

AccuMac



AccuMac Corporation

AccuMac Corporation designs and manufactures digital thermometer readouts, standard platinum resistance thermometers (SPRTs), platinum resistance thermometers (PRTs), thermocouples and thermal imaging devices. With decades of experience in metrology, our team has a passion for making great products using the most cutting-edge technology available. From the initial designs to the final products, our goal is to make devices of the highest quality and performance for our customers. Our products have a wide range of uses and applications, including laboratory metrology, industrial process control and quality assurance.

We are fully committed to customer satisfaction by providing the best product performance, competitive pricing and customized designs.



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Table of Contents

Standard Platinum Resistance Thermometers (SPRTs)

AM1960/1950 Quartz-Sheath SPRTs	01
AM1860/1850 Metal-Sheath SPRTs	02

Secondary SPRTs

AM1762/1760 Secondary SPRTs	03
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Secondary Reference PRTs

AM1750/1730 Secondary Reference PRTs	04
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Precision Industrial PRTs

AM1660/1640/1620 Precision Industrial PRTs.....	05
AM1610 Precision Industrial PRTs.....	06
AM1612 Full Immersion PRTs.....	07

Digital Thermometer Readouts

AM8060 Dual-Channel Precision Thermometer.....	08
AM8040 Precision Thermometer.....	10
AM8010 Handheld Precision Thermometer.....	12

AM1960/1950 Quartz-Sheath SPRTs

OVERVIEW

Standard Platinum Resistance Thermometers (SPRTs) are used to interpolate temperature in the range from -189.3442°C to 660.323°C on the International Temperature Scale of 1990 (ITS-90). They are widely used as standard or reference thermometers to calibrate other thermometers and to measure temperature precisely in primary and secondary laboratories. AccuMac SPRTs are the crown jewels of AccuMac temperature probes. It takes decades of our scientific expertise and original craftsmanship to create these world class products. They feature a very low drift rate.

To reach the best performance in stability and repeatability, the sensing element and sensor support are specially designed. To protect the platinum sensing wire from contamination at high temperature, all parts used in the thermometer are extremely cleaned before assembly. The assembly process is well controlled to protect the sensor from contamination. The gas mixture filled in the thermometer makes the sensor wire oxidation effect as low as possible. Every SPRT is fully tested for stability after manufactured. These world class probes meet ITS-90 criteria of standard thermometer fully with a very competitive pricing.

HIGHLIGHTS

- Affordable SPRTs
- Extremely low drift rate
- Temperature range: -200 °C to 670 °C



SPECIFICATIONS

Model	AM1960	AM1950
Temperature Range	-200°C to 670°C	-200°C to 500°C
Rtpw	Nominal 25 Ω	
Resistance Ratio	W(Ga)>=1.11807, W(Hg)<=0.844235	
Drift at 0.01°C	Δ R(0.01°C) <0.003 °C/100 hours at 670°C Δ R(0.01°C) <0.005 °C/year	Δ R(0.01°C) <0.002 °C/100 hours at 500°C Δ R(0.01°C) <0.004 °C/year
Repeatability	±0.001 °C	
Thermal Shock	±0.001 °C after 10 times thermal cycles from minimum to maximum temperatures	
Self-heating	0.0015 °C at 1 mA current	
Measurement Current	1 mA	
Sensor Length	42 mm	
Insulation Resistance	>1000 MΩ at room temperature	
Sheath Material	Fused-Quartz	
Dimension	7 mm (OD) X 520 mm (L)	7 mm (OD) X 480 mm (L)
External Leads	Insulated copper wire, 4 leads, 2.5 meters	
Termination	Gold-plated Spade	
Handle Dimension	21mm (OD) X 80 mm (L)	
Calibration	Not included	

OPTIONAL ACCESSORIES

Model	Description
9002	Complementary Wooden Carrying Case

AM1860/1850 Metal-Sheath SPRTs

OVERVIEW

AM1860/1850 SPRTs feature a very low drift rate and affordable prices but provide powerful performance.

To improve the durability of the SPRT, Inconel 600 replaces quartz glass as sheath material of the thermometer. A special capsule is adopted to protect the platinum sensor wire from contamination introduced by metal sheath at high temperature. All parts used in the thermometer are completely cleaned and treated at high temperature before assembly. The gas mixture filled in the thermometer is well controlled to reduce oxidation effect as low as possible. Every SPRT is fully tested for stability after manufactured. This world class probe meets ITS-90 criteria of standard thermometer fully with a very competitive pricing.

AM1850 has a temperature range from -200°C to 500°C. AM1860 covers range from -200°C to 670°C. They are widely used as reference thermometer at drywell block calibrator and temperature bath.

HIGHLIGHTS

- Metal-Sheath SPRTs with very low drift rates
- Great standard/reference thermometer for dry block calibrators
- Temperature range: -200 °C to 670 °C



SPECIFICATIONS

Model	AM1860	AM1850
Temperature Range	-200°C to 670°C	-200°C to 500°C
Rtpw	Nominal 25 Ω or nominal 100 Ω	
Resistance Ratio	W(Ga)>=1.11807, W(Hg)<=0.844235	
Drift at 0.01°C	Δ R(0.01°C) <0.003 °C/100 hours at 670°C Δ R(0.01°C) <0.01 °C/year	Δ R(0.01°C) <0.002 °C/100 hours at 500°C Δ R(0.01°C) <0.008 °C/year
Repeatability	±0.001 °C	
Thermal Shock	±0.001 °C after 10 times thermal cycles from minimum to maximum temperatures	
Self-heating	0.0015 °C at 1 mA current	
Measurement Current	1 mA	
Sensor Length	42 mm	
Insulation Resistance	>1000 MΩ at room temperature	
Sheath Material	Inconel™	
Dimension	6.35 mm (OD) X 500 mm (L)	6.35 mm (OD) X 480 mm (L)
External Leads	Insulated copper wire, 4 leads, 2.5 meters	
Termination	Gold-plated Spade	
Handle Dimension	21mm (OD) X 80 mm (L)	
Calibration	Not included	

OPTIONAL ACCESSORIES

Model	Description
9002	Complementary Wooden Carrying Case

AM1762/1760 Secondary SPRTs

OVERVIEW

AM1760 series Secondary Standard PRT provides our customers an affordable SPRT alternative for precision temperature measurement and calibration in labs and fields. This SPRT features accuracy of $\pm 0.006^\circ\text{C}$ at 0.01°C , short term stability of $\pm 0.002^\circ\text{C}$ and very low drift rate of less than 19 mK after 500 hours. Two different lengths of SPRTs are available at 12-inch and 20-inch.

The sensing element is designed to protect the platinum sensing wire from contamination at high temperatures, giving the device a high level of stability and repeatability in performance. A uniquely designed support structure and filling material provides excellent balance between the hysteresis effect, mechanical shock and thermal shock performance. This high performance probe fully meets ITS-90 criteria for reference thermometers.

FEATURES

- Temperature range: -200°C to 670°C
- Accuracy: $\pm 0.006^\circ\text{C}$ at 0.01°C
- Long term drift: $\pm 0.019^\circ\text{C}$
- Short term stability: 0.002°C
- $W(\text{Ga}) >= 1.11807$
- Customized dimensions available



SPECIFICATIONS

Model	AM1762	AM1760
Temperature Range	-200°C to 670°C	
Resistance at 0°C	Nominal $25\ \Omega$	Nominal $100\ \Omega$
Temperature Coefficient	$0.003925\ \Omega/\Omega^\circ\text{C}$	
Accuracy	$\pm 0.007^\circ\text{C}$ at -196°C , $\pm 0.006^\circ\text{C}$ at 0.01°C , $\pm 0.015^\circ\text{C}$ at 420°C , $\pm 0.025^\circ\text{C}$ at 660°C	
Drift	$\pm 0.004^\circ\text{C}$ at 0°C after 100 hours at 660°C	
Short Term Stability	$\pm 0.002^\circ\text{C}$	
Thermal Shock	$\pm 0.002^\circ\text{C}$ after 10 times thermal cycles from minimum to maximum temperatures	
Self-heating	0.0015°C at 1 mA current	
Response Time	9 seconds for 63% response to step change in water moving at 3 feet per second	
Measurement Current	0.5 mA or 1 mA	
Sensor Length	42 mm	
Sensor Location	5 mm from tip	
Insulation Resistance	$>1000\ \text{M}\Omega$ at room temperature	
Sheath Material	Inconel™	
Dimension	1762-12: 0.25 X 12 inch (6.35 X 305 mm) 1762-20: 0.25 X 20 inch (6.35 X 500 mm)	1760-12: 0.25 X 12 inch (6.35 X 305 mm) 1760-20: 0.25 X 20 inch (6.35 X 500 mm)
External Leads	Teflon™ –insulated copper wire, 4 leads, 2.5 meters	
Handle Dimension	15mm (OD) X 65 mm (L)	
Handle Temperature Range**	-50°C to 180°C	
Calibration Options	1762-20-T/1762-12-T, Secondary SPRT with NIST traceable calibration and data	1760-20-T/1760-12-T, Secondary SPRT with NIST traceable calibration and data

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case for 1762/1760-12
9002	Wooden Carrying Case for 1762/1760-20

AM1750/1730 Secondary Reference PRTs

OVERVIEW

AM1750/1730 series Secondary Reference PRT provides our customers an affordable reference probes for precision temperature measurement and calibration in labs and fields. These PRTs features accuracy of $\pm 0.015^{\circ}\text{C}$ at 0.01°C . Short term stability is $\pm 0.007^{\circ}\text{C}$. The lengths of AM1750 are available at 20 and 12 inch and the lengths of AM1730 are available at 12 and 9 inch.

The sensing element is designed to protect the platinum sensing wire from contamination at high temperatures, giving the device a high level of stability and repeatability in performance. A uniquely designed support structure and filling material provides excellent balance between the hysteresis effect, mechanical shock and thermal shock performance. This high performance probe fully meets ITS-90 criteria for reference thermometers.

FEATURES

- Temperature range: -200°C to 670°C
- Accuracy: $\pm 0.015^{\circ}\text{C}$ at 0.01°C
- Long term drift: $\pm 0.01^{\circ}\text{C}$
- Short term stability: 0.007°C
- Durable and shock resistance
- $W(\text{Ga}) \geq 1.11807$
- Customized dimensions available



SPECIFICATIONS

Model	AMAM1750	AM1730
Temperature Range	-200°C to 670°C	1730-12: -200°C to 420°C , 1730-9: -60°C to 300°C
Resistance at 0°C	Nominal $100\ \Omega$	
Temperature Coefficient	$0.003925\ \Omega/\ ^{\circ}\text{C}$	
Accuracy	$\pm 0.025^{\circ}\text{C}$ at -196°C , $\pm 0.015^{\circ}\text{C}$ at 0.01°C , $\pm 0.035^{\circ}\text{C}$ at 420°C , $\pm 0.05^{\circ}\text{C}$ at 660°C	
Drift	$\pm 0.01^{\circ}\text{C}$ at 0°C after 100 hours at 660°C	
Short Term Stability	$\pm 0.007^{\circ}\text{C}$	
Thermal Shock	$\pm 0.005^{\circ}\text{C}$ after 10 times thermal cycles from minimum to maximum temperatures	
Hysteresis	$\leq 0.005^{\circ}\text{C}$	
Self-healing	$50\ \text{mW}/^{\circ}\text{C}$	
Response Time	9 seconds for 63% response to step change in water moving at 3 feet per second	
Measurement Current	$0.5\ \text{mA}$ or $1\ \text{mA}$	
Sensor Length	$32\ \text{mm}$	
Sensor Location	$5\ \text{mm}$ from tip	
Insulation Resistance	$>1000\ \text{M}\Omega$ at room temperature	
Sheath Material	Inconel™	
Dimension	1750-12: 0.25×12 inch (6.35×305 mm) 1750-20: 0.25×20 inch (6.35×500 mm)	1730-12: 0.25×12 inch (6.35×305 mm) 1730-9: 0.187×9 inch (4.75×229 mm)
External Leads	Teflon™ –insulated copper wire, 4 leads, 2.5 meters	
Handle Dimension	$15\ \text{mm}$ (OD) \times $65\ \text{mm}$ (L)	
Handle Temperature Range**	-50°C to 180°C	
Calibration Options	1750-20-T/1750-12-T, PRT with NIST traceable calibration and data	1730-12-T/1730-9-T, PRT with NIST traceable calibration and data

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case for 1750-12, 1730-12 and 1730-9
9002	Wooden Carrying Case for 1750-20

AM1660/1640/1620 Precision Industrial PRTs

OVERVIEW

AM1620/1640/1660 series precision industrial PRTs are top choices when price-to-performance is considered. They cover a wide range of temperature from -200 °C to 670 °C with amazing accuracy of $\pm 0.035^{\circ}\text{C}$ at 0 °C, short term stability of $\pm 0.01^{\circ}\text{C}$ and fast respond time of 5 seconds. These industrial PRTs come with standard length 12-inch but customized dimensions are available per request.

To reach the best performance in stability and repeatability, the wire-wound sensing elements are specially designed to protect the platinum sensing wire from contamination at high temperature. A unique support structure and filling material provide the best balance among the hysteresis effect, mechanical shock and thermal shock performance. All of these probes conform to the standard 385 curve so the resistance ratio of the PRT follow DIN/IEC-751 curve precisely.

FEATURES

- Temperature range: -200 °C to 670 °C
- Accuracy: $\pm 0.035^{\circ}\text{C}$ at 0 °C
- Long term drift: $\pm 0.04^{\circ}\text{C}$
- Short term stability: 0.01°C
- Durable and shock resistance
- Follow DIN/IEC-751 precisely
- Quick response time
- Customized dimensions available



SPECIFICATIONS

Model	AM1660	AM1640	AM1620
Temperature Range	-200°C to 670°C	-200°C to 420°C	-60°C to 300°C
Resistance at 0 °C	Nominal 100 Ω		
Temperature Coefficient	0.00385 Ω/ Ω/°C		
Accuracy	$\pm 0.04^{\circ}\text{C}$ at -200°C, $\pm 0.035^{\circ}\text{C}$ at 0°C, $\pm 0.05^{\circ}\text{C}$ at 200°C, $\pm 0.09^{\circ}\text{C}$ at 420°C, $\pm 0.15^{\circ}\text{C}$ at 660°C		
Drift	$\pm 0.04^{\circ}\text{C}$ at 0 °C after 100 hours at 420 °C		
Short Term Stability	$\pm 0.01^{\circ}\text{C}$		
Thermal Shock	$\pm 0.007^{\circ}\text{C}$ after 10 times thermal cycles from minimum to maximum temperatures		
Hysteresis	$\leq 0.01^{\circ}\text{C}$		
Self-heating	50 mW/°C		
Response Time	5 seconds for 63% response to step change in water moving at 3 feet per second		
Measurement Current	0.5 mA or 1 mA		
Sensor Length	32 mm		
Sensor Location	5 mm from tip		
Insulation Resistance	>1000 MΩ at room temperature		
Sheath Material	Inconel™	Inconel™	316 Stainless Steel
Dimension	0.25 X 12 inch (6.35 X 305 mm)		
External Leads	Teflon™ -insulated copper wire, 4 leads, 2.5 meters		
Handle Dimension	15mm (OD) X 65 mm (L)		
Handle Temperature Range	-50°C to 180°C		
Calibration Options	1660-12-T, PRT with NIST traceable calibration and data	1640-12-T, PRT with NIST traceable calibration and data	1620-12-T, PRT with NIST traceable calibration and data

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case

AM1610 Precision Industrial PRTs

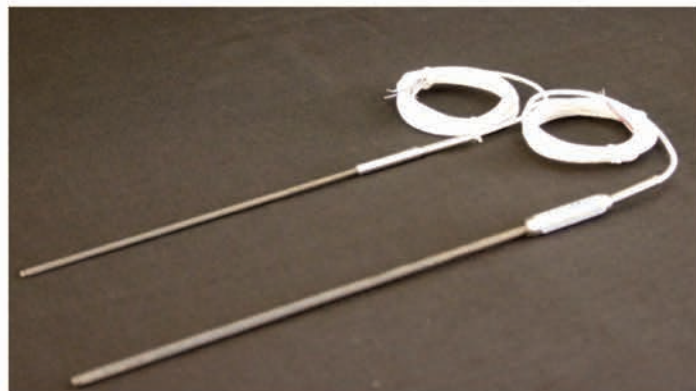
OVERVIEW

With 5mm long sensor, AM1610 series precision industrial PRT provides users an excellence temperature probe with extremely low stem conduction (heat loss along sheath) in precision temperature measurement. It is a great tool for measuring and testing the vertical temperature uniformity of heat sources.

AM1610 uses a special aged and tested 5-mm long sensing element to achieve the best performance in stability and repeatability. A unique assembly procedure provides the best balance among the hysteresis effect, mechanical shock and thermal shock performance.

FEATURES

- Temperature range: -60 °C to 160 °C
- Sensor Length: 5 mm
- Accuracy: ± 0.05 °C
- Long term drift: ± 0.04 °C
- Short term stability: 0.01 °C
- Durable and shock resistance
- SST sheath
- Quick response time
- Customized dimensions available



SPECIFICATIONS

Model	AM1610
Temperature Range	-60°C to 160°C
Resistance at 0 °C	Nominal 100 Ω
Temperature Coefficient	0.00385 $\Omega / \Omega / ^\circ\text{C}$
Accuracy	± 0.05 °C
Drift	± 0.04 °C at 0 °C after 100 hours at 160 °C
Short Term Stability	± 0.01 °C
Thermal Shock	± 0.01 °C after 10 times thermal cycles from minimum to maximum temperatures
Hysteresis	≤ 0.01 °C
Self-heating	≤ 0.01 °C
Response Time	4 seconds for 63% response to step change in water moving at 3 feet per second
Measurement Current	0.5 mA or 1 mA
Sensor Length	5 mm
Sensor Location	3 mm from tip
Insulation Resistance	>1000 M Ω at room temperature
Sheath Material	Stainless Steel 316L
Dimension	1610-12: 0.25 X 12 inch (6.35 X 305 mm); 1610-9: 0.187 X 9 inch (4.75 X 229 mm)
External Leads	Teflon™ –insulated copper wire, 4 leads, 2.5 meters
Handle Dimension	1610-12: 15mm (OD) X 65 mm (L); 1610-9: 10mm (OD) X 50 mm (L)
Handle Temperature Range	-30°C to 150°C
Calibration Options	1610-12-T/1610-9-T, PRT with NIST traceable calibration and data

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case

AM1612 Full Immersion PRTs

OVERVIEW

AM1612 full immersion PRT is uniquely designed to provide users an excellent temperature probe that can expose the transition junction and lead wires to an environment that covers the full PRT temperature range. The seal of probe prevents the ingress of moisture so that the probe can work in a humid condition, or even under full immersion in water.

AM1612 is small in size with probe length of 50 mm and diameter of 3 mm. A unique assembly procedure provides the best balance among the hysteresis effect, mechanical shock and thermal shock performance.

FEATURES

- Temperature range: -60 °C to 180 °C
- Probe Length: 50 mm
- Accuracy: ± 0.05 °C
- Long term drift: ± 0.04 °C
- Short term stability: 0.02 °C
- Durable and shock resistance
- Temperature Coefficient 0.00385
- SST sheath



SPECIFICATIONS

Model	AM1612
Temperature Range	-60°C to 180°C
Resistance at 0 °C	Nominal 100 Ω
Temperature Coefficient	0.00385 $\Omega / \Omega / ^\circ\text{C}$
Accuracy	± 0.05 °C
Drift	± 0.04 °C at 0 °C after 100 hours at 160 °C
Short Term Stability	± 0.02 °C
Thermal Shock	± 0.01 °C after 10 times thermal cycles from minimum to maximum temperatures
Hysteresis	≤ 0.01 °C
Self-heating	75 mW/°C
Response Time	4 seconds for 63% response to step change in water moving at 3 feet per second
Measurement Current	0.5 mA or 1 mA
Sensor Length	32 mm
Sensor Location	3 mm from tip
Insulation Resistance	>1000 M Ω at room temperature
Sheath Material	Stainless Steel 316L
Dimension	0.125 inch X 2 inch (3 mm X 50 mm)
External Leads	Enameled copper wire, 4 leads, 2.5 meters
Calibration Options	1612-T, PRT with NIST traceable calibration and data

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case

AM8060 Dual-Channel Precision Thermometer

OVERVIEW

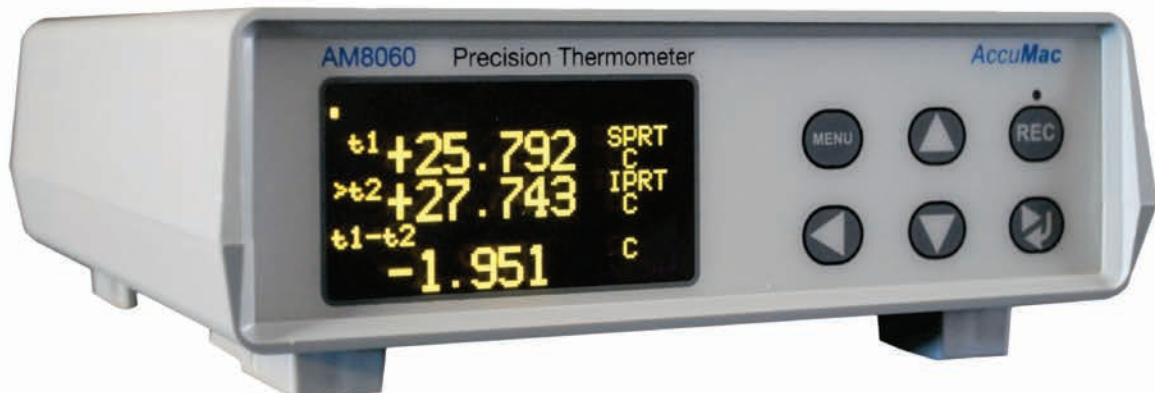
AM8060 Precision Thermometer provides high accuracy, fast readings and great stability. It comes with dual channel measurement of temperature with Platinum Resistance Thermometers (PRTs). The temperature of each input and their temperature difference are displayed simultaneously. All of the readings can be stored in a USB flash disk or transferred to PC through a wireless module or an USB cable.

AM8060 Precision Thermometer allows users to choose ITS-90, IEC-751 (DIN), or Callendar-Van Dusen conversion methods to response to various PRTs. Users can also choose to key in calibration data of each PRT to ensure the best accuracy.

This dual-channel readout is a perfect choice for precision temperature measurement and calibration. It's also a top choice as temperature reference for Drywell Calibrators and Temperature Bath.

FEATURES

- High accuracy: up to ± 0.008 °C at 0 °C
- High resolution: 0.001 °C over the full range
- Temperature range: -200 °C to 850 °C
- Two inputs for reading two different sensors simultaneously
- Differential temperature measurement
- ITS-90, CVD, IEC-751
- 2.7 inch OLED display
- Full-size Touchpad for function control
- User key-in coefficients to ensure the best accuracy
- Data storage into USB flash disk
- Data transfer to PC using an USB cable
- Wireless data transfer to PC with an optional wireless module



AM8060 Dual-Channel Precision Thermometer

SPECIFICATIONS

Model	AM8060
Temperature Range	-200°C to 850°C, depending on PRT used
Accuracy (meter only)	±0.01°C @ -200°C, ±0.008°C @ 0°C, ±0.009°C @ 232°C, ±0.01°C @ 420°C ±0.015°C @ 660°C, ±0.025°C @ 850°C
Resolution	0.001°C (0.0001 Ω) over full range
Probe	Nominal Rtpw: 25 Ω or 100 Ω RTD, PRT or SPRT
Characterizations	ITS-90 coefficients, Callender Van Dusen coefficients, IEC-751 (DIN 385)
Sample Interval	1 second
Display	2.7 inch OLED
Display Units	°C, °F, Ω
Excitation Current	1 mA, reversing
Operation Range	15 °C to 35 °C
Thermometer Input Connectors	Spade plug or bare wire
Power Requirements	100-220V
Dimension	180 mm (W) X 65 mm (H) X 200 mm (D)
Weight	0.3 kg (0.7 lbs)

OPTIONAL ACCESSORIES

Model	Description
1610-12/9	Precision Industrial PRT, -60°C to 160°C
1620-12/9	Precision industrial PRT, -60°C to 300°C
1640-12	Precision industrial PRT, -200°C to 420°C
1660-12	Precision industrial PRT, -200°C to 670°C
1730-12	Secondary Reference PRT, -200°C to 420°C
1750-12/20	Secondary Reference PRT, -200°C to 670°C
1760	Secondary SPRT, -200°C to 670°C
1762	Secondary SPRT, -200°C to 670°C
1850	Metal-sheath SPRT, -200°C to 500°C
1860	Metal-sheath SPRT, -200°C to 670°C
1950	Quartz-sheath SPRT, -200°C to 500 °C
1960	Quartz-sheath SPRT, -200°C to 670 °C

ORDERING INFORMATION

- AM8060 Dual-Channel Precision Thermometer
- AM8060-W Dual-Channel Precision Thermometer with Wireless Module

AM8040 Precision Thermometer

OVERVIEW

AM8040 Precision Thermometer provides the best values with high standard performance. It features high accuracy, fast readings and great stability. It operates with a wide range of Platinum Resistance Thermometers (PRTs). All of the readings can be stored in a USB flash disk or transferred to PC through an USB cable or a wireless module.

AM8040 Precision Thermometer allows users to choose ITS-90, IEC-751 (DIN), or Callendar-Van Dusen conversion methods to response to various PRTs. Users can also choose to key in calibration data of each PRT to ensure the best accuracy.

AM8040 is the solution for precision temperature measurement and calibration at a very attractive price.

FEATURES

- High accuracy: up to ± 0.008 °C at 0 °C
- High resolution: 0.001 °C over the full range
- Temperature range: -200 °C to 850 °C
- ITS-90, CVD, IEC-751 conversion methods or key in coefficients of PRTs
- 2.7 inch OLED display
- Full-size Touchpad for function control
- Data storage into USB flash disk
- Data transfer to PC using an USB cable
- Wireless data transfer to PC with an optional wireless module



AM8040 Precision Thermometer

SPECIFICATIONS

Model	AM8040
Temperature Range	-200°C to 850°C, depending on PRT used
Accuracy (meter only)	±0.01°C @ -200°C, ±0.008°C @ 0°C, ±0.009°C @ 232°C, ±0.01°C @ 420°C ±0.015°C @ 660°C, ±0.025°C @ 850°C
Resolution	0.001°C (0.0001 Ω) over full range
Probe	Nominal Rtpw: 25 Ω or 100 Ω RTD, PRT or SPRT
Characterizations	ITS-90 coefficients, Callender Van Dusen coefficients, IEC-751 (DIN 385)
Sample Interval	1 second
Display	2.7 inch OLED
Display Units	°C, °F, Ω
Excitation Current	1 mA, reversing
Operation Range	15 °C to 35 °C
Thermometer Input Connectors	Spade plug or bare wire
Power Requirements	100-220V
Dimension	180 mm (W) X 65 mm (H) X 200 mm (D)
Weight	0.3 kg (0.7 lbs)

OPTIONAL ACCESSORIES

Model	Description
1610-12/9	Precision Industrial PRT, -60°C to 160°C
1620-12/9	Precision industrial PRT, -60°C to 300°C
1640-12	Precision industrial PRT, -200°C to 420°C
1660-12	Precision industrial PRT, -200°C to 670°C
1730-12	Secondary Reference PRT, -200°C to 420°C
1750-12/20	Secondary Reference PRT, -200°C to 670°C
1760	Secondary SPRT, -200°C to 670°C
1762	Secondary SPRT, -200°C to 670°C
1850	Metal-sheath SPRT, -200°C to 500°C
1860	Metal-sheath SPRT, -200°C to 670°C
1950	Quartz-sheath SPRT, -200°C to 500 °C
1960	Quartz-sheath SPRT, -200°C to 670 °C

ORDERING INFORMATION

- AM8040 Single-Channel Precision Thermometer
- AM8040-W Single-Channel Precision Thermometer with Wireless Module

AM8010 Handheld Digital Thermometer

OVERVIEW

AM8010 is a handheld digital thermometer with high accuracy, fast readings and great stability. This readout is perfect for field applications as well as lab measurement. Though small in size, AM8010 is powerful when it comes to accuracy, which can be as high as 0.03 °C at 0 °C. A USB interface allows user to log and display real time data on a PC.

AM8010 digital thermometer allows users to choose ITS-90, IEC-751 (DIN), or Callendar-Van Dusen conversion methods to response various PRTs. All probe constants and coefficients can be keyed in through front panel.

This portable readout is a powerful device with relative small price.

FEATURES

- High accuracy: ± 0.03 °C at 0 °C
- Work with PRTs with $\alpha=0.00385$ and $\alpha=0.003925$
- 2.7 inch OLED display
- Temperature can be displayed in °C, °F or ohm.
- USB interface with PC for real time data saving and displaying on PC
- Dual power supply with batteries or external power adaptor/computer USB interface
- High resolution: 0.01 °C over the full range
- ITS-90, CVD, IEC-751
- Full-size Touchpad for function control
- Flexible interface with user key-in coefficients

SPECIFICATIONS

Model	AM8010
Temperature Range	-200°C to 850°C, depending on PRT used
Accuracy (meter only)	± 0.04 °C @ -200°C, ± 0.03 °C @ 0°C, ± 0.04 °C @ 232°C ± 0.05 °C @ 420°C, ± 0.06 °C @ 660°C, ± 0.07 °C @ 850°C
Resolution	0.01°C (0.001 Ω) over full range
Stability	± 0.01 °C
Probe	100 Ω RTD, PRT or SPRT
Characterizations	ITS-90 coefficients, Callender Van Dusen coefficients, IEC-751 (DIN 385)
Sample Interval	1 second
Display	2.7 inch OLED
Display Units	°C, °F, Ω
Excitation Current	1 mA, reversing
Operation Range	15 °C to 35 °C
Thermometer Input Connectors	5-pin plug
Power Requirements	100-240 V
Dimension	141mm (L) X 25 mm (H) X 89 mm (W)
Weight	0.2 kg (0.5 lbs)

OPTIONAL ACCESSORIES

Model	Description
1610-12/9	Precision Industrial PRT, -60°C to 160°C
1620-12/9	Precision industrial PRT, -60°C to 300°C
1640-12	Precision industrial PRT, -200°C to 420°C
1660-12	Precision industrial PRT, -200°C to 670°C
1730-12/9	Secondary Reference PRT, -200°C to 420°C
1750-12/20	Secondary Reference PRT, -200°C to 670°C
1760	Secondary SPRT, -200°C to 670°C
1850-100	Metal-sheath SPRT, -200°C to 500°C
1860-100	Metal-sheath SPRT, -200°C to 670°C





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