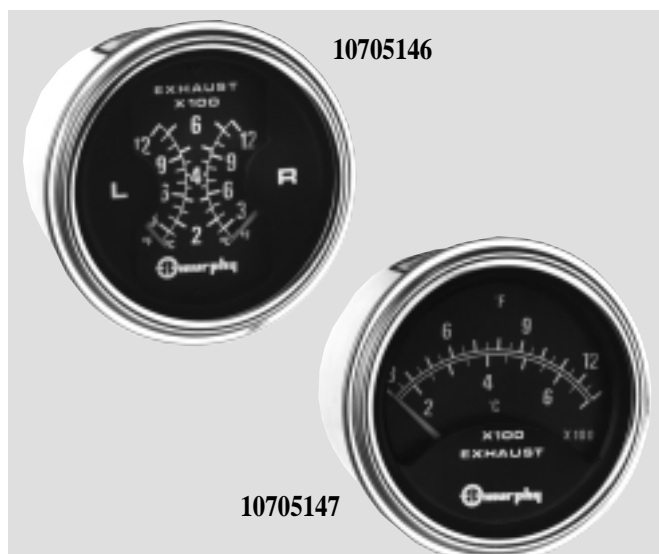


# Exhaust Pyrometers



## Models 10705146 (00000819) and 10705147 (00000956)

- Single or Dual Port Reading
- 2% Accuracy
- Sealed Construction
- Temperature Compensation
- Easy to Read Scales

### Description

The Single 10705147 (00000956) and Dual 10705146 (00000819) Port Pyrometers monitor exhaust temperatures in all types of engines. The Dual Port Pyrometer can monitor each bank of a V-type engine, allowing you to compare readings at all times. Both pyrometers feature an easy-to-read illuminated dial with scales in both Fahrenheit and Celsius. They require no outside power (except for dial lighting). Spring loaded jewels and alloy pivots increase durability. Murphy offers pyrometer accessories such as thermocouples and wire lead assembly.

### Application

Excessive exhaust temperature is a major damaging factor to all engines. The best way to monitor this temperature is with the use of a pyrometer. Excessive exhaust temperature is caused by an upset fuel/air ratio or more fuel in the engine than there is air to support it. This condition can occur as a result of over throttling, a dirty air cleaner, different fuels, a malfunctioning fuel system, change of altitude, an out of tune engine and many other causes. But whatever the cause, a pyrometer indicates this condition before serious damage occurs.

Suitable for stationary or mobile engines, power units, agricultural and construction equipment, as well as marine and trucking.

### Features

- Large sweep scales for maximum legibility.
- Internal illumination for night use.
- Accuracy: 2% full scale.
- Sealed housing.
- Ambient temperature compensation.
- Calibrated permanently at 2/3 scale.
- Flush type mounting on any plane.

### Benefits of Using a Pyrometer

- Longer engine life
- Better fuel economy
- Less lubrication oil dilution
- Lubrication oil stays clean much longer
- Exhaust emissions drop to a minimum
- Malfunctions indicated before excessive damage occurs

### Specifications

#### Dial Scale

Single: 300 to 1300°F (150 to 700°C)\*

Dual: 300 to 1200°F (150 to 649°C)\*

\*Celsius only dials available.

**Dial Sweep (both models):** 100°

**Accuracy:** Full scale 2%.

#### Illumination

Internal 12 or 24 VDC.

**Bezel:** Polished stainless steel.†

†Black bezel available. Special order.

**Case:** PVC.

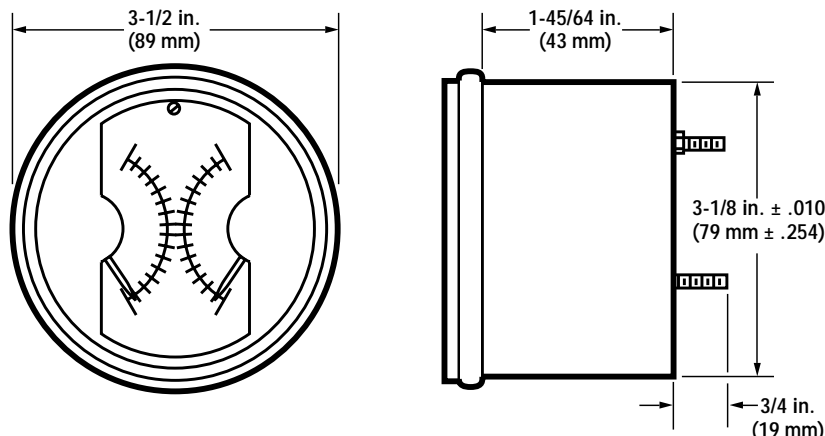
**Pointer(s):** Fire Orange.

### Warranty

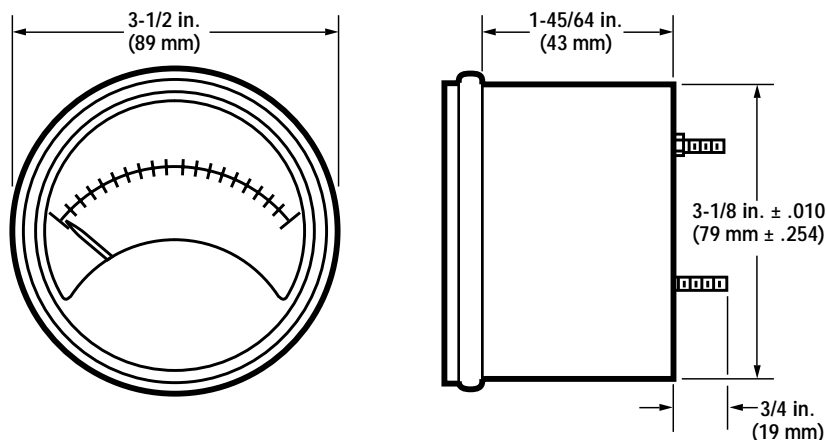
Pyrometers and thermocouples are warranted for 1 year against materials and workmanship.

## Dimensions

### 10705146 (00000819)



### 10705147 (00000956)



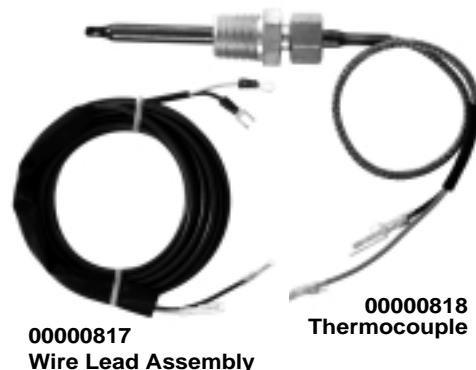
## How to Order

Specify part number. Example: **10705146 (00000819)**

**Pyrometer**  
**10705146** = Dual  
**10705147** = Single

**Accessories (order separately)**  
**00000817** 14 ft. (4.27 m) Wire Lead Assembly.  
**00000818** Thermocouple, grounded, Type K, 3/8 NPT\*  
**00003488** Thermocouple, ungrounded, Type K, 3/8 NPT\*  
 \*1/8 NPT, 1/4 NPT and 1/2 NPT adaptors available.

## Accessories



**00000817**  
**Wire Lead Assembly**

**00000818**  
**Thermocouple**

**Thermocouples** 00000818 and 00003488 can mount in the engine manifold or in 2 to 3-1/2 in. (51 to 89 mm) diameter exhaust ports. In turbo-charged engines, a thermocouple mounts between the engine and the turbo. Thermocouple 00000818 is a grounded, type K (Chromel Alumel). Thermocouple 00003488 is ungrounded type K (Chromel Alumel).

### Thermocouple Specifications

Element "K": *type (NiCr/Ni) solid wire.*

Hot Junction: *fusion welded.*

Protecting Tube: *inconel for no carbon absorption, end closed by heliarc melt down.*

Wire Insulation: *Q-glass with stainless steel overbraid.*

Adaptors:

- 3/8 NPT (00003578) standard
- 1/8 NPT (00003577)
- 1/4 NPT (00003450)
- 1/2 NPT (00003579)

**Wire Lead Assembly** 00000817 is a 14 ft. (4.27 m) extension with mating plug connections for the 00000818 and 00003488 thermocouples. The wire is PVC covered, non-shielded, 18 AWG (1.0 mm<sup>2</sup>), with heat shrinkable sleeve provided for insulating terminals after installation. Extension up to 100 ft. (30.48 m) can be made with 18 AWG (1.0 mm<sup>2</sup>) or larger copper wire at the gage head.