



RTD THERMOMETERS HD2127.1 AND HD2127.2 SENSORS: Pt100, Pt1000, Ni1000, NTC

The **HD2127.1** and **HD2127.2** are portable instruments with **two inputs** and a large LCD display. They measure the temperature using immersion, penetration, contact or air probes.

The instruments accept input from probes with SICRAM module and Pt100 sensor or probes with direct 4 wire Pt100 sensor. The Pt100 probes are fitted with SICRAM module and the factory calibration settings are already memorized inside. Upon turning on the instrument automatically detects them.

The HD2127.2 instrument is a **datalogger**. It memorizes up to 32,000 pairs of data which can be transferred from the instrument connected to a PC via the multi-standard RS232C serial port and USB 2.0. The storing interval, printing, and baud rate can be configured using the menu.

The HD2127.1 and HD2127.2 models are fitted with an RS232C serial port and can transfer the acquired measurements to a PC or to a portable printer in real time. The Max, Min and Avg function calculates the maximum, minimum or average values; the A-B function calculates the difference of the temperatures measured by the two inputs A and B.

Other functions include: the relative measurement REL, the HOLD function, and the automatic turning off which can also be disabled.

The instruments have IP67 protection degree.

INSTRUMENT TECHNICAL CHARACTERISTICS

Instrument

Dimensions (Length x Width x Height)	185x90x40mm
Weight	470g (complete with batteries)
Materials	ABS, rubber
Display	2x4½ digits plus symbols Visible area: 52x42mm

Operating conditions

Working temperature	-5...50°C
Storing temperature	-25...65°C
Working relative humidity	0...90%RH without condensation

Protection degree **IP67**

Power

Batteries	4 1.5V type AA batteries
Autonomy	200 hours with 1800mAh alkaline batteries
Power absorbed with instrument off	20µA
Mains	Output mains adapter 9Vdc / 250mA

Measuring units

°C - °F - °K

Security of memorized data

Unlimited, independent of battery charge conditions



Time

Date and time	Schedule in real time
Accuracy	1min/month max departure

Measured values storage - model **HD2127.2**

Type	2000 pages containing 16 pairs of samples each
Quantity	Total of 32000 samples (channel A + channel B)
Storage interval	1s...3600s (1hour)

Serial interface RS232C

Type	RS232C electrically isolated
Baud rate	Can be set from 1200 to 38400 baud
Data bit	8
Parity	None
Stop bit	1
Flow Control	Xon/Xoff
Serial cable length	Max 15m
Immediate print interval	1s...3600s (1hour)

USB interface - model **HD2127.2**

Type	1.1 - 2.0 electrically isolated
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Connections

Input modules for the probes	2 8-pole male DIN45326 connectors
Serial interface	8-pole MiniDin connector
USB interface - model HD2127.2	8-pole MiniDin connector
Mains adapter	2-pole connector (positive at centre)

Measurement of temperature by Instrument

Pt100 measurement range	-200...+650°C
Pt1000 measurement range	-200...+650°C
Ni1000 measurement range	-50...+250°C

Resolution

0.01°C in the range ± 199.99°C
0.1°C in the remaining field

Accuracy

±0.01°C	
Drift after 1 year	0.1°C/year



TP875

TECHNICAL DATA OF PROBES AND MODULES EQUIPPED WITH INSTRUMENT

Temperature probes Pt100 sensor using SICRAM module

Model	Type	Application range	Accuracy
TP472I	Immersion	-196°C...+500°C	±0.25°C (-196°C...+350°C) ±0.4°C (+350°C...+500°C)
TP472I.0	Immersion	-50°C...+400°C	±0.25°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP473P.0	Penetration	-50°C...+400°C	±0.25°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP474C.0	Contact	-50°C...+400°C	±0.3°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP475A.0	Air	-50°C...+250°C	±0.3°C (-50°C...+250°C)
TP472I.5	Immersion	-50°C...+400°C	±0.3°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP472I.10	Immersion	-50°C...+400°C	±0.3°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP49A	Immersion	-70°C...+400°C	±0.25°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP49AC	Contact	-70°C...+400°C	±0.25°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP49AP	Penetration	-70°C...+400°C	±0.25°C (-50°C...+350°C) ±0.4°C (+350°C...+400°C)
TP875	Globe thermometer Ø 150mm	-10°C...+100°C	±0.25°C

Common characteristics

Resolution 0.01°C in the range ± 199.99°C
0.1°C in the remaining field

Temperature drift @20°C 0.003%/°C



HD2110CSNM



HD2101/USB



AF209.60

4 wire Pt100 and 2 wire Pt1000 Probes

Model	Type	Application range	Accuracy
TP47.100	Pt100 4 wires	-50...+400°C	Class A
TP47.1000	Pt1000 2 wires	-50...+400°C	Class A

Common characteristics

Resolution 0.01°C in the range ± 199.99°C
0.1°C in the remaining field

Temperature drift @20°C

Pt100 0.003%/°C
Pt1000 0.005%/°C

ORDER CODES

HD2127.1K: The kit is composed of the instrument HD2127.1, connection cable for serial output HD2110CSNM, 4 1.5V alkaline batteries, operating manual, case and DeltaLog9 software. **The probes must be ordered separately.**

HD2127.2K: The kit is composed of the HD2127.2 datalogger, connection cable HD2101/USB, 4 1.5V alkaline batteries, operating manual, case and DeltaLog9 software. **The probes must be ordered separately.**

HD2110CSNM: 8-pole connection cable MiniDin - Sub D 9-pole female for RS232C.

HD2101/USB: Connection cable USB 2.0 connector type A - 8-pole MiniDin.

DeltaLog9: Software for download and management of the data on PC using Windows 98 to XP operating systems.

AF209.60: Stabilized power supply at 230Vac/9Vdc-300mA mains voltage.

S'print-BT: On request, portable, serial input, 24 column thermal printer, 58mm paper width.

Probes complete with SICRAM module

TP472I: Pt100 sensor immersion probe. Stem Ø 3 mm, length 300 mm. Cable length 2 metres.

TP472I.0: Pt100 sensor immersion probe. Stem Ø 3 mm, length 230 mm. Cable length 2 metres.

TP473P.0: Pt100 sensor penetration probe. Stem Ø 4mm, length 150 mm. Cable length 2 metres.

TP474C.0: Pt100 sensor contact probe. Stem Ø 4mm, length 230mm, contact surface Ø 5mm. Cable length 2 metres.



S'print-BT

TP475A.0: Pt100 sensor air probe. Stem Ø 4mm, length 230mm. Cable length 2 metres.

TP472I.5: Pt100 sensor immersion probe. Stem Ø 6mm, length 500 mm. Cable length 2 metres.

TP472I.10: Pt100 sensor immersion probe. Stem Ø 6mm, length 1,000mm. Cable length 2 metres.

TP49A: Pt100 sensor immersion probe. Stem Ø 2.7 mm, length 150 mm. Cable length 2 metres. Aluminium handle.

TP49AC: Pt100 sensor contact probe. Stem Ø 4 mm, length 150 mm. Cable length 2 metres. Aluminium handle.

TP49AP: Pt100 sensor penetration probe. Stem Ø 2.7 mm, length 150 mm. Cable length 2 metres. Aluminium handle.

TP875: Globe thermometer Ø 150 mm with handle, complete with SICRAM module. Cable length 2 metres.

Temperature probes without SICRAM module

TP47.100: Direct 4 wire Pt100 sensor immersion probe. Probe's stem Ø 3mm, length 230mm. 4 wire connection cable with connector, length 2 metres.

TP47.1000: Pt1000 sensor immersion probe. Probe's stem Ø 3mm, length 230mm. 2 wire connection cable with connector, length 2 metres.

TP47: Only connector for probe connection: direct 4 wire Pt100, 2 wire Pt1000 and Ni1000.

