

392 High Performance Platinum RTD Thermometer System

Exceptional Accuracy and Long-Term Stability in a Versatile Meter System with Interchangeable Probes

- **392HPF** Meter range -290 to 1450°F
- **392HPC** Meter range -180 to 788°C
- Meter accuracy $\pm 0.1^\circ\text{F}/\text{C}$ at 32°F (0°C)
- System accuracy $\pm 0.25\%$ of reading (392HP Meter & 202HP Immersion Probe)
- Complete tracing of the platinum standard DIN 43760 to 0.1°F conformity over the entire temperature range
- Readings updated 2.5 times per second
- Bright 0.33" high-visibility LED display
- Maxi-Temp[®] holds peak temperature reading
- Tough, drop tested meter assembly
- Interchangeable, 4-wire snap-in connection HP Series probes
- Automatic compensation for probe calibration of temperature at ice point and alpha
- Noise suppression circuit
- NIST traceable conforming to ITS-90

Wahl invented the portable Platinum-RTD Thermometer (Pat. No. 4,050,309) to provide exceptional accuracy and conformity in laboratory and industrial applications. The 392HP Meter/Probe System represents the ultimate in Heat-Prober System Performance.

Thousands of 392HP Heat-Probers are used by vary industries, making critical temperature measurements as well as calibrating sensors and other instruments.

Use the 392HP system to calibrate installed sensors, to make quality assurance tests and to make highly accurate process temperature measurements. An internal feedback loop maintains system calibration during use. And you can order additional HP probes at any time without calibration.

The 392HP features a special noise rejection program for use near high EMF machines.

See pages 6-7 for complete meter specifications, options, accessories, and money saving kits.

APPLICATIONS
<ul style="list-style-type: none"> • Petrochemical • Food • Photographic • Aerospace • Electronics • Nuclear Power



392HPC Meter



392HP Probe Connector

5-POINT NIST TRACEABLE RTD CALIBRATORS

Assures System Reliability Before Every Measurement

CAL392HP-HT High Temperature Calibrator for 392HP only
Calibration Points: -58°F, 32°F, 212°F, 284°F, 752°F
 -50°C, 0°C, 100°C, 140°C, 400°C

CAL392HP-LT Low Temperature Calibrator for 392HP only
 Ice Point to Boil
Calibration Points: 32°F, 68°F, 104°F, 140°F, 212°F
 0°C, 20°C, 40°C, 60°C, 100°C

10786-NIST Optional Certificate of NIST Traceability with Test Data.

To request *Custom Calibrators* with special calibration points, please contact Customer Service.



Application Example with 392MF Meter with optional 5-point Calibrator, CAL392-HT



392HP Meter is FM (Factory Mutual) approved for potentially explosive environments.
 Class I & II Div. 1, Groups D, F & G.
 The performance of our meters is warranted for three years against defects in parts and workmanship.

392 Series Platinum RTD Thermometer Systems

392 Precision Systems Offer Wide Temperature Range and Meter Options



392EXC Meter

- **392E Series** Meter Expanded Range -290 to 1450°F (-180 to 788°C)
- **392M Series** Meter Range 60 to 752°F (-51.1 to 400°C)
- Meter options for display type and power source
- Meter accuracy of $\pm 0.1^\circ\text{F}/\text{C} \pm 1$ digit at 32°F (0°C)
- System accuracy $\pm 0.5\%$ of reading (Meter & 202 Immersion Probe)
- Large LED or LCD display for indoor or outdoor readings
- Interchangeable Platinum RTD probes
- Peak Hold and Auto-Ranging display features.
- Interchangeable probes compensated for calibration at ice point
- NIST traceable conforming to ITS-90

A precision, microprocessor driven meter is the heart of a complete, portable and rugged Heat-Prober temperature measurement system. Using **392** meters, engineers in maintenance, quality assurance, energy conservation and process control can now have laboratory accuracy anywhere in the plant, laboratory, or field.

The **392** system gives you outstanding accuracy with a choice of interchangeable probes for measuring surfaces, liquids, semi-solids and gases. Interchangeable 3-wire, snap-in connection Platinum-RTD probes are shown on pages 8 and 9. In addition, 392 Meter/Probe Systems are ideal for use as an in-house calibration standard for less accurate thermometers and to calibrate installed thermowells.

For complete portability and ease of use, Wahl Heat-Prober Meters are battery powered. The **392E/M** and **392EX/MX** series are supplied with rechargeable batteries that allow 8 hours continuous operation. The supplied recharger allows these meters to be used as a continuously operating bench unit. For field backup, a spare rechargeable battery pack (page 6) may be purchased.

Model 392E/M features a bright .33" high red LED display for normal to low lighting conditions. It operates on a rechargeable NiCad battery pack. Includes battery recharger and AC line adapter.

Model 392EX/MX features a 0.4" high red LCD for normal to bright lighting conditions and operates on a rechargeable NiCad battery pack. Includes battery recharger and AC line adapter.

Model 392EVX/VX has a .4" high red LCD for normal to bright lighting conditions and is powered by a 9-volt alkaline battery for 50 hours continuous use making it an excellent choice for field tests.

-S Models are FM approved for additional groups, see specifications on page 6.

Use **F, C, or D** Model No. suffix to designate Fahrenheit, Celsius, or Dual Range °F/°C Switchable.

See pages 8-9 for Platinum RTD Probe listings.

See pages 6-7 for complete meter specifications, options, accessories, and money saving kits.



5-POINT NIST TRACEABLE RTD CALIBRATORS



Platinum RTD Meter 392MF shown with 5-point calibrator CAL392-HT

All 392 Series Meters assure laboratory accuracy in the field when used in conjunction with the NIST traceable Heat-Prober Calibrator CAL392.

Assures System Reliability Before Every Measurement

CAL392-HT High Temperature Calibrator
Calibration Points:

-58°F, 32°F, 212°F, 284°F, 752°F
-50°C, 0°C, 100°C, 140°C, 400°C

CAL392-LT Low Temperature Calibrator
Calibration Points:

32°F, 68°F, 104°F, 140°F, 212°F
0°C, 20°C, 40°C, 60°C, 100°C

10786-NIST Optional Certificate of NIST Traceability with Test Data.

Calibration Services Available

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com



RTD Meter Specifications

392 SERIES THERMOCOUPLE METER SPECIFICATIONS

Model	392HP	392E 392EX	392E-S 392EX-S	392EVX	392M 392MX	392M-S 392MX-S	392VX	
Range	-290 to 1450°F -180 to 788°C	-290 to 1450°F -180 to 788°C		-290 to 1450°F -180 to 788°C	-60 to 752°F -51 to 400°C		-60 to 752°F -51 to 400°C	
Digital Display	Bright 0.33" LED	392E/392E-S Bright 0.33" high LED		Red, 0.4" high LCD	392M/392M-S Bright 0.33" high LED		Red, 0.4" high LCD	
		392EX/392EX-S Red, 0.4" high LCD			392MX/392MX-S Red, 0.4" high LCD			
Resolution	0.1° below 375°F (190°C). Auto Ranges to 1° above 375°F (190°C).							
Meter Accuracy at 77°F	±0.1°F/C ±1 digit at 32°F (0°C)							
System Accuracy (Meter with 202 immersion probe)	±0.1°F ±1 digit at ice point, ±0.25% reading thereafter		±0.3°F at ice point, ±0.5% reading thereafter					
Repeatability	±0.2°F							
Peak Hold	Microcomputer calculated, switch to "P" to activate							
Ambient Operating Range	0 to 130°F (-18 to +55°C)							
Temperature Coefficient	0.01 deg/deg over ambient range							
FM (Factory Mutual) Approved*	Class I & II, Div. 1, Groups: D, F, & G		Class I & II, Div. 1, Groups: C, D, E, F, & G		Not Available	Class I & II, Div. 1, Groups: D, F, & G	Class I & II, Div. 1, Groups: C, D, E, F, & G	Not Available
Power	11681-1 6.25 V NiCad Battery		11681-2 6.25 V NiCad Battery		9V Alkaline battery (NEDA 1604A)	11681-1 6.25 V NiCad Battery	11681-2 6.25 V NiCad Battery	9V Alkaline battery (NEDA 1604A)
Battery Life	4.5 hrs. per charge	392E/392E-S 10 hrs. per charge		50 hrs. per charge Low battery indication.	392M/392M-S 10 hrs. per charge		50 hrs. per charge	
		392EX/392EX-S 50 hrs. per charge			392MX/392MX-S 50 hrs. per charge			
Low Battery Indicator	Yes							
Noise Rejection	Greater than 40 dB at 60 Hz increasing at 20 dB per decade. Spurious noise attenuated by internal 16 Hz filter. 392HP includes special noise rejection program for use in presence of rampant EMF such as spark ignition engines.							
Size	3" W x 6" L x 1.5" D (7.5 cm x 15 cm x 3.75cm)							
Weight	12 oz. (340gm)			7 oz. (198gm)	12 oz. (340gm)		7 oz. (198gm)	
* FM Approval Groups: C (Ethylene Gas), D (Methane, Propane), E (Metal Dust), F (Coal Dust), and G (Grain Dust)								
All 392 Models Available in °F, °C, or Dual Scale, add "F", "C" or "D" to Model Number. Dual Scale not available on -S Models.								

392 SERIES METER ACCESSORIES

DA-4	Silicone Paste	11681-1	Spare NiCad Battery Pack
DA-6	Belt-Clip Meter Case with Hand Strap	11681-2	Spare NiCad Pack for -S Models
DA-10	Nylon Safety Wrist Strap	MN1604	Standard 9V Alkaline Battery
DA-60	Shock-Proof attache-style Instrument Case	MA150	Battery Recharger, 120V AC 50/60Hz
		MA150E	Battery Recharger, 220V AC 50/60Hz, European

METER OPTIONS

392NIST	Certificate with 3 Standard Calibration Points between 32°F (0°C) & 500°F (250°C) Meter calibration includes one probe.	392NIST-1	Certificate with 3 User-specified Calibration Points between -40°F (-40°C) & 600°F (315°C) Meter calibration includes one probe.
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