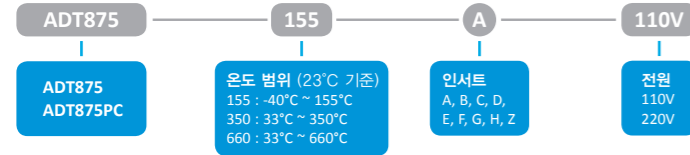


ADT875



현장 교정용 전기로

주문 정보



기본 액세서리

항 목	수 량	제품 사진
드라이 블록 인서트	1개	
전원 아답터	1개	
USB 케이블	1개	
인서트 제거 툴	1개	
고온 보호실드 (ADT875/PC-350/660 전용)	1개	
실리카 겔 플러그 (ADT875/PC-155 전용)	1세트 (3개)	
절연 플러그 (ADT875/PC-155 전용)	1세트 (3개)	
테스트 리드 (ADT875PC 전용)	2세트 (6개)	
교정 성적서	1개	
CD 매뉴얼	1개	

옵션 액세서리

사용자 맞춤형(CYOR: Choose Your Own Range) 및 이동 케이스

모 델	수 량	제품 사진
9875-155-CYOR	ADT875-155 드라이 블록 사용자 맞춤형 온도범위 지정	
9875-350-CYOR	ADT875-350 드라이 블록 사용자 맞춤형 온도범위 지정	
9875-660-CYOR	ADT875-660 드라이 블록 사용자 맞춤형 온도범위 지정	
99XX-87X	Carry case for ADT875 with wheels	

※ 기본모델 온도범위 내 사용자가 원하는 범위 지정가능



경기도 용인시 기흥구 흥덕1로 13 흥덕IT밸리 P동 102-A호

Tel. 031-713-5988 Fax. 031-713-5983

Email. sales@tessol.com

www.tessol.com

인서트

타 입	상 세	타 입	상 세
A	High Temp Low Temp	F	High Temp Low Temp
B	High Temp Low Temp	G	High Temp Low Temp
C	High Temp Low Temp	H	High Temp Low Temp
D	High Temp Low Temp	Z	High Temp Low Temp
E	High Temp Low Temp		

※ 추후 업데이트 될 수 있음

Secondary PRT

모 델	상 세
AM1710-12-ADT	100Ω, -40°C ~ 160°C, 1/4" dia x 12" length (6.35 x 305mm) with dry well connector
AM1710-BEND-ADT	100Ω, -40°C ~ 160°C, 1/4" dia x 12" length (6.35 x 305mm), 90° bend at 6.7" (170mm) from probe end, with dry well connector
AM1760-12-ADT	100Ω, -40°C ~ 420°C, 1/4" dia x 12" length (6.35 x 305mm) with dry well connector
AM1730-BEND-ADT	100Ω, -40°C ~ 420°C, 1/4" dia x 12" length (6.35 x 305mm), 90° bend at 9.6" (245mm) from probe end, with dry well connector
AM1751-12-ADT	100Ω, -40°C ~ 661°C, 1/4" dia x 12" length (6.35 x 305mm) with dry well connector
AM1751-BEND-ADT	100Ω, -40°C ~ 661°C, 1/4" dia x 12" length (6.35 x 305mm), 90° bend at 9.6" (245mm) from probe end, with dry well connector



AM17XX-12-ADT



AM17XX-BEND-ADT

ADT875

현장 교정용 전기로



미국 Additel사의 새로운 온도 교정 솔루션

- -40°C ~ 660°C 범위의 기본 3종 모델
- 빠른 발열/냉각시간
- Euramet cg-13 Performance Level
- 프로세스 교정 옵션
 - 외부 표준 온도센서 연결가능
 - 독립된 2채널 : TC/RTD/전기/스위치 측정, 24V 루프파워
 - HART 커뮤니케이션, 데이터 로깅, 작업관리
 - 셀프 교정기능으로 장기 드리프트 제거
- 견고함, 작은 사이즈와 뛰어난 휴대성
- 6.5인치 컬러 터치스크린

기본 모델

ADT875/ADT875PC -155 (-40°C ~ 155°C)

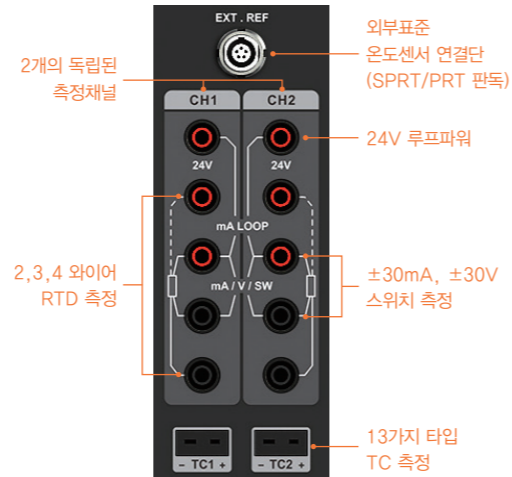
ADT875/ADT875PC -350 (33°C ~ 350°C)

ADT875/ADT875PC -660 (33°C ~ 660°C)

* 전 범위 23°C 기준

프로세스 교정기 옵션 (ADT875PC-XXX)

- 3가지 기본 모델에 표준 온도센서 연결(1채널), TC/RTD/전기/스위치 측정, 24V 루프파워(2채널), HART 커뮤니케이션, 데이터 로깅 및 작업관리 기능 추가
- 외부 표준 온도센서를 연결하여 자동 셀프 교정기능을 수행할 경우, 드라이 블록 내부 센서의 장기 드리프트가 제거되어 최상의 정확도를 제공



기본 3종 모델 사양

항 목	ADT875-155	ADT875-350	ADT875-660
온도 범위 (23°C 기준)	-40°C ~ 155°C	33°C ~ 350°C	33°C ~ 660°C
디스플레이 정확도	±0.18°C (전 범위)	±0.2°C (전 범위)	±0.3°C (33°C)
			±0.3°C (420°C)
			±0.5°C (660°C)
안정도 (30분 기준)	±0.01°C (전 범위)	±0.02°C (전 범위)	±0.02°C (33°C)
			±0.03°C (50°C)
			±0.04°C (420°C)
			±0.04°C (660°C)
정확도 보장 환경	8°C ~ 38°C		
사용 환경	0°C ~ 50°C, 0% ~ 90% RH non-condensing (3,000m 이하)		
보관 온도	-20°C ~ 60°C		
IP등급	IP20 (실내용)		
Immersion Depth	150mm		
발열 시간	-40°C → 155°C : 13분	33°C → 350°C : 5분	33°C → 660°C : 15분
	-40°C → 23°C : 5분		
	23°C → 155°C : 8분		
냉각 시간	155°C → -40°C : 28분	350°C → 100°C : 15분	660°C → 100°C : 23분
	155°C → 23°C : 8분	100°C → 50°C : 10분	100°C → 50°C : 12분
	23°C → -40°C : 20분	50°C → 33°C : 10분	50°C → 33°C : 12분
안정화 시간	10분		
분해능	0.01°C		
단위	°C, °F, K		
디스플레이	6.5인치 컬러 터치스크린		
부피	320 x 170 x 330mm		
중량	9.9kg	8.2kg	
물리 테스트	- 진동 : 2g (10-500Hz), 30분 (2 sides) - 충격 : 4g (3회) - 낙하 : 0.5m		
인터페이스	USB A, USB B, RJ45, WiFi, Bluetooth		

프로세스 교정 사양 (옵션)

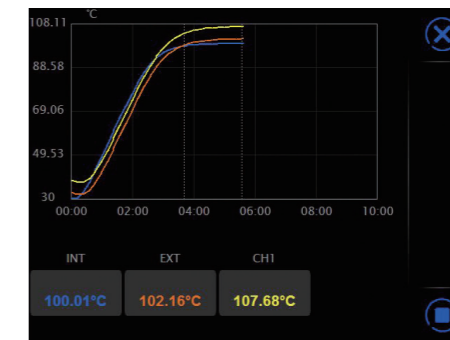
	입력 채널	연결	범위	정확도
레퍼런스 PRT	1	6-pin lemo smart Connector	0 ~ 400Ω	0 ~ 50Ω : 0.002Ω 50 ~ 400Ω : 0.004% RD
RTD	2	Four 4mm input jacks	0 ~ 4KΩ	25 ~ 400Ω : 0.008% RD
TC	2	Mini TC terminal	13 타입	±0.15°C at 155°C
전압	2	4mm input jack	-30V ~ 30V	±0.02 RD ± 2mV
전류	2	4mm input jack	-30mA ~ 30mA	0.02% RD + 2uA

- 도큐멘테이션 : 1,000건의 작업, 건당 10개의 결과파일 저장 가능, 스냅 샷 기능으로 스크린 캡처 가능
- HART 커뮤니케이션

프로세스 교정 주요 기능 및 어플리케이션



전기(mA, V)측정, 스위치 테스트



데이터 로깅

Set Point °C	INT °C	CH1 °C	REF Pt100(385)-1 °C
20	20	19.87	20.61
50	49.92	49.67	50.41
80	79.92	79.59	81.22
110	110.01	109.96	112.41
80	79.99	80.34	81.87
50			
20			

자동 스텝



PRT 테스트 (외부 표준 온도센서)



TC/RTD 테스트



트랜스미터 테스트 (HART 커뮤니케이션)

공통 기능



WiFi, Bluetooth 제어



온도 안정화 및 소요시간 표시

Additel 875 Series Dry Well Calibrators



- Three models ranging from -40°C to 660°C
- Portable, rugged, and quick to temperature
- Metrology-level performance in stability, uniformity, accuracy and loading effect
- Dual-zone control
- Process calibrator option provides a multi-channel readout for a reference thermometer, RTDs and TCs, task documentation, and HART communication
- Color touch screen display
- Choose your own range option
- Set point control by reference
- Self-calibration feature

OVERVIEW

If you are serious about portable temperature calibration tools, then you know a good dry well calibrator is more than just a stable heat source. The Additel 875 Series Dry Well Calibrators combine excellent performance in stability, radial and axial uniformity, and loading with speed, ruggedness and portability. But we don't stop there! The Process Calibrator option adds the capabilities of a three-channel thermometer readout and a documenting process calibrator. We've also incorporated a unique option to select your own temperature range within the range of the model selected. We're calling this the CYOR option or Choose Your Own Range option. When you purchase the CYOR option, you pick the upper and lower temperature range needed and we calibrate and optimize the dry well's performance over your selected range. Each unit has a color touch screen display, dual-zone control, and much more. You are just going to love these new dry wells!



Process Calibrator Option

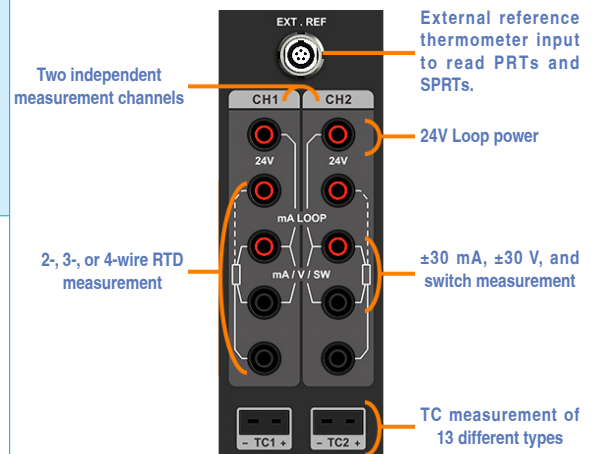
Each model offer has a Process Calibrator (PC) option. This process calibrator option combines the many features found in a HART documenting process calibrator with the temperature dry well. This option includes the ability to measure a reference PRT and two device under test channels which can measure, mA, voltage, switch, RTD or thermocouple. In addition to these measurement functions, this calibrator has full documenting capability of creating tasks, saving as found and as left results, and HART communication. The snap shot feature allows you to capture all information displayed on the screen with the push of a button. This unit also allow for data logging of all channels on an auto step function and a ramp function. By utilizing the reference PRT, you can select to control to the dry well set point using the internal sensor or the external reference PRT.

Self Calibration

We believe using an external reference probe as your standard is the best way to perform your temperature calibration. But we also recognize this method is not always necessary or convenient and depending on the application, using the internal control sensor would be preferred. Traditionally, the internal control sensor has a wide accuracy which can largely be contributed to its long-term drift. We've built-in a self calibration feature allowing you to run an automated calibration of the internal control sensor using your external reference. With literally a few selections the calibration will run automatically giving you a fresh, traceable calibration of the control sensor which will improve its accuracy as you will not have to account for its long term drift when used as the reference.

FEATURES

Specification	Display
Task	
mA Measurement	
V Measurement	



**Process Calibrator
Optional Electronics**

FEATURES



Specification	Display 1	Display 2
Auto Step		
Remote Control		
Data Logging		
Stability Indicator		
Connection Instruction		

APPLICATIONS



Specification	Display	Application
PRT Test (External Reference)		
RTD Test		
TC Test		
Transmitter Test		
Switch Test		

SPECIFICATIONS

Base Unit Dry Well Specifications

Specification	875-155	875-350	875-660
Temperature Range at 23°C	-40°C to 155°C	33°C to 350°C	33°C to 660°C
Display Accuracy	±0.18°C at Full Range	±0.2°C at Full Range	±0.3°C at 33°C
			±0.3°C at 420°C
			±0.5°C at 660°C
Stability (30 min)	±0.01°C at Full Range	±0.02°C at Full Range	±0.02°C at 33°C
			±0.03°C at 50°C
			±0.04°C at 420°C
			±0.04°C at 660°C
Axial Uniformity at 60 mm (2.4 in)	±0.07°C at Full Range	±0.04°C at 33°C	±0.05°C at 33°C
		±0.1°C at 200°C	±0.3°C at 420°C
		±0.2°C at 350°C	±0.5°C at 660°C
Radial Uniformity	±0.01°C at Full Range	±0.01°C at 33°C	±0.02°C at 33°C
		±0.015°C at 200°C	±0.05°C at 420°C
		±0.02°C at 350°C	±0.1°C at 660°C
Loading Effect	±0.1°C (Display Sensor)	±0.15°C (Display Sensor)	±0.15°C (Display Sensor)
	±0.02°C (External Sensor)	±0.015°C (External Sensor)	±0.025°C (External Sensor)
Hysteresis (Display Sensor)	0.025°C	0.03°C	0.1°C
Environmental Conditions	8°C to 38°C guaranteed accuracy		
	0°C to 50°C, 0% to 90% RH non-condensing, 3000 M altitude for normal operation		
Storage Conditions	-20°C to 60°C		
IP Rating	IP20		
Immersion Depth	150 mm (5.9 in)		
Insert OD	25.8 mm (1.02 in)	24.8 mm (0.98 in)	
Heating Time	13 min: -40°C to 155°C	5 min: 33°C to 350°C	15 min: 33°C to 660°C
	5 min: -40°C to 23°C		
	8 min: 23°C to 155°C		
Cooling Time	28 min: 155°C to -40°C	15 min: 350°C to 100°C	23 min: 660°C to 100°C
	8 min: 155°C to 23°C	10 min: 100°C to 50°C	12 min: 100°C to 50°C
	20 min: 23°C to -40°C	10 min: 50°C to 33°C	12 min: 50°C to 33°C
Typical Time to Stability	10 min		
Resolution	0.01°C		
Units	°C, °F, and K		
Display	6.5 in (165 mm) color touch screen		
Size (H x W x D)	320 x 170 x 330 mm (12.6 x 6.7 x 13.0 in)		
Weight	9.9 kg (21.8 lbs)	8.2 kg (18.1 lbs)	
Power Requirements	90-254 VAC, 45-65 Hz, 580 W	90-254 VAC, 45-65 Hz, 1200 W	
Mechanical Testing	Vibration: 2 g (10-500 Hz), 30 min for 2 sides		
	Impact: 4 g three times		
	Drop test: 500 mm (19.6 in)		
Communication	USB A, USB B, RJ45, WiFi, Bluetooth		
Localization	English, Chinese, Japanese, Russian, German, French, Italian, and Spanish		



Input Specifications (Process Calibrator [PC] Option)

Specification	Description	
Readout Accuracy for 100 ohm PRT (Probe Accuracy Not Included)	±0.009°C at -40°C	
	±0.010°C at 0°C	
	±0.012°C at 50°C	
	±0.017°C at 155°C	
	±0.019°C at 200°C	
	±0.026°C at 350°C	
	±0.030°C at 420°C	
	±0.042°C at 660°C	
Readout Resolution	1 mΩ	
Reference Resistance Range	0 Ω to 400 Ω	
Reference Resistance Accuracy	0 Ω to 50 Ω: 0.002 %	
	50 Ω to 400 Ω: 0.004% RD	
Reference Characterizations	ITS-90, CVD, IEC-751, Resistance	
Reference Measurement Capability	4-wire PRT	
Reference Probe Connection	6-pin lemo smart connector	
RTD Channels	2	
RTD Measurement Accuracy (excl sensor) Compliance	0 Ω to 25 Ω: 0.002 %	
	25 Ω to 400 Ω: 0.008% RD	
	400 Ω to 4K Ω: 0.004% RD	
RTD Measurement Resolution	0 Ω to 400 Ω: 1 mΩ	
	400 Ω to 4K Ω: 0.01 %	
RTD Measurement Resistance Range	0 Ω to 4K Ω	
RTD Characterizations	PT10, PT25, PT50, PT100, PT200, PT500, PT1000, CU10, CU50, CU100, NI100, NI120	
RTD Connection	Four 4 mm input jacks	
RTD Channels	2 channels. Both accept 2, 3, or 4-wire RTDs	
TC Channel	2	
TC Measurement Channels	Mini TC terminals: Accepting S, R, K, B, N, E, J, T, C, D, G, L, and U	
TC Measurement Accuracy (excl sensor)	Type K: ±0.13°C at 0°C ±0.15°C at 155°C ±0.18°C at 350°C ±0.24°C at 660°C	
	TC Range	-100 mV to 100 mV
	TC Resolution	0.001 mV, Input Impedance <1 MΩ
	TC Voltage Accuracy	0.02% RD + 5 μV
Internal CJC Accuracy	±0.35°C (ambient from 0 °C to 50 °C)	
Current Range	-30 mA to 30 mA	
Current Accuracy	0.02% RD + 2 μA	
Current Resolution	0.001 mA, Input Impedance: < 10Ω	

Specification	Description
Voltage Range	-30 V to 30 V
Voltage Accuracy	±0.02% RD + 2 mV
Voltage Resolution	0.001V; Input impedance: < 1MΩ
Switch Test	Mechanical or Electrical
DC 24V Output	24 V ±1 V, MAX60 mA
Hart Communication	Optional (ADT875PC Model)
Documentation	Up to 1,000 tasks which store up to 10 results each containing as found and as left data. Snap shot feature allows for screen captures. Records auto step and ramp functions.
Temperature Coefficient 0°C to 8°C and 38°C to 50°C	ADT875(PC)-155: ±0.005 °C/°C
	ADT875(PC)-350/660: ±0.01 °C/°C
	Ref Readout: ±1 ppm FS/°C
	RTD Readouts: ±2 ppm FS/°C
	TC Readouts: ±5 ppm FS/°C
	Current: ±10 ppm FS/°C
Voltage: ±10 ppm FS/°C	

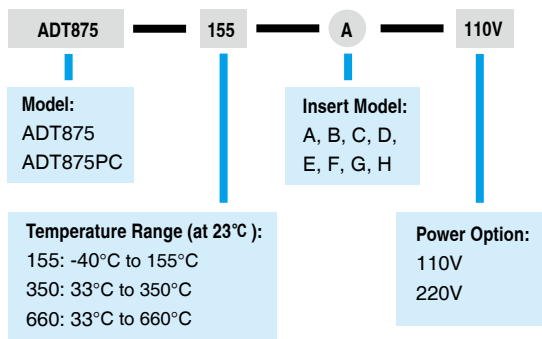
TC Measurement Specification and Calculation (Process Calibrator [PC] Option)

TC Type	Temperature (°C)	Error (°C) ^[1]	TC Type	Temperature (°C)	Error (°C) ^[1]
B	250	±2	L	-40	±0.1
	350	±1.44		0	±0.1
	660	±0.84		155	±0.12
C	0	±0.38		350	±0.16
	155	±0.34		660	±0.21
	350	±0.33		-40	±0.2
D	660	±0.38	0	±0.2	
	0	±0.52	155	±0.19	
	155	±0.37	350	±0.2	
	350	±0.33	660	±0.24	
	660	±0.36	-40	±1.23	
	-40	±0.09	0	±0.95	
E	0	±0.09	155	±0.63	
	155	±0.1	350	±0.56	
	350	±0.13	660	±0.54	
	660	±0.19	-40	±1.16	
G	0	±3.85	0	±0.93	
	155	±0.71	155	±0.65	
	350	±0.43	350	±0.6	
	660	±0.36	660	±0.6	
J	-40	±0.1	-40	±0.14	
	0	±0.1	0	±0.13	
	155	±0.12	155	±0.13	
	350	±0.16	350	±0.15	
	660	±0.21	400	±0.15	
K	-40	±0.13	-40	±0.14	
	0	±0.13	0	±0.13	
	155	±0.16	155	±0.13	
	350	±0.19	350	±0.14	
	660	±0.25	600	±0.17	

[1] Excluding cold junction compensation errors.

Ordering Information

Model Number



CYOR Option (Choose Your Own Range)

Optional Accessories		
Model	Description	Picture
9875-155-CYOR	Range selection for ADT875-155 Dry Well Calibrator, Customize Range	
9875-350-CYOR	Range selection for ADT875-350 Dry Well Calibrator, Customize Range	
9875-660-CYOR	Range selection for ADT875-660 Dry Well Calibrator, Customize Range	

Accessories

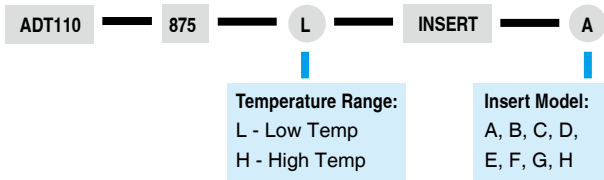
Standard Accessories		
Model	Quantity	Picture
Dry well and selected insert	1 pc.	
Power adapter	1 pc.	
USB Cable	1 pc.	
Insert removal tool	1 pc.	
Thermal Shield (ADT875/PC-350/660 only)	1 pc.	
Silica gel plug (ADT875/PC-155 only)	1 set (3 pcs.)	
Insulation plug (ADT875/PC-155 only)	1 pc.	
Test leads (ADT875PC only)	2 sets (6 pcs.)	
Certificate of calibration	1 pc.	
CD Manual	1 pc.	

Optional Accessories		
Model	Description	Picture
9918-875	Carry case for ADT875 with wheels	
ADT110-875-X-INSERT-X	Insert for ADT875, see insert ordering information on the next page	
AM17XX-12-ADT	Secondary PRT with dry well connector, see PRT information on the next page	
AM17XX-BEND-ADT	Bend Secondary PRT with dry well connector, see PRT information on the next page	
9070	Smart connector for reference PRT used with ADT875 Dry Well Calibrator	
9071	Connector Adapter from smart connector to 4-wire with gold-plated spades for ADT875 Dry Well Calibrator	
9072	Smart connector with clamps for reference PRT used with ADT875 Dry Well Calibrator	
9080	CJC Cable Kit (includes TC to Plug, TC to TC, TC to Banana, and B,E,J,K,N,R,S,T,U cables)	

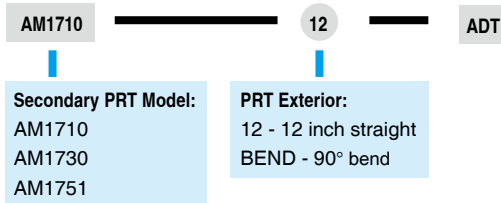
Insert Information

Insert Information			
Model	Specification	Model	Specification
A	High Temp 1/4 in 3/8 in 3/16 in 1/8 in Low Temp	F	High Temp 6.5 mm 10 mm 8 mm 6.5 mm Low Temp
B	High Temp 1/4 in 1/4 in 3/16 in 3/16 in Low Temp	G	High Temp 8 mm 8 mm Low Temp
C	High Temp 1/4 in 1/4 in 1/4 in Low Temp	H	High Temp 1/4 in 4 mm 8 mm 4 mm 6 mm Low Temp
D	High Temp 1/4 in 1/4 in Low Temp	Z	High Temp Low Temp
E	High Temp 1/4 in 10 mm 4 mm 8 mm 6 mm Low Temp	* Updated insert information at www.additel.com	

Insert Ordering Information



Secondary PRT Ordering Information



AM17XX-12-ADT



AM17XX-BEND-ADT

Secondary PRT Information

Specification	AM1710 Series	AM1730 Series	AM1751 Series
Temperature Range	-60°C to 160°C	-200°C to 420°C	-200°C to 670°C
Resistance at 0°C	Nominal 100 Ω		
Temperature Coefficient	0.003925 Ω / Ω / °C		
Accuracy	±0.025°C at -40°C ±0.015°C at 0.01°C ±0.025°C at 160°C	±0.025°C at -196°C ±0.015°C at 0.01°C ±0.035°C at 420°C	±0.025°C at -196°C ±0.015°C at 0.01°C ±0.035°C at 420°C ±0.05°C at 661°C
Drift	±0.01°C at TPW after 100 hours at 160°C	±0.01°C at TPW after 100 hours at 420°C	±0.01°C at TPW after 100 hours at 661°C
Short Term Stability	±0.007°C		
Thermal Shock	±0.005°C after 10 times thermal cycles from minimum to maximum temperatures		
Hysteresis	≤0.005°C		
Self-heating	50 mW/°C		
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	32 mm		
Sensor Location	5 mm from tip		
Insulation Resistance	>1000 MΩ at room temperature		
Sheath Material	Stainless Steel	Inconel™	
Dimension	AM1710-12-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm)	AM1730-12-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm)	AM1751-12-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm)
	AM1710-BEND-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm), 90° bend at 7.4 inch (190 mm) from probe end	AM1730-BEND-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm), 90° bend at 9.6 inch (245 mm) from probe end	AM1751-BEND-ADT 0.25 in dia X 12 in (6.35 mm X 305 mm), 90° bend at 9.6 inch (245 mm) from probe end
External Leads	Teflon™ –insulated copper wire, 4 leads, 2.5 meters		
Handle Dimension	15 mm (OD) x 65 mm (L)		
Handle Temperature Range ^[1]	-50°C to 160°C	-50°C to 180°C	
Optional Calibration	NIST traceable calibration and data available per request		

[1] Handle temperature outside this range will cause damage to the probe.

* PRT Information from www.accumac.com