

**43347****RTD Temperature Probe**

Very High Accuracy

Good for air-quality applications

Overview

The 43347, manufactured by R. M. Young, is a highly accurate RTD that often provides delta temperature measurements for

air-quality applications. To greatly reduce radiation errors, house your 43347 in a 43502 fan-aspirated radiation shield.

Benefits and Features

- › Uses 1000 Ω RTD for highly accurate air temperature measurements
- › Well-suited for air-quality applications
- › 43502 fan-aspirated radiation shield reduces radiation errors for more accurate measurements
- › Ideal for delta temperature measurements used in calculating atmospheric stability class

Detailed Description

To determine delta temperature, a 43347 probe mounted in a 43502 shield is attached to the mast of a UT20 or UT30 tower, while another 43347 probe mounted in a 43502 shield is attached to the tower at a 2-m height. (The 43502 attaches to the legs of a UT20 or UT30 tower via a CM202, CM203, CM204, or CM206 crossarm. Two CM210s can be used to attach the crossarm to two tower legs.) The temperature difference of the two measurement heights is calculated and used to determine atmospheric stability as required by the EPA.

The 43347 may also be housed in a 41003-5 Naturally Aspirated Shield if fan-driven aspiration is not required. Additional hardware is required (see Ordering Info and Compatibility).

The standard 43347 probe has an RTD uncertainty of $\pm 0.3^{\circ}\text{C}$. If increased accuracy is required, a three-point calibration can be ordered that allows the RTD to have an uncertainty of only $\pm 0.1^{\circ}\text{C}$.

Specifications

Sensor Description 1000 Ω Platinum RTD

Measurement Description Temperature



Signal Type/Output	Analog voltage
Operating Temperature Range	±50°C
Range	±50°C
Accuracy	±0.3°C at 0°C; ±0.1°C with NIST calibration
Temperature Coefficient	0.00375 Ω/Ω °C
Radiation Error / Ambient Temperature	< 0.2°C RMS at 1000 W/m ² intensity (when housed in the 43502 shield)

Radiation Error / Delta T	< 0.05°C RMS with 43502 shields equally exposed (when housed in the 43502 shield)
Stainless-Steel Sheath Diameter	0.478 cm (0.188 in.)
Stainless-Steel Sheath Length	6.12 cm (2.41 in.)
Probe Tip Length	10.08 cm (3.97 in.) stainless-steel sheath and molded plastic
Length	17.8 cm (7 in.)
Weight	0.54 kg (1.2 lb)