343 Dual K-type Thermometer

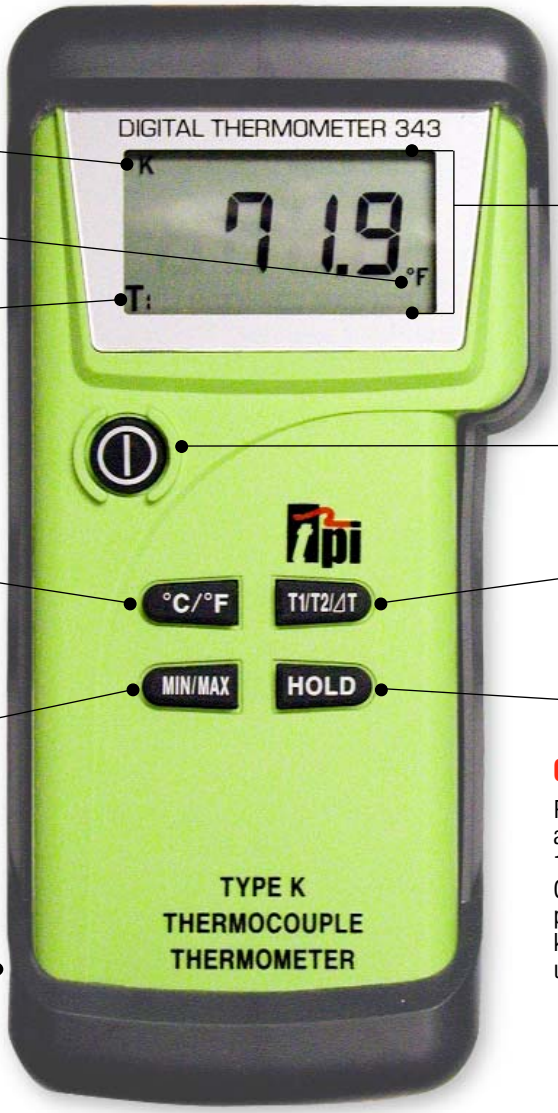
343 APPLICATIONS

HVAC/R
- Ambient Air
- Calibrate Thermostats
- Compressor Heads
- Registers
- Temperature Differential
- Vents

FOOD
- Grill & Surface Temperatures

ELECTRICAL
- Cables
- Circuit Breakers
- Connections
- Machinery
- Motors & Transformers

The Value Leader™



Thermocouple type indicator

°F/°C unit selector

Display mode indicator (T1, T2, T1-T2)

Select between Celsius or Fahrenheit display

Record and display minimum and maximum temperatures

Protective rubber boot

Shown actual size:
5.75" x 2.75" x 1.5"
41mm x 152mm x 77mm

Easy-to-read main display

Displays OFL to display disengaged or open probe

On/off button with guard to prevent accidental engagement

Select input T1 or T2 and display temperature differential (T1-T2)

Freezes the reading on the display

CALIBRATION

Perform ice bath calibration* to achieve ±1°F within the 30°F to 120°F temperature range. Calibration is an easy two-step process performed through the keypad and does not require the use of additonal tools.

KITS AVAILABLE:

343C1 (For High Temperature, over 400°F):
343; A304 tilt-stand protective boot; (2) GK11M fiberglass, beaded, K-type thermocouple probes; A340 soft pouch

343C2 (For Low Temperature, under 400°F):
343; A304 tilt-stand protective boot; (2) GK13M Teflon, beaded, K-type thermocouple probes; A340 soft pouch

343C3 (For Differential Temperature):
343; A304 tilt-stand protective boot; (2) CK21M K-type thermocouple pipe clamp probes; (1) GK13M Teflon, beaded, K-type thermocouple probe; A908 shoulder strap carrying case

* Ice bath calibration is performed to account for accuracy variations in thermocouple probes and to achieve +/-1°F within the 30°F to 120°F temperature range. Use the VKF300M to verify accuracy of K-type thermometers at several different temperatures and calibrate the TPI 343.

ACCESSORIES: *See back page for additional accessories.*

Pipe Clamp Probe CK21M

- **Saves Time and Frees Hands!**
- **More Accurate than non-mechanical connections!**

Standard w/ 343C3, optional w/ 343C1 & 343C2.

For pipe diameters up to 1.2'' (30 mm) and temperatures up to 212° F (100° C)

Calibrator VKF300M

Use to verify accuracy of K-type thermometers and calibrate the TPI 343. Reliable K-type thermocouple, low-battery indicator, and easy on-site thermometer calibration checking. Accuracy at 23°C is ±0.5 or 0.9% °F.

Shoulder Stap Case A908

Standard with 343C3 kit

Tilt Stand A304

Standard on all 343 kits.

Specifications and Optional Probes

TPI offers a complete line of…

- CO, Combustibles & Combustion (CEA)
- Refrigerant Leak Detectors
- Digital Manometers
- Temperature Contact & IR Instruments
- IAQ: Air Flow & Humidity
- Handheld Oscilloscopes
- Digital Multimeters & Clamp-on Meters
- Accessories & Kits

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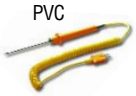
343 SPECIFICATIONS:

Input	Dual K-type thermocouple
Temperature Range	-58°F to 2,462°F (-50°C to 1,350°C)
Display	0.1°C/°F : up to 999.9°C/°F 1.0°C/°F : above 1,000°C/F
Accuracy	±3°F(±1.6°C) from: -58°F to 32°F (-50°C to 0°C) ±0.3% of rdg +1.8°F (1°C) from: 32°F to 1,100°F (0°C to 600°C) ±0.4% of rdg +1.8°F (1°C) from: 1,100°F to 2,462°F (600°C to 1,350°C)
Update Rate	2.5 times/second
Key Buttons	On/Off, T1, T2, T1-T2, °C, °F, HOLD
Field Calibration	By key operation
Operating Temperature	32°F to 122°F (0°C to 50°C)
Storage Temperature	-13°F to 158°F (-25°C to 70°C)
Battery	9V
Battery Life	200 hours (Alkaline)

OPTIONAL K-TYPE PROBES:

Model # Description	Application	Range °F °C	Stem Length Diameter Lead Length	Insulation Material
CK18M Wide contact surface probe	Restaurant Grills	-58° to 500°F -50° to 250°C	NA 39.4" (1M) .39" (10mm)	Polyurethane 
CK21M K-type thermocouple pipe clamp for pipe diameters up to 1.2" and temp. up to 212°F	Pipe Clamp	-58° to 212°F -50° to 100°C	NA .39"(10mm) 39.4"(1M)	PVC 
FK26M Use with Pete's plugs to measure water temp. and temp. up to 212°F	For Pete's Plug	-40° to 400°F -40° to 204°C	2.5"(63.5mm) .125"(3.18mm) 25.5"(.6M)	Teflon 
GK11M Standard K-type thermocouple probe	Air Temp.	-40° to 9,500°F -40° to 510°C	NA NA 1.2M	Fiberglass 
GK12M Standard K-type thermocouple probe w/oven clip	Food Processing	-40° to 400°F -40° to 204°C	NA NA 1.2M	Teflon 
GK13M Beaded probe with FDA approved insulation	General Purpose Air	-40° to 400°F -40° to 204°C	NA NA 1.2M	Teflon 
GK14M K-type air probe shielded to protect sensing area	Food Immersion	-40° to 510°F -40° to 265°C	4" 3.75mm 1M	PVC 

PROBE FACTS:

What is the difference between thermocouple and thermistor probes?

Thermocouple probes utilize the reaction between two dissimilar metals to produce a voltage that changes as temperature changes. A thermistor is a resistive device that produces a change in resistance with a change in temperature. In general, thermocouples offer a wider temperature range and quicker response time than thermistors. Thermistors are typically more accurate than thermocouples.

How are thermocouple types different?

Each thermocouple uses different metals and therefore have different characteristics. Here are general guidelines:

K-Type: Wide temperature range, use in many digital thermometers and multimeters. Identify by yellow connector.

J-Type: Narrower temperature range than K-type, use in analog and digital thermometers. Identify by black connector.

T-Type: Narrower temperature range than J-type but more accurate than K and J types, use in digital thermometers. Identify by blue connector.

Can different thermocouple types be interchanged?

No. Since each thermocouple type is constructed with different metals they have different output characteristics. Using a J-type thermocouple in a K-type thermometer will cause measurements to be very inaccurate.

What type of probe should I use?

Probe type used depends on the specific application. General guidelines for different probe types follow:

Penetration : General-purpose probe used for immersion and air temperature measurements. Response time in air is slower than an air probe because the tip is not exposed.

Chisel: General-purpose tip used for surface, immersion, and air temperature measurements. Response time in air or on surfaces is slower than an air or surface probe because of the tip design.

Air: Exposed tip probe provides the fastest response time when measuring air temperatures. Not useful for surface or immersion testing.

Surface: Contact tip probe provides fastest response time when measuring surface temperatures. Probe tip offers maximum temperature transfer in surface applications. Not useful for air or immersion testing.

Beaded: General-purpose probe used in immersion and air temperature measurements. Exposed tip allows for fast reaction time. Not useful in semi-solids.

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