

*Naturally Ventilated  
Requires No Power*



Model 41003

**Multi-Plate Radiation Shield**

*The Multi-Plate Radiation Shield protects temperature and relative humidity sensors from error-producing solar radiation and precipitation. Compact size and light weight make this shield useful for many applications.*

The multiple discs have a unique profile that blocks direct and reflected solar radiation, yet permits easy passage of air. The disc material is specially formulated for high reflectivity, low thermal conductivity, and maximum weather resistance. The rugged U-bolt mounting clamp attaches easily to any vertical pipe up to 2 inches diameter.

The Model 41003 employs a universal adapter to securely hold sensors up to 12.5 mm diameter. The Model 41003P uses a special mounting adapter that can be custom sized to fit any sensor from 12.5 mm to 26 mm; specify the diameter when ordering.

The Temperature Probe is a 1000 Ω Platinum RTD encased in a stainless steel protective sheath. The sensing element is securely mounted in a convenient junction box that fits YOUNG radiation shields. For special applications, the temperature 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. Low power circuitry makes it ideal for field studies and remote data-logging applications.

The Relative Humidity/Temperature Probe combines a high accuracy humidity sensor and a 1000 Ω Platinum RTD. Available with 0-1 VDC or 4-20 mA outputs, sensors are mounted in a common junction box.



## Specifications

### Sensor Types:

Accommodates temperature and humidity sensors up to 26 mm (1 in) diameter

### Radiation Error:

@ 1080 W/m<sup>2</sup> intensity- Dependent on wind speed  
 0.4° C (0.7°F) RMS @ 3 m/s (6.7 mph)  
 0.7° C (1.3°F) RMS @ 2 m/s (4.5 mph)  
 1.5° C (2.7°F) RMS @ 1 m/s (2.2 mph)

### Construction:

UV stabilized white thermoplastic plates  
 Aluminum mounting bracket, white  
 Stainless steel U-bolt clamp

### Dimensions:

12 cm (4.7 in) diameter x 27 cm (10.6 in) high  
 Mounting fits vertical pipe 25-50 mm (1-2 in) diameter

### Weight:

Net weight- 0.7 kg (1.5 lb)  
 Shipping weight- 1.4 kg (3 lb)

## MODEL 41342 Platinum Temp. Probe

### Sensor Type:

1000 Ω Platinum RTD

### 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 41372 Rel. Humidity/Temp. Probe

### Sensor Type:

Temperature: .....1000 Ω Platinum RTD  
 Humidity: .....Capacitive Polymer

### Accuracy:

Temperature:  
 ±0.3° C at 0° C ..... (standard)  
 ±0.1° C at 0° C ..... (optional)  
 Humidity: .....3% from 10 to 90% RH  
 4% from 0-10, 90-100%

### Available Outputs: (Power Requirement)

4-20 mA (12-30 VDC, 40 mA) .....41372L  
 0-1 VDC (8-24 VDC, 9 mA) .....41372V

### \*SPECIFY TEMPERATURE SCALING:

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

## Ordering Information

## MODEL

<b>MULTI-PLATE RADIATION SHIELD</b> .....	<b>41003</b>
<i>Includes universal adapter for sensors to 12.5 mm diameter.</i>	
<b>MULTI-PLATE RADIATION SHIELD</b> .....	<b>41003P</b>
<i>With custom sensor adapter. Specify diameter from 12.5 mm to 26 mm.</i>	
<b>TEMPERATURE PROBE- RTD OUTPUT</b> .....	<b>41342</b>
<b>4-20 mA OUTPUT*</b> .....	<b>41342L*</b>
<b>0-1 VDC OUTPUT*</b> .....	<b>41342V*</b>
<b>RELATIVE HUMIDITY/TEMPERATURE PROBE:</b>	
<b>4-20 mA OUTPUT*</b> .....	<b>41372L*</b>
<b>0-1 VDC OUTPUT*</b> .....	<b>41372V*</b>
<b>ACCESSORY JUNCTION BOX</b> <i>Specify sensor diameter (6 mm max.)</i> .....	<b>41390</b>



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