

Hygro - Thermometer

The **HD2301.0** is a portable instrument with a large LCD display. It measures relative humidity and temperature using a Pt100 sensor humidity/temperature combined probe. The Temperature sensor can be a Pt100, Pt1000 or Ni1000. when the humidity/temperature combined probe is connected.

The instrument calculates and displays the absolute humidity, the dew point, the partial vapour pressure.

Instrument Technical Characteristics

instrument

Measuring Unit	°C - °F - %RH - g/m ³ -Td - hPa
Dimensions (Length × Width × Height)	140×88×38mm
Weight	160g (complete with batteries)
Materials	ABS
Display	2×4½ digits plus symbols Visible area : 52×42mm

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	3 1.5V type AA batteries
Autonomy	200 hours with 1800mAh alkaline batteries
Power absorbed with instrument off	20µA

Connections

8-pole male DIN45326 connector

Measurement of relative humidity by instrument

Measurement range	0...100% RH
Resolution	0.1% RH
Drift after 1 year	0.1% RH/year

Measurement of temperature by Instrument

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

ORDER CODES

HD2306.0K: The kit is composed of; instrument HD2301.0, 3 1.5V alkaline batteries, operating manual, case. Probes to be ordered separately.

RELATIVE HUMIDITY AND TEMPERATURE PROBES

HP472AC : Combined probe %RH & temperature, dimensions φ 26×170mm. Connection cable length 2 meters.

HP473AC : Combined probe %RH & temperature. Handle dimension φ 26×130mm, probe φ 14×110mm. Connection cable length 2 meters.

HP474AC : Combined probe %RH and temperature. Handle dimensions φ 26×130mm, probe φ 14×210mm. Connection cable length 2 meters.

HP475AC : Combined probe %RH and temperature. Connection cable length 2 metres. Handle φ 26×110mm. Stainless steel stem φ 12×560mm. Point φ 13.5×75mm.

HP477DC : Combined sword probe %RH and temperature. Connection cable length 2 meters. Handle φ 26×110mm. Probe's stem 18×4mm, length 520mm.

Model : HD2301.0



Relative humidity and temperature probes

Model	Temperature Sensor	Working range		Accuracy	
		%RH	Temperatue	%RH	Temp.
HP472AC	Pt100	5...98%RH	-20°C...+80°C	±2% (5...95%RH) ±3% (95...99%RH)	±0.3°C
HP473AC	Pt100	5...98%RH	-20°C...+80°C		±0.3°C
HP474AC	Pt100	5...98%RH	-40°C...+150°C		±0.3°C
HP475AC	Pt100	5...98%RH	-40°C...+150°C	±2.5% (5...95%RH) ±3.5% (95...99%RH)	±0.3°C
HP477DC	Pt100	5...98%RH	-40°C...+150°C		±0.3°C

Common characteristics

Relative humidity

Sensor	Capacitive
Typical capacity @ 30%RH	300pF ± 40pF
Resolution	0.1%RH
Temperature drift @ 20°C	0.02%RH/°C
Response time %RH at constant temperature	10 sec (10→80HR; air speed=2m/S)

Temperature with sensor Pt100

Resolution	0.1°C
Temperature drift @ 20°C	0.003%/°C

Temperature with thermocouple K - HP 572AC

Resolution	0.1°C
Temperature drift @ 20°C	0.02%/°C



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