

# Pyrometers

## DIGITAL

Thermolyne

PM20700



### GREAT FOR ANY TEMPERATURE VERIFICATION!

- — Measure the temperature of solids, liquids or gases
- — Rugged and easy to use
- — Can be calibrated to NIST standards

## PRODUCT DESCRIPTION

- Choose from five different accessory probes to measure the temperature of liquids, solids or gases.
- "Hold function" stores measured temperature in memory.
- "RCD" records maximum and minimum values or held values.
- "Read" allows operator to read recorded values.
- "Range Select" automatically adjusts display resolution from 0.1°C to 1°C.
- "REL" displays the difference between initial measured value and succeeding measured values.
- 450 hours of dependable, continuous operation with automatic power OFF function (battery supplied with pyrometer).
- Pyrometer indicates open thermocouple or low battery conditions.

## APPLICATIONS

- Product temperature measurement testing.
- Temperature measurement for research and development.
- Frozen product quality control.
- Temperature measurement in production processes.
- Used by members of the United States Olympic Luge Team to measure the temperature of the sled's runners during Olympic luge races.

48 Hour or Sooner  
Express Shipping  
Guaranteed!\*



\*see inside front cover for details

## PRODUCT SPECIFICATIONS

Overall Dimensions Inches (cm)			Shipping Weight Lb. (kg)	Ambient Temp Limits °C	
W	H	L		Operating	Storage
2.6 (6.6)	1.4 (3.5)	7.7 (19.5)	1.0 (0.4)	0-50	-35-60

## ORDERING INFORMATION

Model #	Read-out Scale	Range °C (°F)	US List Price
PM20700	°C & °F	K: -160 (-256) to + 1372 (2502) J: -170 (-274) to + 1000 (1832)	\$314.00

## CALIBRATION VERIFICATION SYSTEM FOR FURNACES OR OVENS

Model #	Description	US List Price
AY589X1	Pyrometer/probe, Calibration Verification System for Furnaces or Ovens includes: PM20700 pyrometer, TC405X2 10" probe, C5000 calibration certification of compliance to NIST standards. If no calibration setpoints are specified the default values will be fixed at 100°C (212°F), 500°C (932°F) and 800°C (1472°F). Maximum setpoint is 1000°C.	\$566.00

• Additional setpoint calibrations (over 3) are available upon request

• Accuracy:  
 $T$  = temperature in °C  
 $T < 0$ : + (0.002T - 1)  
 $0 < T < 200$ : + (0.001 T + 0.7)  
 $T > 200$ : + (0.002T + 1)

• Precision:  
 $T < 200$ : 0.1°C  
 $T > 200$ : 0.1°C

# Pyrometers

## TEMPERATURE PROBES

Thermolyne

### ORDERING INFORMATION

Model #	Description	Sheath Dimensions Inches (cm)		Flexible Coiled Extension Cable Inches (cm)	Ratings Temp Range °C (°F)	Time Constant* (Seconds)	US List Price
		L	Diameter				
TC405X1	General Purpose	6 (15.2)	.13 (.33)	36	-160 (-256)–1100 (2012)	1	\$111.00
TC405X2	General Purpose	10 (25.4)	.13 (.33)	36	-160 (-256)–1100 (2012)	1	\$111.00
TC405X3	General Purpose	18 (45.7)	.13 (.33)	36	-160 (-256)–1100 (2012)	1	\$139.00
TC405X4	Penetration	6 (15.2)	.13 (.33)	36	-160 (-256)–1100 (2012)	1	\$110.00
TC405X5	Air	6 (15.2)	.13 (.33)	36	-160 (-256)–1100 (2012)	5	\$110.00
TC405X6	Surface	6.5 (16.5)	.13 (.33)	36	-160 (-256)–538 (1000)	3	\$110.00

The above temperature probes are complete with flexible cable, yellow ANSI coded subminiature thermocouple connector and a 4" plastic handle with a maximum exposure temperature of 105°C. All probes are grounded and use a Type K thermocouple.

TC405X7	Beaded Wire	36	—	—	538 (1000)	8	\$37.00
TC405X8	Adaptor Assy	40	—	—	—	—	\$37.00

\*Five (5) time constants are needed for and accurate measurement (99% of final reading.)

### GENERAL PURPOSE IMMERSION PROBE

A fast-responding stainless steel probe; ideal for measuring air, liquid, semi-liquid, and granular materials. It is field bendable to meet the configuration required for hard-to-reach locations. Choose from three sizes: 6", 10" and 18."

APPLICATION: General purpose use, liquids, air, molds, ovens and furnaces.

### PENETRATION PROBE

A sharp-tip stainless steel probe for measuring the internal temperature of soft and semi-frozen materials.

APPLICATION: Food, tissue cultures, rubber and plastic.

### AIR PROBE

A fast-responding, perforated, stainless steel probe for measuring gas or air temperature.

APPLICATION: Moving air, gases in heating and cooling units, furnaces and engine exhaust.

### ANGLED SURFACE PROBE

A ruggedly constructed stainless steel shaft with an open-ended surface probe for providing a fast response. Sensing head has a flat, low-mass grounded tip and is spring-loaded for solid contact.

APPLICATION: Hot plates, molds and semi-conductors.

### BEADED WIRE PROBE

A fast-responding exposed junction probe for measuring the precise temperature of small items. The low mass of the exposed tip prevents heat dissipation.

APPLICATION: General lab use for hot plates, platens, molds and heating tapes.

### THERMOCOUPLE ADAPTER

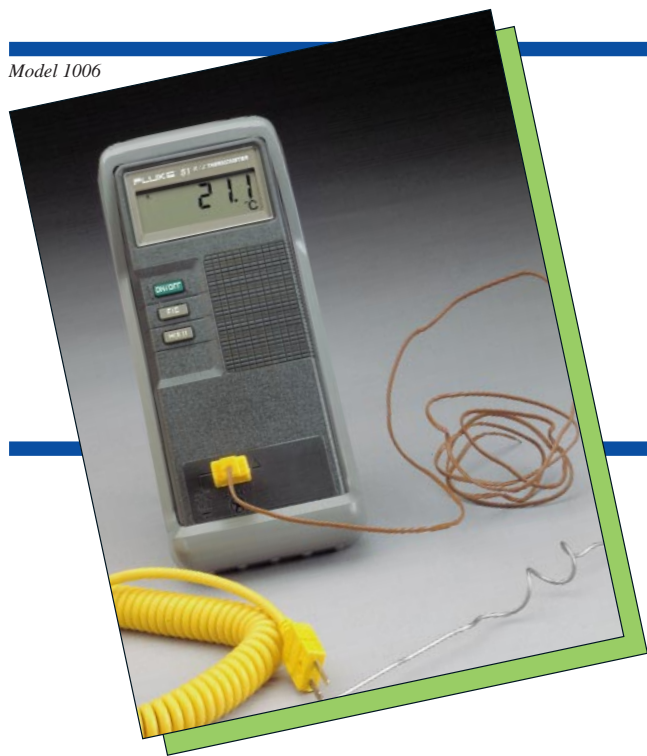
Adapter connects the meter to the terminal block of your instrument to monitor and calibrate temperature.

# Pyrometers

DIGITAL

Electrothermal

Model 1006



## QUICKER AND EASIER THAN A THERMOMETER!

- — Rugged, compact and easy to use
- — Accompanied by a range of temperature probes
- — Use with Mel-Temp for quick melting point determinations

## PRODUCT DESCRIPTION

- Low mass thermocouple occupies the left capillary slot reducing thermal lag on the melting point apparatus.
- Melting points can be determined faster without sacrificing accuracy.
- Low mass thermocouple reduces thermal lag.

## OPERATION

- Provides 0.1°C resolution on an easy to read digital display.
- HOLD key allows uninterrupted observation of the sample rather than dividing attention between sample and thermometer.
- Choose from 4 different accessory probes.

## APPLICATIONS

- Product temperature measurement testing.
- Temperature measurement for research & development.
- Frozen product quality control.
- Temperature measurement in production processes.
- Melting point determination with the Mel-Temp.

## ORDERING INFORMATION

Model#	Read-out Scale	Range °C	US List Price
1006	°C	- 200 to 900°C	\$314.00

Model 1006 Show with Mel-Temp



# Pyrometers

## TEMPERATURE PROBES

Electrothermal

### ORDERING INFORMATION

Model #	Description	Sheath Dimensions		Minimum Immersion Depth Inches (cm)	Flexible Coiled Extension Cable Inches (cm)	Ratings		US List Price
		L Inches (cm)	Diameter Inches (cm)			Temp Range °C	Time Constant (Seconds)	
8303	Rigid S/S Probe, Type K T/C	12 (30.5)	.25 (.63)	50 mm	72 (183)	-20 to 900°C	10	\$ 110.00
8306	Rigid S/S Probe, Type K w/PFA Teflon® coating	12 (30.5)	.25 (.63)	50 mm	72 (183)	-20 to 250°C	20	\$130.00
8304	Rigid S/S Probe, Type J T/C	12 (30.5)	.25 (.63)	50 mm	72 (183)	-20 to 760°C	10	\$ 110.00
8307	Rigid S/S Probe, Type J w/PFA Teflon® coating	12 (30.5)	.25 (.63)	50 mm	72 (183)	-20 to 250°C	20	\$130.00
8003	Glass-Probe (quartz), Type K T/C	12 (30.5)	.25 (.63)	25 mm	79 (200.7)	-200 to 500°C	11	\$245.00
8004	Glass-Probe (quartz), Type J, T/C	12 (30.5)	.25 (.63)	25 mm	79 (200.7)	-200 to 500°C	11	\$ 245.00
8005	Glass-Probe (quartz), Type K T/C	18 (46.0)	.25 (.63)	25 mm	79 (200.7)	-200 to 500°C	11	\$276.00
8007	Glass-Probe (quartz), Type J T/C	24 (60.9)	.25 (.63)	25 mm	79 (200.7)	-200 to 500°C	11	\$306.00
8403	Bendable s/s probe, Type K (requires extension cord)	12 (30.5)	.06 (.16)	16 mm	-	-20 to 900°C	2	\$94.00
8404	Bendable s/s probe, Type J (requires extension cord)	12 (30.5)	.06 (.16)	16 mm	-	-20 to 760°C	2	\$ 94.00
8503	Straight Extension, Type K	51 (129.5)	-	16 mm	51.2 (130)			\$37.00
8504	Straight Extension, Type J	51 (129.5)	-	-	51.2 (130)			\$37.00
8505	Extendible extension, Type K	47 (119.4)	-	-	47.25 (120)			\$47.00
8203	Adapter for 10/18 joints	-	-	-	-	-	-	\$37.00
8204	Adapter for 14/20 joints	-	-	-	-	-	-	\$38.00
8205	Adapter for 19/22 joints	-	-	-	-	-	-	\$43.00
8206	Adapter for 24/40 joints	-	-	-	-	-	-	\$43.00

\*Five time constants are needed to reach 99% of final reading

### PROBE ADAPTERS

Adapters provide a convenient means to hold a temperature probe in a vessel with a free neck and standard taper. These adapters provide an air tight seal for moderate vacuum work. Teflon® body has polypropylene extracting nut and Viton® O-ring. Adapters accept 0.25" (0.64 mm) diameter probes. Available for 10/18, 14/20, 19/22 and 24/40 tapered joints.

### RIGID STAINLESS STEEL PROBES

Probes fit traditional apparatus an glassware without modifications. Their rigid 316 stainless steel sheaths are 0.25" (0.64 mm) in diameter, roughly the same as traditional glass thermometers. Available with or without Teflon coating, all have 6' (183cm) lead wires.

### GLASS-PROBE™ CORROSION RESISTANT THERMOCOUPLES

Patented glass probe is highly resistant to most chemicals and thermal shock. Sheath is the same diameter as standard laboratory thermometers, 0.25" (0.64mm), so it is compatible with common thermometer adapters, clamps and apparatus. The glossy quartz sheath may be cleaned more thoroughly than metals, Teflon or other glasses. Usable up to 500°C.

### BENDABLE STAINLESS STEEL PROBES

Probes have bendable 316 stainless steel sheaths that are 0.16 mm diameter. They may be used straight or gently bent to suit your application. Probe has connector that plugs into extension cord.

### EXTENSION CORDS

These extensions are made from appropriate thermocouple wire to minimize their effect on temperature readings. Straight extension cords are 130 cm long. Extendible cords stretch to 120 cm.