Pyrometer Kits
Models 326-IC, 326-CA, & 326-LIC

Made In U.S.A.

Model 326-LIC Pyrometer shown above

- ***Easy to Read Analog Meter***
- ***Dual Fahrenheit & Celsius Scales***
- ***Ranges From: 0°F/2300°F (0°C/1260°C)***
- ***Accuracy of ±2% of full scale range***
- ***Kit Includes: Meter, Thermocouple Wire, and S.S. Thermowell***

SPECIFICATIONS

1. Available models & temperature ranges:
   Model 326-IC (Iron/Constantan)
   Range ..... 0°F to 1600°F (0°C to 850°C).
   External resistance ..... 2.22 ohms.
   Model 326-CA (Chromel/Alumel)
   Range ..... 0°F to 2300°F (0°C to 1260°C).
   External resistance ..... 3.58 ohms.
   Model 326-LIC (Iron/Constantan)
   Range ..... 30°F to 630°F (0°C to 330°C).
   External resistance ..... 2.22 ohms.
2. Body diameter ..... 2.75 in. (7 cm).
3. Front Flange diameter ..... 3.5 in. (8.9 cm)
4. Stainless steel tube (thermowell).....included.
5. Accuracy.....±2% of full scale range.
6. Shipping weight .....2 lb. (907 g)

SPARE PARTS

326-IC.46..... 20 gauge Iron/Constantan (6').
326-CA.46 ..... 20 gauge Chromel/Alumel (6').
326.311..... Meter only for 326-IC.
326.312.....Meter only for 326-CA.
326.313..... Meter only for 326-LIC.

Note: CA wire must be used with a CA instrument; IC wire must be used with an IC or LIC instrument.

PTC®'s Model 326 Series Pyrometer Kits provide a flexible and inexpensive method of accurately measuring temperatures from 0°F to 2300°F (0°C to 1260°C). The meter is a D'Arsonval type millivolt meter which has a scale to indicate temperature rather than voltage.

The pyrometer kits can be used in many diverse applications, including the temperature measurement of furnaces, kilns, and ovens; platens, rollers, and hot plates; dies, weld preheats, exhausts, motors, etc.

The meter is flanged for easy mounting on a panel or dashboard.

Six feet of thermocouple wire is provided in each kit. The wire is either Iron Constantan or Chromel Alumel, depending upon the temperature range. The wire is double glass insulated to withstand high temperatures. A stainless steel tube is provided to keep the glass insulation wear to a minimum in high temperature applications.

Thermocouple pyrometers work on the principle that when different metals, in this case wires, are joined together at each end an EMF (electromotive force) is created when a temperature difference exists between their ends or junctions. The greater the temperature difference, the greater the EMF. The "cold" junction usually is the meter terminals to which the thermocouple wires are connected and the "hot" junction is the probe end of the thermocouple. The EMF is quite small and requires a very sensitive millivolt meter to measure it.

The cold junction adjustment screw located below the dial is used to compensate for changes in the ambient temperature at the cold junction location.

INSTRUCTIONS

Thermocouple-type pyrometers measure differences in temperature. Before using, it is necessary to adjust the meter and thermocouple to room temperature. Turn the adjusting screw, located below the meter face, until the needle reads the ambient room temperature. A small, accurate thermometer can be mounted next to the meter so that room temperature will always be known. When heated the first time, the IC thermocouples may smoke somewhat. This is not the insulation burning but rather the coloring material used on the insulation. The insulating material is glass, and will not burn. The Iron and Alumel leads are magnetic, the Chromel and Constantan leads are nonmagnetic.

NOTE: The length of wire is important. DO NOT CUT THE WIRE, but use all 6 feet. The meter is calibrated for this length.

Model 326-CA

Ranges ..... 0°F to 2300°F (0°C to 1260°C).
Positive lead ..... Chromel—nonmagnetic.
Negative lead.....Alumel—magnetic.
Temperature limits .....2000°F (continuous).
2300°F (intermittent).

Model 326-IC

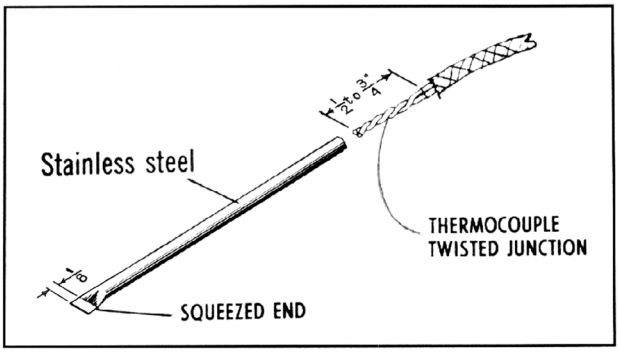
Ranges ..... 0°F to 1600°F (0°C to 850°C).
Positive lead .....Iron—white insulation.
Negative lead.....Constantan—red insulation.
Temperature limit.....1600°F (continuous).

Model 326-LIC

Ranges ..... 30°F to 630°F (0°C to 330°C).
Positive lead .....Iron—white insulation.
Negative lead.....Constantan—red insulation.
Temperature limit.....630°F (continuous).

LIMITED LIABILITY WARRANTY

PTC® products are covered by a limited liability warranty from defects in material and workmanship for one year from date of purchase. This warranty does not apply if, in the judgement of PTC®, the product fails due to damage from shipment, handling, storage, accident, abuse or misuse, or if it has been used or maintained in a manner not conforming to product's instructions, has been modified in any way, or has a defaced or removed serial number. Repair by anyone other than PTC® or an approved agent voids this warranty. The maximum liability of PTC® is the product purchase price.



THERMOCOUPLE: To prepare the thermocouple, strip the insulation back about 3/4" from one end of the two wires. Twist the two bare leads tightly together 4 or 5 turns with a pair of pliers. When using the stainless steel thermowell for high temperature applications, be sure that the wires do not bunch up and will reach the end of the tubing. With a vise or with suitable pliers, pinch the end of the stainless steel well closed. A flat area of about 1/8" is enough. Then slide the thermocouple junction into the well as far as it will go. The bare junction may touch the tube. Lengths of copper wire can be added to the thermocouple leads at the meter ends. Wire with a sufficient diameter for the length added must be used so that the resistance is not changed. A check in boiling water or with an accurate standard should be made.

METER CONNECTION: The outer braid of the free end of the thermocouple wire should be pushed back 2 to 3 inches. Strip each wire for about 3/4" and connect to meter terminals. The white or yellow wire goes to the terminal marked "+" while the red wire goes to the unmarked terminal. The pyrometer is now ready to use.