Maximum Protection, Compact

temperature

humidity



YOUNG

Model 43502

Aspirated Radiation Shield

YOUNG

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*	41382L*
0-1 VDC OUTPUT*	41382V*

*SPECIFY TEMPERATURE SCALING:

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

CE Complies with applicable CE Directives

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/m² intensity
Delta T: 0.05° C (0.1° F) RMS with like shields equally exposed.

Aspiration Rate:
5 to 11 m/s (16 to 35 fps) depending on sensor size.

Power Requirement:
12-14 VDC @ 500 mA for blower.
AC adapter included.

Construction:
UV stabilized white thermoplastic shield 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 (1-2 in) 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:
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:
4-20 mA (10-28 VDC, 20 mA) 41382L
0-1 VDC (10-28 VDC, 8 mA) 41382V

Copyright © 2006 R.M. Young Company. Specifications subject to change without notice. Printed in USA. 11/06

YOUNG
R.M. YOUNG COMPANY
2801 Aero Park Drive
Traverse City, Michigan 49686 USA
TEL: (231) 946-3980 FAX: (231) 946-4772
E-mail: met.sales@youngusa.com
Web Site: www.youngusa.com