Radiation Shields

The RAD Series radiation shields have an innovative design to reduce overheating when solar radiation is high and wind speed is low. This is also effective in the winter when the sun's angle is low or there is reflection of snow.

The design of the shield has a white outer reflective surface combined with an inner barrier of non-reflective, black louvres. This prevents sunlight and reflected radiation reaching the sensor whilst still allowing air to flow across the sensor. This design is based on the MET Series Stevenson screen which is now established as an industry standard and sold to National Meteorological Services worldwide.

Trials carried out over the past years have confirmed that errors under adverse conditions are typically half those compared to similar shields.

Key Features

- Accuracy in trials comparable to Stevenson screens
- Less sensitive to rainfall events
- Improved protection against wind-blown precipitation
- Secure sensor installation with stable mounting mechanism
- Durable UV stable plastic
- No power required

Introducing our new range of radiation shields, designed to house temperature and humidity probes and protect them from the heating effects of solar radiation and direct exposure to rain and snow.
Benefits over existing models on the market include:

- Improved accuracy proven in recent comparison trials
- Unique double louvered construction
- Highly durable, non-yellowing, UV stable plastic
- Accommodates complete range of sensor sizes

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Dimensions and weights

RAD 01 :

Shield only

Overall diameter : 165 mm / Height : 172 mm

Shield with bracket

Height : 303 mm / Weight : 1,05 kg

RAD 02 :

Shield only

Overall diameter : 165 mm / Height : 274 mm

Shield with bracket

Height : 405 mm / Weight : 1,34kg

Probe compatibility

RAD 01 :

Houses shorter probes with up to 120 mm inside the shield.
Standard diameter range : 5 - 12 mm.

RAD 02 :

For all longer probes.
Standard diameter range : 14 - 25 mm.

Optional: smaller or larger tightening glands can be fitted on both models if required.

Accuracy

Testing of these Shields has been carried out by Campbell Scientific Ltd, UK and the results are published with their kind permission :

Typical solar heating errors :

In conditions of high solar radiation and wind speeds : less than 1 m/s the readings were compared with an aspirated shield.
RAD 01 Small version : +0,75°C
RAD 02 Large version : +0,5°C
These errors are less than half those recorded in other similar shields on the market and the performance is comparable to the Stevenson screens, although the time constant of our new shields is shorter.

Specifications

- Double louvered high impact thermoplastic
- White external layer, with U.V. stabilizer for long-term weather resistance
- Extra black internal layer
- Aluminum arm with durable white powder coating
- A4 grade (316), stainless steel 'U' bolt and securing nuts to fit a pole of between 25 – 51 mm diameter
- Black acetal plastic locating clamp

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