Digital 500 Surface & Immersion

THERMOCOUPLE PYROMETER

DIGITAL 500 II PORTABLE MULTI-PURPOSE DIGITAL PYROMETER

FEATURES

- Digital Readout ±1°F or C
- Accuracy: ±1.0% Reading
- Temperature Ranges: 0°F - 2500°F (0°C - 1400°C)
- Peak Hold & Track
- Automatic Cold End Junction Compensation
- Durable Lexan Housing
- Lightweight Compact Design
- Rechargeable Ni Cad Batteries
- Low Battery Warning Light
- Rigid or Flexible Extension Arms
- Interchangeable "K" Type Thermocouples for Contact and Immersion Applications

APPLICATIONS

The Pyro Digital 500 II Pyrometer can accommodate a wide variety of thermocouple tips that are suited for many types of surface and immersion applications.

- Foundries
- Castings
- Molten Copper
- Molten Tin
- Molten Brass
- Molten Bronze
- Molten Aluminum
- Molten Zinc
- Rolling Mills
- Heat Treating
- Rubber Processing
- Billets
- Ceramics
- Rotating Rolls
- Steam Traps
- Sheet Metal

DESCRIPTION

The Pyro Digital 500 II Pyrometer is a rugged, portable, easy-to-read thermocouple pyrometer that utilizes interchangeable, reusable thermocouple tips for both surface and immersion applications. Instrument temperature accuracy to ±1.0% of reading is achieved by employing an automatic internal cold end junction compensator to prevent temperature measurement errors due to ambient temperature variations. The Pyro Digital 500 Pyrometer comes complete with a durable Lexan housing and is ready to use with a wide variety of optional rigid and flexible extension arms and thermocouples.

OPERATION

The Pyro Digital 500 II Pyrometer is easy to operate and requires no external power source. Simply screw the appropriate thermocouple and extension arm to the Pyro Digital 500 Pyrometer. The operator can adjust the extension arm angle to target "knuckle" as required for the application. After the Digital 500 Pyrometer contacts the surface of the target or is immersed into the molten metal being measured, the temperature is read on the direct reading digital display. Pyro's Digital 500's peak hold feature permits the display of the highest temperature measured.

- Simplicity of Operation
- Interchangeability
- Durability/Ruggedness
- Peak Hold/Track

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Digital 500 Surface & Immersion

SPECIFICATIONS

Selectable Readout:	°F, °C,
Temperature Range:	0°F - 2500°F (0-1400°C)
Accuracy:	±1.0% of Temperature Displayed
Ambient Temperature Range:	40°F to 120°F (5°C - 50°C)
Digital Display:	4 Digits - Characters 3/16" High
Cold Junction Compensation:	Automatic (0.01%)
Power:	5.0 Volt, Ni Cad Rechargeable Battery, 5.0 Hours Continuous Operation
Battery Charger:	110v, 60Hz (220v, 50Hz Option) 10-12 hours for full charge

CALIBRATION

- The Pyro Digital 500 II Pyrometer comes complete factory calibrated traceable to NIST Standards.
- Optional "Certificate of Calibration" per point to NIST Standards can also be provided.
- Expert factory service is also available for periodic calibration or maintenance.

PRODUCT INFORMATION

- The Pyro Digital 500 II Pyrometer comes with carrying case, battery charger and manual.
- Interchangeable thermocouples and extension arms are optional. When ordering specify model numbers.

WARRANTY

Good performance and reliability are what you expect when you buy precision products from The Pyrometer Instrument Company, Inc. The Pyro Digital 500 Pyrometer comes complete with a one-year factory warranty. For complete details see our Product Warranty Page.

ACCESSORIES

Interchangeable "K" Style Thermocouples, Extension Arms & Support Brackets are shown below.

INTERCHANGEABLE CONTACT TYPE EXTENSION ARMS

Pyro offers a wide range of industrial rigid and flexible extension arms to meet your surface applications. Rigid extension arms are constructed from rugged 5/8" diameter tubes with protective chrome plating, available in standard 12" length. All extension arms incorporate an angle to target "knuckle" for ease of operation. Flexible extension arms utilize stainless steel flexible armor between the handle grip and the extension arm. Pyro contact extension arms are completely interchangeable. ***(Immersion extension arms are shown separately below.)*** Custom extension arms are available upon request, consult factory.

Model Number	Type	
K21	Rigid Extension Arm,12" long with Standard Connector	
K24	Flexible Extension Arm, 42" long o.a. consisting of a 12" rigid arm with a grip handle & 30" of 1/4" dia. flexible SS armor	
K21QC	Rigid Extension Arm 12" long with quick change connector	
K24QC	Flexible Extension Arm 42" long o.a. consisting of a 12" rigid arm with a grip handle & 30" of 1/4" dia. flexible SS armor with quick change connector	
K18AO	18" A rigid add-on arm section for model 12 &12 QC	

INTERCHANGEABLE "K" CONTACT TYPE THERMOCOUPLES

Pyro offers a wide range of industrial thermocouple styles to meet your applications. Pyro's many styles of contact thermocouples allow for contact measurement of convex, flat, rotating, soft molten materials. Special purpose thermocouples are available for immersion in liquids, gases, or for measuring air temperature. Pyro thermocouples thread securely into the Pyro Digital 500 Pyrometer extension arms. All Pyro contact thermocouples are interchangeable. ***(Immersion thermocouples are shown separately below.)*** Custom thermocouples are available upon request, consult factory.

Accuracy on "K" Style Surface Thermocouples:

32°F - 530°F ±4°F
530°F - 2300°F ±3/4%

Model K1, Band
Convex Applications
5" Head Span
Maximum Temperature 500°F (260°C)
Response Time 7-10 seconds

Model K1A, Band
Convex Applications
3" Head Span
Maximum Temperature 500°F (260°C)
Response Time 7-10 seconds

Model K10, Wire Junction with Flexible Extension Arm 30" SS Armor Cable
Flat Surface Applications
1/4" Head Diameter
Maximum Temperature 1700°F (925°C)
Response Time 3 seconds

Model K2, Wire Junction
Flat Surface Applications
1/4" Head Diameter
Maximum Temperature 1700°F (925°C)
Response Time 3 seconds

Model K3, Silver Disc
Semi Flat Surface Applications
1/4" Head Diameter
Maximum Temperature 1300°F (700°C)
Response Time 5 seconds

Model K4, Prod
Billet, Molds & Sheet Applications
3/4" Tip Width x 6" Long
Maximum Temperature 2300°F (1260°C)
Response Time 10 seconds

Model K5, Needle
Semi Fluids, Rubber & Plastic Applications
1/16" Diameter x 6" Long
Maximum Temperature 1300°F (700°C)
Response Time 7 seconds

Model K6, Needle
Semi Fluids, Rubber & Plastic Applications
1/8" Diameter x 6" Long
Maximum Temperature 1300°F (700°C)
Response Time 7 seconds

Model K15, Needle
Semi Fluids, Rubber & Plastic Applications
1/8" Diameter x 2" Long
Maximum Temperature 1300°F (700°C)
Response Time 7 seconds

Model K7, Bare Wire
Furnaces, Oils & Dirty Fluid Applications
Two 1/16" Diameter Wires x 6" Long
Maximum Temperature 2000°F (1100°C)
Response Time 5 seconds

Model K8, Protected Tube
Corrosive Liquid Applications
1/4" Diameter x 6" Long
Maximum Temperature 1300°F (700°C)
Response Time 7 seconds

Model K9, Leaf Type
Press & Platen Applications
0.010" Thick x 6" Long
Maximum Temperature 2000°F (1100°C)
Response Time 5 seconds

Model K16, Air Type
Oven Applications
1/4" Diameter x 6" Long
Maximum Temperature 1300°F (700°C)
Response Time 3 seconds

Model KSP49A, Spring Prod
Sheet & Billet Applications
12" Rigid Handle, 5.0' Flexible SS Armor Cable
Maximum Temperature 2300°F (1260°C)
Response Time 10 seconds
Note: Standard Thermocouple Connector

Model KSP49B, Spring Prod
Sheet & Billet Applications
12" Rigid Handle, 30" Flexible SS Armor Cable
Maximum Temperature 2300°F (1260°C)
Response Time 10 seconds

Model KSP49C, Spring Prod
Sheet & Billet Applications
12" Rigid Handle
Maximum Temperature 2300°F (1260°C)
Response Time 10 seconds

INTERCHANGEABLE IMMERSION TYPE EXTENSION ARMS

Pyro offers a wide range of industrial rigid and flexible extension arms to meet your immersion applications. Rigid extension arms are constructed from rugged 5/8" diameter tubes with protective chrome plating, available in lengths noted below. All extension arms incorporate an angle to target "knuckle" for ease of operation. Flexible extension arms utilize stainless steel flexible armor between the handle grip and the extension arm. Pyro immersion extension arms are completely interchangeable. ***(Contact extension arms are shown separately above.)*** Custom extension arms are available upon request, consult factory.

Model Number	Type	
K37R	Rigid Extension Arm,34" long	
K37F	Flexible Extension Arm, 65" long o.a. consisting of a 35" rigid arm with a grip handle & 30" of 1/4" dia. flexible stainless steel armor	

INTERCHANGEABLE "K" IMMERSION TYPE THERMOCOUPLES

Pyro offers a wide range of industrial thermocouple styles to meet your applications. Pyro's many styles of immersion thermocouples allow for immersion measurement of many non-ferrous molten materials. Pyro immersion thermocouples attach securely into the Pyro Digital 500 Pyrometer extension arms. All Pyro immersion thermocouples are interchangeable. ***(Contact thermocouples are shown separately above.)*** Connections are keyed to ensure correct attachment. Custom thermocouples are available upon request, consult factory.

Accuracy on "K" Style Thermocouples
500°F - 2500°F ±3/4%

Model T-11

Closed End, Bare Wire, Welded Tip
16 & 22 Gauge Wire
Overall Length 18"
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

Model T-12

Closed End, Bare Wire, Welded Tip
16 & 22 Gauge Wire
Overall Length 24"
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

Model T-14

Open End, Bare Wire Tip
16 & 22 Gauge Wire
Overall Length 24"
Maximum Temperature 1450°F (788°C)
Response Time 7-10 seconds

Model T-16

Type 446 SS Protective Tube, & Dia.
Immersion Length 8"
Overall Length 21"
Maximum Temperature 2500°F (1400°C)
Response Time 7-10 seconds

Model T-18

Type 446 SS Protective Tube, & Dia.
Immersion Length 12"
Overall Length 25"
Maximum Temperature 2500°F (1400°C)
Response Time 7-10 seconds

Model SP-SPT Thermocouple Support Bracket

(for above Model T-16 & T-18)
The Model SP-SPT Thermocouple Support Bracket assists in preventing the protected tube style thermocouple's 1/2" thick ceramic base from breaking should the operator wipe or bang the thermocouple against the crucible.

Note: For removing slag a stiff wire brush is recommended for this procedure.

PYRO'S AUTHORIZED REPRESENTATIVE: