



*Naturally Ventilated
Requires No Power*

temperature
humidity



Model 41003

Multi-Plate Radiation Shield



YOUNG

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 plates have a unique profile that blocks direct and reflected solar radiation, yet permits easy passage of air. Enlarged top plate and steep edge profile minimize moisture accumulation from precipitation and dew. The plate 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.

Model 41003 employs a universal clamp-type adapter to securely hold sensors up to 12.5 mm diameter. Model 41003P features a special mounting adapter that is custom sized to fit a sensor from 12.5 mm to 26 mm diameter; please specify the sensor diameter when ordering.

The Temperature Probe is a precision Platinum RTD encased in a stainless steel protective sheath.



The sensor assembly 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 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 26 mm (1 in) diameter

Radiation Error:

① 1080 W/m² 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 powder coated
 Stainless steel U-bolt clamp

Dimensions:

13 cm (5.1 in) diameter x 26 cm (10.2 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

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: 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

*SPECIFY TEMPERATURE SCALING:

-50 to +50° C add suffix C
 -50 to +150° F add suffix F

Ordering Information

MODEL

MULTI-PLATE RADIATION SHIELD	41003
<i>Includes universal adapter for sensors to 15 mm diameter.</i>	
MULTI-PLATE RADIATION SHIELD	41003P
<i>With custom sensor adapter. Specify diameter from 12.5 mm to 26 mm.</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 <i>Specify sensor diameter (10 mm max.)</i>	41390



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