

Model **HD-1000 series**

Handheld Thermometer



Model HD-1000 series handheld thermometers allow easy temperature measurement.

These general-purpose thermometers can be used for on-site temperature measurement and various other applications.

HD-1000模式系列

追求高精度度,可靠性,操作简单的HD-1000系列可以和安立计器的多种多样的温度传感器配合使用于不同领域。

HD-1000シリーズは、簡単に温度測定が出来るハンディタイプの温度計測器です。現場での温度チェックなど、汎用的にご使用いただけます。

**HD-1150K
HD-1150E**



HD-1150K

**HD-1250K
HD-1250E**



HD-1250K

**HD-1350K
HD-1350E**



HD-1350K

**HD-1450K
HD-1450E**



HD-1450K

**HD-1550K
HD-1550E**



HD-1550K

Function of HD-1000 series

ASP model	ANP model	WATER PROOF	DISPLAY	BACK LIGHT	AUTO OFF	HOLD	P/V HOLD	1/0.1	CAL	ALARM	ANALOG	°C / °F	MEMORY
HD-1100K HD-1100E	HD-1150K HD-1150E	●	LCD		●	●						°C	
HD-1200K HD-1200E	HD-1250K HD-1250E	●	LCD	●	●	●	●	●				°C	
HD-1201K HD-1201E	HD-1251K HD-1251E		LCD	●	●	●	●	●			1mV / °C	°C	
HD-1202K HD-1202E	HD-1252K HD-1252E		LCD	●	●	●	●	●			10mV / °C	°C	
HD-1300K HD-1300E	HD-1350K HD-1350E		LCD	●	●	●	●	●	●	●		°C	
HD-1301K HD-1301E	HD-1351K HD-1351E		LCD	●	●	●	●	●	●	●	1mV / °C	°C	
HD-1302K HD-1302E	HD-1352K HD-1352E		LCD	●	●	●	●	●	●	●	10mV / °C	°C	
HD-1400K HD-1400E	HD-1450K HD-1450E	●	LED		●	●						°C	
HD-1500K HD-1500E	HD-1550K HD-1550E		LCD	●	●	●	●	●				°C	●
	HD-1650K HD-1650E	●	LCD		●	●						°C / °F	
	HD-1750K HD-1750E	●	LCD	●	●	●	●	●				°C / °F	

Connector type 连接传感器

2 types of connectors available
有2种插口可供选择。



ASP:
Standard size connector

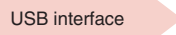
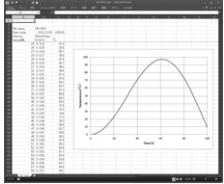


ANP:
Miniature size connector

Functions 功能

Waterproof specifications 防水功能 Waterproof specifications : Equivalent to IPX5 Protected against water jets - Water projected at all angles through a 6.3mm nozzle at a flow rate of 12.5 liters/min at a pressure of 30kN/m ² for 3 minutes from a distance of 3 meters. IPX5防水功能。可防御来自任何方向的喷水(12.5L/分)。	Memory function 记录功能 Stores readings at user - selected time intervals. User specified time interval and the remaining amount of memory are displayed on the sub-display. 设定记录间隔和剩余可记录数同时显示。 
Display 显示 Large easy - to - read LCD display 便于确认的大型显示屏	 Backlight 背光灯 The backlight will operate by the  key and the LCD display will be visible even in a dark place. 按  键打开背光灯，可在黑暗处确认数据
 Auto power - off 自动关闭 The thermometer will turn the power off automatically after 5 minutes. 5分钟以上不使用按钮，主机将自动关闭。 	 Resolution change 分辨率切换 Press the  key to change the resolution of readings. 按  键切换分辨率 
 Hold 固定测量数据 The thermometer stops measurement by the  key and holds the present readings. 按  键，可固定测量数据并保持该数据的显示。 	 P / V Hold P / V 值固定 The peak (Max.) value and the valley (Min.) value can be displayed by the  key on the sub-display. 可固定测量温度的最大值或最小值 
 Calibration 校准 The displayed value can be adjusted by the  key. 可设定测量标准值。 	 Alarm output 报警输出 The thermometer gives an alarm when readings go beyond the high or low limits. 表示温度超出设定范围外时，可显示·蜂鸣·信号输出进行警告。 
Analog output 模拟输出 1mV/°C Output 1mV per °C in conjunction with readings. 10mV/°C Output 10mV per °C in conjunction with readings. 电压输出时1°C为1mV或1°C为0.1mV。	 °C / °F Change °C / °F 切换 Press the  key to change the temperature unit of the displayed temperature. 按  键切换°C与°F。

Software for HD-15*0 (AMS-100) 专用软件

Data stored in memory can be transmitted to a personal computer through a USB interface and can be converted into CSV files. 可用USB导线将数据传到电脑，以CSV形式保存。  Download data HD-15*0K HD-15*0E PC	Easily create graphs and tables from CSV files by Microsoft® Excel® or other spreadsheet software. 用Excel等软件进行制表·画图。 
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●Operational environment of software (AMS-100)

O S	Microsoft® Windows® XP (SP.3 or newer), Windows Vista®, Windows® 7
Memory·Hard-disk space	Normal operating environment of OS
Communication interface	USB 1.1

※ All PCs under the recommended environment are not guaranteed to work successfully with AMS-100.
※ AMS-100 can be used only by the user that has a system administrative right (Administrator).
※ AMS-100 does not support Mac OS.
※ Microsoft® Windows® XP, Windows Vista®, Windows® 7 and Excel® are registered trademarks of Microsoft Corporation in the United States and other countries.



※ Image picture of waterproof specifications
※ 防水功能图片

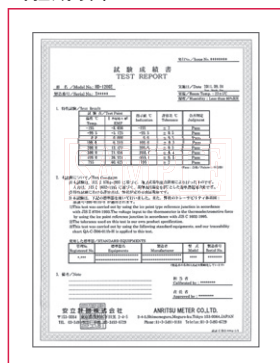


※ Image picture of temperature measurement
※ 测量温度图片

● Supplied accessories and Optional accessories 附件和选件

Supplied accessories

Test report
试验成绩书



Soft case
主机套



SCHD
Thermometer not included
不包括本体。

Hand strap
手带



Thermometer not included
不包括本体。

Optional accessories

AC-Adaptor
AC电源

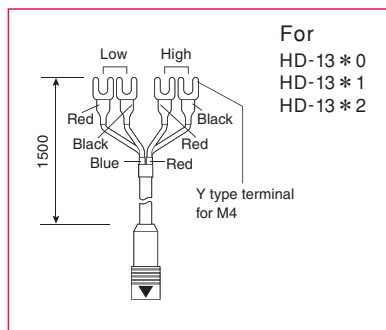


For
HD-12 * 1
HD-12 * 2
HD-13 * *
HD-15 * 0

A-115-200-HR-R (for AC115)
A-220-200-HR-R (for AC220)
Not CE-approval

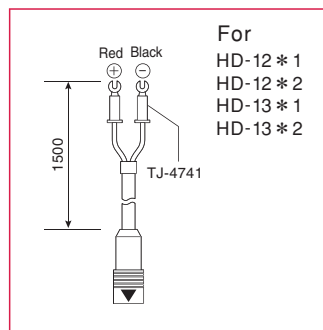
Supplied accessories

Alarm output cable
报警输出线



ALMHA-1.5

Analog output cable
模拟输出线



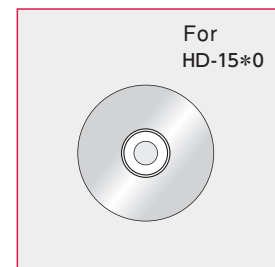
ANGHA-1.5

Communication cable
通信用USB线



AM-USB (for USB)

Software for HD-15*0 (CD-ROM)
软件



AMS-100

※ An alarm output cable and an analog output cable cannot be used simultaneously.
※ 不能同时使用报警输出线和模拟输出线

Specifications

Model		HD-1100 HD-1150 HD-1650	HD-1200 HD-1250 HD-1750	HD-1201 HD-1251	HD-1202 HD-1252	HD-1300 HD-1350	HD-1301 HD-1351	HD-1302 HD-1352	HD-1400 HD-1450	HD-1500 HD-1550
Waterproof specifications / Equivalent to IPX5		●	●						●	
Display		LCD	LCD with Backlight						LED	LCD with Backlight
Input connector		ASP model : HD-1*0* / ANP model : HD-1*5*								
Channel		1ch								
Input type		Thermocouple input : Type E or K (HD-1*0*) / Type E, K, J, T or R (HD-1*5*) Not switchable								
Signal source resistance		MAX 500Ω								
Measurement range		*TABLE I								
Measurement accuracy		*TABLE II								
Reference junction compensation accuracy		±0.2℃ at 25℃±10℃ [±0.4°F at 77°F±18°F]								
Temperature coefficient		±0.01% of F / S per ℃ [±0.01% of F / S per °F] ※ F / S : full scale								
Environmental	Operation	0~40℃, 0~80%RH (Non condensing) [32~104°F, 0~80%RH (Non condensing)]								
	Storage	-20~50℃, 0~85%RH (Non condensing) [-4~122°F, 0~85%RH (Non condensing)]								
Battery life		300h	300h	150h	150h	300h	150h	150h	150h	150h
Power supply	Dry battery	4 AA Alkaline batteries								
	AC power	—	—	AC- Adaptor (Option)					—	AC- Adaptor (Option)
Sampling rate		approx. 300ms								approx. 300ms *1
Plinearizer		Digital linearizer method (Compliant with IEC 60584-1 (1995))								
Dimensions		approx. 76(W) × 167(H) × 36(D) mm [Protruded parts excluded]								
Weight		approx. 350g [Include Batteries]								
Supplied accessories		Manual, Test report, Softcase , Hand strap , 4 AA Alkaline batteries								
		—	—	Analog output cable		Alarm output cable		—	Communication cable, Software (AMS-100)	
Analog output		—	—	1mV/℃	10mV/℃	—	1mV/℃			10mV/℃
				*TABLE III	*TABLE III		*TABLE III	*TABLE III		
Alarm output		—	—	—	—	● *TABLE IV	● *TABLE IV	● *TABLE IV	—	—
Memory function		—	—	—	—	—	—	—	—	● *TABLE V
Compatible standards		CE Marking, RoHS								

*1 Sampling period will be a user-selected time interval when time interval is specified at 10 seconds or more.

***TABLE I (Measurement range)**

Thermocouple type	°C		°F	
	1°C Resolution	0.1°C Resolution	1°F Resolution	0.1°F Resolution
E	-200 ~ 800°C	-100.0 ~ 500.0°C	-328 ~ 1472°F	-148.0 ~ 932.0°F
K	-200 ~ 1370°C		-328 ~ 2498°F	
J	-200 ~ 1100°C		-328 ~ 2012°F	
T	-200 ~ 400°C	-100.0 ~ 400.0°C	-328 ~ 752°F	-148.0 ~ 752.0°F
R	0 ~ 1760°C		32 ~ 3200°F	

※ Switches automatically to 1°C resolution range when measured temperatures fall outside the 0.1°C resolution range.

***TABLE II (Measurement accuracy)**

Thermocouple type	°C			°F		
	0.1°C Resolution	0°C ~ ~ 0°C	± (0.05% of reading + 0.2°C)	0.1°F Resolution	32°F ~ ~ 32°F	± (0.05% of reading + 0.4°F)
E, K, J, T	1°C Resolution	0°C ~ ~ 0°C	± (0.1% of reading + 1°C)	1°F Resolution	32°F ~ ~ 32°F	± (0.1% of reading + 2°F)
		~ 0°C	± (0.5% of reading + 1°C)		~ 32°F	± (0.5% of reading + 2°F)
R	1°C Resolution		± (0.1% of reading + 3°C)	1°F Resolution		± (0.1% of reading + 6°F)

***TABLE III (Analog output)**

Environment	Accuracy
25°C ±5°C	± (0.15% of F/S + 1mV)
Except 25°C ±5°C	± ((0.15% of F/S + 1mV) + (0.01% of F/S))

※ Output Impedance 100Ω ※ F / S : full scale

***TABLE IV (Alarm output)**

Output pattern	Upper limit	Lower limit
More than upper limit	H (5V)	L (0V)
Between upper and lower limit	L (0V)	L (0V)
Less than lower limit	L (0V)	H (5V)

※ Signal current of up to 5 mA can be taken out.

***TABLE V (Memory function)**

Time interval	1second, 5 seconds, 10 seconds, 30 seconds, 1 minute, 5 minutes, 10 minutes, 30 minutes, 60 minutes and manual memory
Memory capacity	9999 data