

# 5-in-1 Conductivity Meters / Dataloggers

## HD 2106.2

The HD2106.1 & HD2106.2 are portable instruments with a large LCD display. they measure conductivity, liquid resistivity, total dissolved solids (TDS), & salinity using combined 4-ring and 2-ring conductivity/Temp. probes. Temp. only is measured by Pt100 or Pt1000 immersion, penetration or contact probes.

The probe calibration can be performed automatically in one or more than one of the 147µS, 1413µS, 1288µS or 111800µS/cm conductivity calibration solutions. The temp. probes are fitted with an automatic detection module, with the factory calibration settings already being memorized inside.

The HD2106.2 is a datalogger. It memorizes up to 36,000 conductivity & temp. samples which can be transferred from the instrument connected to a PC via the multi-standard RS232C serial port & USB 2.0. The storing interval, printing, & baud rate can be configured using the menu.

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



### INSTRUMENT TECHNICAL CHARACTERISTICS

Display	2×4½ digits plus symbols Visible area : 52×42mm
Dimensions (L × W × H)	185 × 90 × 40mm
Weight	470g (complete with batteries)
Materials	ABS, rubber

### 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
Power absorbed with instrument off	20µA

### Measured Values Storage - Model HD2106.2

Type	2000 pages containing 18 samples each
Quantity	36000 pairs of measurements [c-°C], [W-°C], [TDS-°C] or Sal-°C]
Storage interval	1s.....3600s (1hour)

### Serial interface RS232C

Type	RS232C electrically isolated
Baud rate	Can be set from 1200 to 38400 baud
Serial cable length	Max 15m
Immediate print interval	1s...3600s (1hour)

### Connections

Conductivity input	8-pole male DIN45326 connector
Input module for the temp. probe	8-pole male DIN45326 connector
Serial interface & USB	8-pole MiniDin connector
Mains adapter	2-pole connector (positive at centre)

### Measurement of conductivity by instrument

Measurement range (K cell=0.1)	
Resolution	0.00...19.99µS/cm/0.01µS/cm (with K cell=0.10)
	0.0...199.9µS/cm/0.1µS/cm
	200...1999µS/cm / 1µS/cm
	2.00...19.99mS/cm/0.01mS/cm
	20.0...199.9mS/cm/0.1mS/cm
Accuracy (conductivity)	± 0.5% ± 1digit

### Measurement of resistivity by instrument

Measurement Range/Resolution	4.0...199.9 W / 0.1 W
	200....999 W / 1 W
	1.00k....19.99k W / 0.01k W
	20.0K....99.9k W / 1 k W
	1...10M W / 1M W
Accuracy (resistivity)	± 0.5% ± 1digit

**Note : Required Conductivity probe to be ordered separately .**



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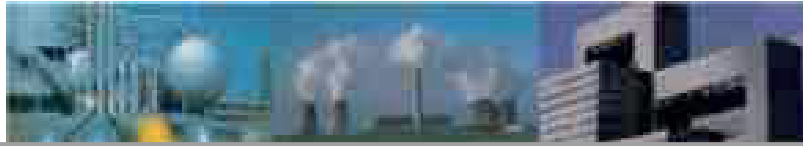
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**Measurement of total dissolved solids (with coefficient  $c/TDS=0.5$ ) Measurement of Temperature by Instrument**

Measurement Range (K cell=1)	0.00...19.99mg/l / 0.05mg/l
Resolution	(with K cell=0.1) 0.0...199.9 mg/l / 0.5 mg/l 200...1999 mg/l / 1 mg/l 2.00...19.99 g/l / 0.01 g/l 20.0...199.9 g/l / 0.1 g/l
Accuracy (total dissolved solids)	$\pm 0.5\% \pm 1$ digit

Pt100 measurement range	-50...+200°C
Pt1000 measurement range	-50...+200°C
Resolution	0.1°C
Accuracy	$\pm 0.25^\circ\text{C}$
Drift after 1 year	0.1°C / Year

**Automatic/manual Temperature**

compensation	0...100°C with $\alpha = 0.00...4.00\% / ^\circ\text{C}$
Reference Temperature	20°C or 25°C
c/TDS conversion factor	0.4...0.8
Cell constant K ( $\text{cm}^{-1}$ )	0.1, 0.7, 1.0 and 10.0

**Measurement of salinity**

Measurement range/Resolution	0.000...1.999 g/l / 1 mg/l 2.00...19.99g/l / 10mg/l
Accuracy (total dissolved solids)	$\pm 0.5\% \pm 1$ digit

**Order Codes :**

- HD2106.1K : The kit is composed of: instrument HD2106.1 conductivity/temperature combined probe SP06T, connection cable for serial output HD2110CSNM, standard calibration solution HD8712 (12880 $\mu\text{S}/\text{cm}$ ), 4 $\times$  1.5V alkaline batteries, operating manual, case & DeltaLog9 software. Other conductivity probes must be ordered separately .
- HD2106.2K : The kit is composed of : instrument HD2106.2 datalogger, conductivity/temperature combined probe SP06T, connection cable for serial output HD2101/USB, 4 $\times$ 1.5V alkaline batteries, standard calibration solution HD8712 (12880 $\mu\text{S}/\text{cm}$ ), operating manual, case and DeltaLog9 software. Other conductivity 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 (not suitable for HD2106.1K)
- DeltaLog9 : Software for download and management of the data on PC using Windows 98 to XP operating system.
- AF209,60 : Stabilized power supply at 230V ac/9Vdc - 300mA mains voltage.
- S'print-BT : On request, portable, serial input, 24 column thermal printer , 58mm paper width.

**Technical Data conductivity Probes for Instrument :**

- SP06T : K = 0.7, 5 $\mu\text{S}$ ..... 200mS/cm, 0....90°, C 4-electrode cell in Poca / Platinum.
- SPT01G : K = 0.1, 0.1 $\mu\text{S}$ ....500 $\mu\text{S}/\text{cm}$ , 0....80°C, 2-electrode cell in Glass / Platinum.
- SPT1 : K = 1, 10 $\mu\text{S}$ ....10mS/cm, 0....50°C, 2-electrode cell in Epoxy / Graphite.
- SPT1G : K = 1, 10 $\mu\text{S}$ ....10mS/cm, 0....80°C, 2-electrode cell in Glass / Platinum.
- SPT10G : K = 10, 500 $\mu\text{S}$ ....200mS/cm, 0....80°C, 2-electrode cell in Glass / Platinum.