



**NIEUWKOOP**

# LEAFLET



## **TP110-HD2307**

TEMPERATURE METER

IP67



TO MEASURE  TO KNOW



The **HD2307.0** is a portable instrument with a large LCD display. It measures the temperature using Pt100 or Pt1000 immersion, penetration, contact or air probes. The sensor can be a Pt100 3 or 4 wires, Pt1000. The probes are fitted with an automatic detection module, with the factory calibration settings already being memorized inside.

The *Max*, *Min* and *Avg* function calculate the maximum, minimum or average values. Other functions include: the relative measurement REL, the HOLD function, and the automatic turning off that can also be disabled.

**The instruments have IP67 protection degree.**



## INSTRUMENT TECHNICAL CHARACTERISTICS

### **Instrument**

Dimensions	: (Length x Width x Height) 140x88x38mm
Weight	: 160g (complete with batteries)
Materials	: ABS
Display	: 2x 4½ digits plus symbols Visible area: 52x42mm

### **Operating conditions**

Operating temperature	: -5...50°C
Warehouse temperature	: -25...65°C
Working relative humidity	: 0...90%RH without condensation
Protection degree	: IP67

### **Power supply**

Batteries	: 3 1.5V type AA batteries
Autonomy	: 200 hours with 1800mAh alkaline batteries
Current consumption with instrument off	: < 20µA

**Measuring unit** : °C - °F

### **Connections**

Input module for probes : 8-pole male DIN45326 connector

### **Measurement of temperature by Instrument**

Pt100 measurement range	: -200...+650°C
Pt1000 measurement range	: -200...+650°C
Resolution	: 0.1°C
Accuracy	: ±0.05°C
Drift after 1 year	: 0.1°C/year



**TECHNICAL DATA OF PROBES AND MODULES EQUIPPED WITH INSTRUMENT**

**Temperature probes Pt100 sensor with SICRAM module**

Model	Type	Application field	Accuracy
TP472I	Immersion	-196°C...+500°C	±0.25°C (-196°C...+300°C) ±0.5°C (+300°C...+500°C)
TP472I.0 1/3 DIN Thin Film	Immersion	-50°C...+300°C	±0.25°C (-50°C...+300°C)
TP473P.I	Penetration	-50°C...+400°C	±0.25°C (-50°C...+300°C) ±0.5°C (+300°C...+400°C)
TP473P.0 1/3 DIN Thin Film	Penetration	-50°C...+300°C	±0.25°C (-50°C...+300°C)
TP474C.I	Contact	-50°C...+400°C	±0.3°C (-50°C...+300°C) ±0.5°C (+300°C...+400°C)
TP474C.0 1/3 DIN Thin Film	Contact	-50°C...+300°C	±0.3°C (-50°C...+300°C)
TP475A.0 1/3 DIN Thin Film	Air	-50°C...+250°C	±0.3°C (-50°C...+250°C)
TP472I.5	Penetration	-50°C...+400°C	±0.3°C (-50°C...+300°C) ±0.6°C (+300°C...+400°C)
TP472I.10	Penetration	-50°C...+400°C	±0.30°C (-50°C...+300°C) ±0.6°C (+300°C...+400°C)
TP49A.0 Class A Thin Film	Immersion	-70°C...+250°C	±0.3°C (-70°C...-50°C) ±0.25°C (-50°C...+250°C)
TP49AC.0 Class A Thin Film	Contact	-70°C...+250°C	±0.3°C (-70°C...-50°C) ±0.25°C (-50°C...+250°C)
TP49AP.0 Class A Thin Film	Penetration	-70°C...+250°C	±0.3°C (-70°C...-50°C) ±0.25°C (-50°C...+250°C)
TP875.I	Globe-thermometer Ø150mm	-30°C...+120°C	±0.25°C
TP876.I	Globe-thermometer Ø50mm	-30°C...+120°C	±0.25°C
TP87.0 1/3 DIN Thin Film	Immersion	-50°C...+200°C	±0.25°C
TP878.0 1/3 DIN Thin Film TP878.1.0 1/3 DIN Thin Film	Photovoltaic	+4°C...+85°C	±0.25°C
TP879.0 1/3 DIN Thin Film	Compost	-20°C...+120°C	±0.25°C

*Common characteristics*

Temperature drift @ 20°C    0.003%/°C



**4 wire Pt100 and 2 wire Pt1000 Probes**

Model	Type	Application field	Accuracy
TP47.100.0 1/3 DIN Thin Film	4 wires Pt100	-50...+250°C	1/3 DIN
TP47.1000.0 1/3 DIN Thin Film	2 wires Pt1000	-50...+250°C	1/3 DIN
TP87.100.0 1/3 DIN Thin Film	4 wires Pt100	-50...+200°C	1/3 DIN
TP87.1000.0 1/3 DIN Thin Film	2 wires Pt1000	-50...+200°C	1/3 DIN

*Common characteristics*

Temperature drift @ 20°C

Pt100                    0.003%/°C

Pt1000                  0.005%/°C

**ORDER CODES**

**HD2307.OK:** The kit consists of the instrument HD2307.0, 3 1.5V alkaline batteries, instruction manual and case.

**The probes have to be ordered separately.**

**Probes equipped with SICRAM module**

**TP472I:** Immersion probe, Wire Wound Pt100 sensor. Stem Ø 3 mm, length 300 mm. Cable 2 meters long.

**TP472I.0:** Immersion probe, Thin Film Pt100 sensor. Stem Ø 3 mm, length 230 mm. Cable 2 meters long.

**TP473P.I:** Penetration probe, Wire Wound Pt100 sensor. Stem Ø 4mm, length 150 mm. Cable 2 meters long.

**TP473P.0:** Penetration probe, Thin Film Pt100 sensor. Stem Ø 4mm, length 150 mm. Cable 2 meters long.

**TP474C.I:** Contact probe, Wire Wound Pt100 sensor. Stem Ø 4mm, length 230mm, contact surface Ø 5mm. Cable 2 meters long.

**TP474C.0:** Contact probe, Thin Film Pt100 sensor. Stem Ø 4mm, length 230mm, contact surface Ø 5mm. Cable 2 meters long.

**TP475A.0:** Air probe, Thin Film Pt100 sensor. Stem Ø 4mm, length 230mm. Cable 2 meters long.

**TP472I.5:** Penetration probe, Thin Film Pt100 sensor. Stem Ø 6mm, length 500 mm. Cable 2 meters long.

**TP472I.10:** Penetration probe, Thin Film Pt100 sensor. Stem Ø 6mm, length 1000mm. Cable 2 meters long.

**TP49A.0:** Immersion probe, Thin Film Pt100 sensor. Stem Ø 2.7mm, length 150mm. Cable 2 meters long. Aluminium handle.

**TP49AC.0:** Contact probe, Thin Film Pt100 sensor. Stem Ø 4 mm, length 150mm. Cable 2 meters long. Aluminium handle.

**TP49AP.0:** Penetration probe, Thin Film Pt100 sensor. Stem Ø 2.7mm, length 150mm. Cable 2 meters long. Aluminium handle.

**TP875.I:** Globe thermometer Ø 150 mm with handle. Wire Wound Pt100 sensor complete of SICRAM module. Cable 2 meters long.

**TP876.I:** Globe thermometer Ø 50 mm with handle. Wire Wound Pt100 sensor complete of SICRAM module. Cable 2 meters long.

**TP87.0:** Immersion probe, Thin Film Pt100 sensor. Stem Ø 3 mm, length 70 mm. Cable 2 meters long.

**TP878.0:** Contact probe for solar panels. Thin Film Pt100 sensor. Cable 2 meters long.

**TP878.1.0:** Contact probe for solar panels. Thin Film Pt100 sensor. Cable 5 meters long.

**TP879.0:** Penetration probe for compost. Thin Film Pt100 sensor. Stem Ø 8 mm, length 1000mm. Cable 2 meters long.



**Temperature probes without SICRAM module**

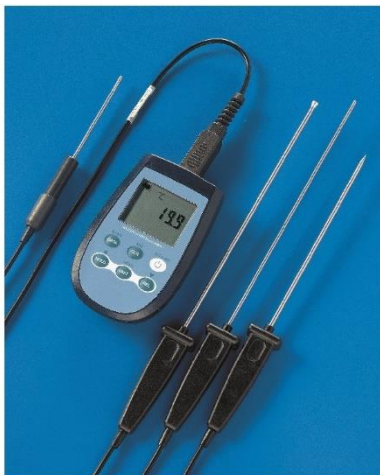
**TP47.100.0:** Immersion probe, Thin Film Pt100 sensor probe. Stem Ø 3 mm, length 230mm. 4 wires connection cable with connector, 2 meters long.

**TP47.1000.0:** Thin Film Pt1000 sensor immersion probe. Stem Ø 3 mm, length 230mm. 2 wires connection cable with connector, 2 meters long.

**TP47:** Only connector for probe connection without SICRAM module: direct 3 and 4 wires Pt100, 2 wires Pt1000.

**TP87.100.0** Immersion probe, Thin Film Pt100 sensor. Stem Ø 3 mm, length 70mm. Cable 2 meters long. 4 wires connection cable with connector 1 meter long.

**TP87.1000.0** Immersion probe, Thin Film Pt100 sensor. Stem Ø 3 mm, length 70mm. Cable 2 meters long. 2 wires connection cable with connector 1 meter long.





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