameter

### Radiation error:

Ambient Temperature: 0.2°C (0.4°F) rms @ 1000 w/m<sup>2</sup> intensity  
Delta T: 0.05°C (0.1°C) RMS with like shields

### Aspiration Shields:

5 to 11 m/s (16 to 35 fps) depending on sensor size

### Power Requirement:

12-24 VDC @ 500 mA for blower  
AC adapter included.

### Construction:

UV stabilized white thermoplastic shields and blower housing  
Aluminum mounting bracket, white coated  
Stainless steel U-bolt clamp

### Dimensions

Overall Height: 33 cm (13 in)  
Overall Diameter: 20 cm (8 in)  
Shield: 70 mm (2.8 in) dia. x 12 cm (4.7 in) length  
Blower Housing: 17 cm (6.7 in) dia. x 11 cm (4.3 in)

### Mounting:

V-Block and U-bolt fits vertical post or tower members 25-50 mm dia

### Weight:

Net weight: 1.1 kg (2.5 lb)  
Shipping weight: 2.7 kg (6 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: (Power Requirement)

4 wire RTD .....41342  
4-20 mA (12-30 VDC, 20 mA) .....41342L  
0-1 VDC (8-24 VDC, 5 mA) .....41342V

## MODEL 41382 Rel. Humidity/Temp. Probe

### Sensor Type:

Temperature:.....00 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