

Thermal Vial™ Temperature Sensing System

Measure the temperature of the contents, not the air



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.
- 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.
- NIST/SI 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.

Specification and order options

AS103282	Model number
PM	Sensing element, .00385 TCR: PM = 100Ω Platinum +/-0.06%, Class A PD = 100Ω Platinum +/-0.12%, Class B PF = 1000Ω Platinum +/-0.12%
60	Cable length in inches: 60, 120 are standard
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: 20 = .20% of span or .1°C, whichever is greater 50 = .50% of span 75 = .75% of span
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)
See pages 42-43 or contact Mod-tronic for a complete list of available temperature codes.	
AS103282PM60DC20EZ = Sample part number	

Thermal Vial Temperature Sensing System

Technical Details and accessories

Technical Details

Probe case: Stainless steel.

Element: Platinum.

Resistance (excluding leadwire resistance):

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

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

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

TCR: .00385 $\Omega/\Omega/^\circ\text{C}$ 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.

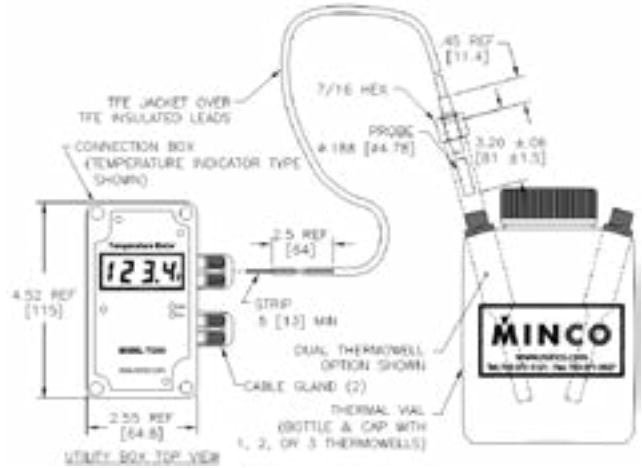
Leads: AWG #22, stranded, TFE insulated, with TFE jacket overall.

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.



Bracket accessories

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



Bottle accessories

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



Junction box accessories

Description	Model
Loop-powered indicating	TI350
Non-indicating	CH102777