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Self-Aspirated Radiation Shield Model 8141

- Material specially formulated for high reflectivity and low thermal conductivity
- Three models available
- Resistant to UV light



Overview

The Self-Aspirated Radiation Shield is designed to house temperature and humidity sensors in an environment protected from the thermal effects of solar radiation and precipitation. This shield is typically used in applications where the AC power required by motor-aspirated radiation shields is not available.

Models

Three models are available to accommodate any one of several temperature and relative humidity sensors. A threaded hex plug adapter secures the sensor inside the shield, while providing easy access to the probe at time of calibration.

Features

The shield is constructed of 12 thermoplastic discs that block direct and reflected solar radiation from all angles, while permitting air flow past the sensor due to convection and wind. The disc material is specially formulated for high reflectivity and low thermal conductivity, and is resistant to ultraviolet light for improved weatherability.

Mounting

The shield mounts to a vertical mast or tower leg with an outside diameter of 1-2 inches (25-50 mm). Mounting hardware and sensor hex plug adapter are included.

SENSORS

SPECIFICATIONS

Parameter	Specification
Capacity	One probe (humidity, temperature, or humidity/temperature combination)
Radiation Error	Dependent on solar radiation intensity and wind speed velocity
At 1080 W/m ²	0.7° F (0.4° C) RMS @ 6.7 MPH (3 m/s) 1.3° F (0.7° C) RMS @ 4.5 MPH (2 m/s) 2.7° F (1.5° C) RMS @ 2.2 MPH (1 m/s)
Material	White thermoplastic, UV stabilized; gloss white painted aluminium mounting bracket with stainless steel U-bolt.
Operating Temp. Range	-58° to +122° F (-50° to +50° C)
Mounting	U-Bolt fitting 1-2" (25-50 mm) O.D. vertical pipe

ORDERING INFORMATION

Part Number	Description
8141-A	SARS for 5120 & 5129 series probes
8141-B	SARS for 4470 & 4480 series probes
8141-D	SARS for 5190 series probes
8141-001	User's Manual for 8141 series SARS
81413	Adapter Plug: 0-12 mm
81414	Adapter Plug: 15 mm

DIMENSIONS & WEIGHTS

Unit Size	4.7" Diameter x 10.6" H (12 x 27 cm)
Unit Weight	1.5 lbs. (0.7 kg)
Shipping Dimensions	11.25" x 8" x 6" (28.6 x 20.3 x 15.2 cm)
Shipping Weight	3 lbs. (1.4 kg)



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