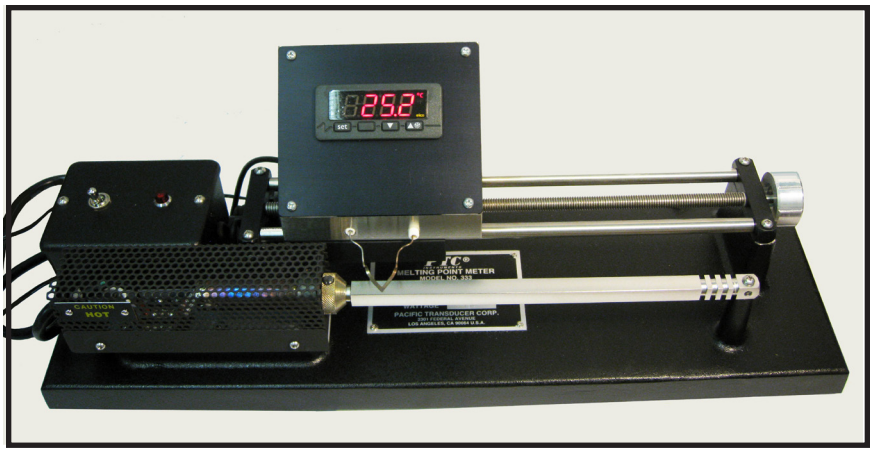
Digital Melting Point Meter

Made In U.S.A.



Model 333 shown above

- ***Easy to read LCD digital display***
- ***Fahrenheit or Celsius display***
- ***Range: 120°F to 500°F or 50°C to 260°C***
- ***Accuracy of 2% of full scale range***
- ***Power: 110V AC 50-60Hz or 220V AC (50-60Hz)***
- ***Portable unit -- weighs only 10 lb.***

SPECIFICATIONS

1. Models:
   333 ..... 120°F to 500°F or 50°C to 260°C
   110V AC 50-60Hz
   334 ..... 120°F to 500°F or 50°C to 260°C
   220V AC 50-60Hz
2. Accuracy.....±2% of full scale.
3. Body Dimensions:
   Length.....19-3/4 in. (50 cm).
   Width.....6 in. (15 cm).
   Height .....7-3/4 in. (20 cm).
4. Power source required ..... 110V AC, 50-60 Hz
   or 220V AC, 50-60Hz.
   for digital display.....12-Volt transformer.
5. Weight ..... 10 lb. 2 oz. (4.1 kg).
6. Shipping weight ..... 14 lb. (6.4 kg).

The Models 333 and 334 Digital Melting Point Meters measure the melting point of substances. They can be used for testing the melting points of plastics, waxes, resins, inks, gums, fats, tars, low melting alloys, organic and inorganic compounds, etc. They feature a digital LCD that is factory-set to °F or °C for fast and easy readings. The Models 333 & 334 both operate over a range of 120°F to 500°F (50°C to 260°C). Accuracy of the unit is ±2% of full scale range.

The instrument is portable and can be used on any workbench or desk. The units work on standard 110V AC 50-60Hz (Model 333) or 220V AC 50-60Hz (Model 334). A warning light next to the on/off switch cautions the user that the heating element is turned on. The stainless steel platen heats to a 400°F temperature gradient across its length. The LCD digital display is powereed by a standard 12-Volt transformer

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OPERATING INSTRUCTIONS

Plug both the heating element cord and meter transformer into standard 110V (Model 333) or 220V (Model 334) outlet.

The platen takes approximately 20 to 30 minutes to fully come up to temperature. The test method is fast and only a small quantity (a few milligrams) of the sample material is required. Place a small amount of the substance along the upper surface of the platen. The demarcation line between the molten and solid particles of the sample will be quickly seen. Place the thermocouple junction at the demarcation point on the platen and read the temperature on the meter. For the most accurate results, place a small amount of the sample directly on the thermocouple tip and move the thermocouple from right to left along the platen until the sample just melts. The temperature reading at this point is the most accurate.

The thermocouple and meter assembly can be disengaged from the platen by tipping back the meter assembly. This allows the meter to slide easily along the back bar for rapid positioning of the thermocouple junction. Once positioned, fine adjustments are made by turning the knob attached to the threaded feed bar. Any of the four sides of the platen can be used as the test side. The LCD digital display is powered by a standard 12-Volt transformer

DEFINITION OF 'MELTING POINT'

"Temperature at which a substance changes its state from solid to liquid. Under standard atmospheric pressure different pure crystalline solids will each melt at a different specific temperature; thus melting point is a characteristic of a substance and can be used to identify it. When heat is applied continuously and in sufficient quantity to such solids, the temperature rises steadily until it reaches the point at which liquefaction occurs. Here the rise ceases and no further change in temperature is observed until all of the substance has been converted to liquid. The heat being applied to the substance at that temperature is consumed in bringing about the change of state, and none is available to raise the temperature of that part of the substance already liquefied until all of it has changed to the liquid. If heat is still applied when liquefaction is complete, the temperature will begin to rise again."[1]

[1]The Columbia Encyclopedia, Sixth Edition. Copyright © 2001 Columbia University Press

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