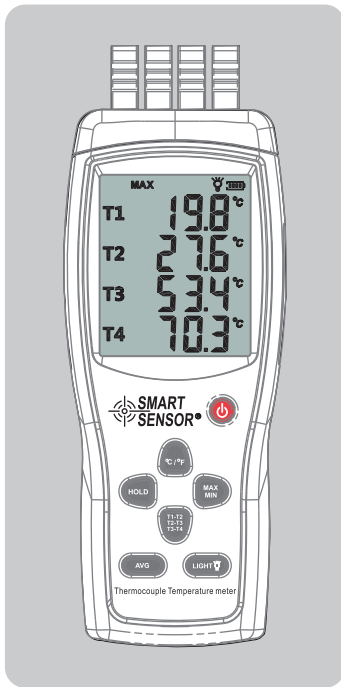


Four Channel Thermometer

User Manual



Version Code: 00

1) Introduction

A thermocouple is an electrical device consisting of two dissimilar electrical conductors forming electrical junctions at differing temperatures. A thermocouple produces a temperature-dependent voltage as a result of the thermoelectric effect, and this voltage can be interpreted to measure temperature. Thermocouples are a widely used type of temperature sensor. Commercial thermocouples are inexpensive, interchangeable, are supplied with standard connectors, and can measure a wide range of temperatures. In contrast to most other methods of temperature measurement, thermocouples are self powered and require no external form of excitation. The main limitation with thermocouples is accuracy; system errors of less than one degree Celsius (°C) can be difficult to achieve.

Thermocouples are widely used in science and industry. Applications include temperature measurement for kilns, gas turbine exhaust, diesel engines, and other industrial processes.

Thermocouples are also used in homes, offices and businesses as the temperature sensors in thermostats, and also as flame sensors in safety devices for gas-powered major appliances.

Features

1. High measure accuracy. Due to thermocouple sensor direct contact the object, don't affective with the media.
2. Easy to use, don't limitation of the size and opening.
3. The measured unit can be selected (°C or °F)
4. Data storage with Maximum, Minimum and Average.
5. User-friendly front panel design, easy for operation.
6. Large LCD display with back Light, show four channel measurement reading at the same time with T1, T2, T3, T4 or T1-T2, T2-T3, T3-T4 combination.
7. Measure four channel temperature with K type thermocouple sensor at the same time.
8. Electronic temperature compensation system to compensate the error for different thermocouple sensor, can achieve the maximum accuracy of this unit.

2) Safety Notice

Irregular operation of the user may cause seriously human body jeopardize. To avoid that kind of electrical

shock of human body, please follow the below advice. Before start the measurement, please check carefully of the thermo coupler any broken skin, specially at the connector plug. If thermo coupler was damaged, please stop to use it.

>If find " " , please replace a new battery, otherwise error reading may caused jeopardize of Human body.

>If mal-function or operation of this unit or sensor, please stop to use it to measure the temperature, otherwise the unit itself may be damage. If have problem please consult the Professionals .

>Don't use this thermometer at the below environments: Explosive gas, Steam air or Dusty area.

>Reflective object will effective a lower temperature measure value, please pay attention to prevent any burning.

>Don't contact any measure object it have operation voltage higher than 30V True RMS, 42V Peak value, 60V DC.

>If there is voltage different of the measure object to the thermo coupler high than 1V, may cause error measure, it this case end user must be use isolated material in between the measured object and the thermo coupler to prevent of this problem.

>Please according to temperature measurement arrange to select a suitable thermo-coupler sensor.

>Please don't attempt to charge the battery.

>Please don't through the battery into fire to prevent of explosion.

>Please pay attention of the polarity of the battery when replace a new battery.

3) LCD screen (Figure 1)

1) Maximum, Minimum, Average

2) Auto Power Off Icon

3) Battery Power Icon

4) Thermo-Coupler T1-T1

5) Thermo-Coupler T2-T3

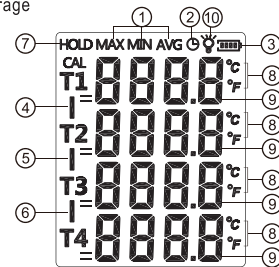
6) Thermo-Coupler T3-T4

7) Data Hold Icon

8) Temperature unit (°C/°F)

9) Temperature Reading

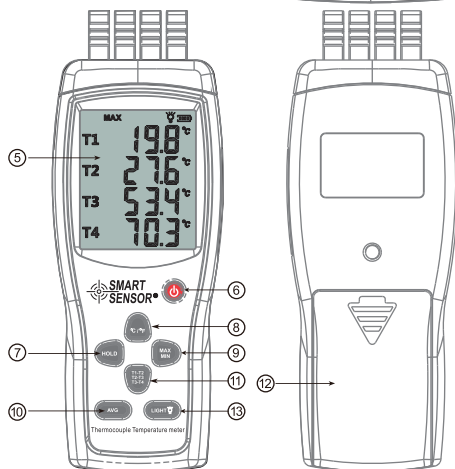
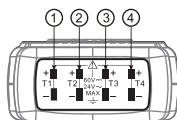
10) Back light icon



(Figure 1)

4) The name of each parts (Figure 2)

1. Thermo-Coupler T1 input port
2. Thermo-Coupler T2 input port
3. Thermo-Coupler T3 input port
4. Thermo-Coupler T4 input port
5. LCD Display
6. Power On/Off Key
7. Data Hold Key
8. °C/°F temperature unit selection.
9. Maximum, Minimum selection key,
10. Average key
11. T1-T2, T2-T3, T3-T4 Selection Key
12. Battery Door
13. Back light On/Off Key



(Figure 2)

5) Operation Instruction

1. Power
Depress Power On/Off key, Turn on or Turn off unit power.
2. Data Hold
Depress Hold key, frozen the data value, screen will show "Hold" icon, depress Hold Key again will release

the hold function and "Hold" icon disappear.

3. Temperature unit selection (°C/°F)
Depress °C/°F key, you can select °C/°F sequentially.

4. Maximum, Minimum and Average
(1) Depress Max/Min Key, screen show "MAX" icon, this time screen will display the maximum value of the temperature.

(2) Depress Max/Min key again, screen show "MIN" icon, this time screen will display the Minimum value of the temperature.

(3) Depress Average key, screen show "AVG" icon, this time screen will display the average value of the temperature.

(4) Depress "Max/Min" key, can select Maximum/Minimum and real time temperature (no Max or Min icon)

(5) T1, T2, T3, T4 and T1-T2, T2-T3, T3-T4 selection (factory pre-set is reading T1, T2, T3 and T4 temperature).

Depress T1-T2/ T2-T3/T3-T4 Key once, to select T1-T2 mode, in this mode the reading is temperature T1 deducted temperature T2, the reading show the difference of T1-T2 temperature.

Depress T1-T2/ T2-T3/T3-T4 Key again, to select T2-T3 mode, in this mode the reading is temperature T2 deducted temperature T3, the reading show the difference of T2-T3 temperature.

Depress T1-T2/ T2-T3/T3-T4 Key once again, to select T3-T4 mode, in this mode the reading is temperature T3 deducted temperature T4, the reading show the difference of T3-T4 temperature.

(6) Back light

Depress Light key can turn LCD back light on or off sequentially.

(7) Auto Power off

To safe the battery energy, if no any key in, the unit will turn off after 5 minutes. If you want to turn this function off, depress C/F key more than 3 seconds, LCD display APO "ON" "OFF": "OFF" means no auto power off function, unit will on auto power off. "ON" means Auto power off mode: depress ON/OFF key to select "ON" or "OFF" mode, after selection depress C/F key more than 3 seconds return to normal temperature measurement mode.

(8) Battery replacement

When battery low power, the battery power icon will show " " icon, please change battery immediately (3 X 1.5V AA size alkaline battery is recommended)

6) SPECIFICATION

Main unit	
Measure range:	T1 K-Type: -200°C to +1372°C (-328°F to +2501°F)
	T2 K-Type: -200°C to +1372°C (-328°F to +2501°F)
	T3 K-Type: -200°C to +1372°C (-328°F to +2501°F)
	T4 K-Type: -200°C to +1372°C (-328°F to +2501°F)
Resolution:	0.1°C/°F < 1000°; 1.0°C/°F ≥ 1000°
Accuracy:	±0.1% + 0.6°C
Input port:	Four channel input
Operation temperature:	0°C to 40°C
Storage temperature:	-10°C to 50°C
Operation Humidity:	20~90%
Power Source:	3 X 1.5V AA size battery.
Dimension:	66*31*159mm
Weight:	163.0g
	K Type thermo-coupler sensor (Four this package) temperature range: -50°C to +300°C
Accuracy:	+/-1.5%

Special Announcement

Our company reserve the right to change the design and the user manual without prior notice to the end user.



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