

# Thermal Vial™ Temperature Sensing System



## Overview

- Ideal for ultralow freezers, laboratories, blood banks, walk-in freezers and refrigerators, even incubators—anywhere accurate sensing of the contents instead of the air is a vital concern.
- Sealed Polyethylene Thermal Vial™ eliminates spillage and contamination. Simply fill with fluid such as ethylene glycol, alcohol, water, or a cryopreservative to accurately emulate the material being stored or processed.
- Large (50 mm x 50 mm) footprint of the single well vial provides stability on a shelf or rack. Holds 175 ml (6 oz) of fluid. Other vial configurations are available. See next page.
- Platinum RTD probe is constructed of 316 Stainless Steel and operates to -200°C (-328°F).
- Metal shielded cable is rugged and washdown proof.
- 4 to 20 mA transmitter is match calibrated to the RTD for improved system accuracy.
- System accuracy is a variable
- NIST certificate and calibration data supplied at no additional cost.
- Additional accessories available.
- Customizable for validation requirements.
- Connection box and indicator are polycarbonate and NEMA 4X sealed to be washdown proof.

## Specifications

**Probe case:** Stainless steel.

**Element:** Platinum.

**Resistance (excluding leadwire resistance):**

PM platinum: 100.00 Ω ±.06% at 0°C (32°F) (Class A).

PD platinum: 100.00 Ω ±.12% at 0°C (32°F) (Class B).

PF platinum: 1000.00 Ω ±.12% at 0°C (32°F).

**TCR:** .00385 Ω/Ω/°C nominal from 0°C to 100°C.

**Operating temperature range:**

Probe and vial: -200 to 120°C (-328 to 248°F).

Transmitter: -25 to 85°C (-13 to 185°F).

**Insulation resistance:** 1000 megohms minimum at 500 VDC, leads to probe case.

**Leads:** AWG #22, stranded, TFE insulated, with TFE jacket overall.

**Thermal vial:** Polyethylene bottle with cap.

**Thermowell:** Delrin material.

**Transmitter:** 4-20 mA output; 8.5 to 35 VDC loop powered.

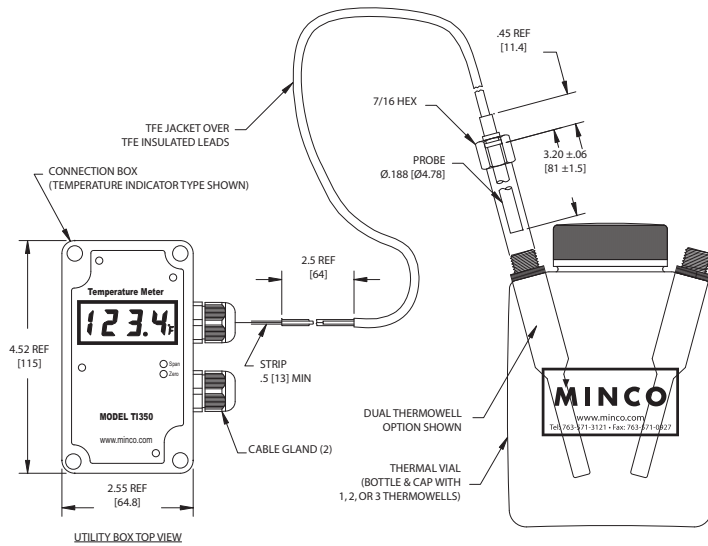
**Connection box:** Polycarbonate enclosure, NEMA 4X.

## Specification and order options

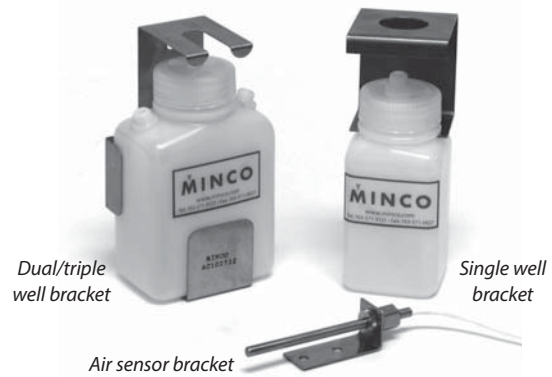
AS103282	Model number
PM	Sensing element, .00385 TCR: ▼ PM = 100 Ω Platinum ±.06%, Class A PD = 100 Ω Platinum ±.12%, Class B PF = 1000 Ω Platinum ±.12%
60	Cable length in inches ▼: 60, 120
D	Vial configuration: ▼ S = Single thermowell, standard vial ▼ D = Dual thermowell T = Triple thermowell ▼ M = Single thermowell, miniature vial L = Single thermowell, large vial
C	Connection box type: ▼ C = Indicating °C      ▼ F = Indicating °F ▼ B = Non-indicating
20	System accuracy: 75 = .75% of span      50 = .50% of span ▼ 20 = .20% of span or .1°C, whichever is greater
EZ	Temptran temperature range code: ▼ EZ = -100/0°C (-148/32°F) ▼ M = -50/50°C (-58/122°F) C = 0/100°C (32/212°F) More ranges starting on page 4-20.
AS103282PM60DC20EZ = Sample part number	

▼ = **STANDARD OPTIONS**  
Specifications subject to change

# Thermal Vial™ Accessories



## Available Accessories



Description	Capacity		Model
Single	6 oz.	175 ml	AC101394
Dual	8 oz.	250 ml	AC102026
Triple	8 oz.	250 ml	AC102647
Mini	2 oz.	60 ml	AC103316
Large	32 oz.	1000 ml	AC102551

Description	Model
Single well bracket	AC101540
Dual/triple well bracket	AC102732
Air sensor bracket	AC102074



Description	Model
Loop-powered indicating	TI350
Non-indicating	CH102777

▼ = STANDARD OPTIONS  
Specifications subject to change

HVAC SENSORS