The HD2108.1 and HD2108.2 with one input and the HD2128.1 and HD2128.2 with two inputs are portable instruments with a large LCD display. They measure the temperature using immersion, penetration air or contact probes. The sensor may be a thermocouple of type K, J, T, N, R, S, B or E.

Instruments HD2108.2 and HD2128.2 are data logger, they store up to 76,000 samples the first and 38,000 couples of values the second. These data can be transferred into a PC connected to the instrument through a multi-standard RS232C serial port and a USB 2.0. It is possible to configure the storage interval, the printing and the baud rate by the menu.

All models are equipped with RS232C serial port and are able to transfer the acquired measures, in real time, into a PC or a portable printer.

Functions Max, Min and Avg calculate maximum, minimum and average values. Further functions are: REL relative measure, HOLD and automatic switching-off system, excludable. HD2128.1 and HD2128.2 calculate A-B difference of the temperatures acquired by the two input channels.

Instruments have IP67 protection degree.

TECHNICAL SPECIFICATIONS OF THE INSTRUMENTS

Instruments
- Dimensions: 185x90x40mm
- Weight: 470g (complete with Batteries)
- Materials: ABS, rubber
- Display: 2x4½ digits plus symbols, Visible area: 52x42mm

Temperature
- Operating temperature: -5 ... 50°C
- Storage temperature: -25 ... 65°C
- Working relative humidity: 0 ... 90% RH, no condensation
- Protection degree: IP67

Power supply
- Batteries: 4 Batteries 1.5V type AA
- Autonomy: 200 hours with 1800mAh alkaline batteries
- Current consumption with instrument off: 20μA
- Main: 12Vdc / 1000mA Output main adapter

Unit of measurement
- °C - °F - °K - mV - mV*C

Security of data stored
- Unlimited, independent of battery charge conditions
- 1min/month max drift

Time
- Date and time: Schedule in real time
- Accuracy: 1min/month max drift

Measured values storage
- Model HD2108.2: 2000 pages each one containing 38 samples, 76000 samples in total
- Model HD2128.2: 2000 pages each one containing 19 samples, 38000 couples of samples
- Storage interval: 1s ... 3600s (1 hour)

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 (1 hour)

USB interface - model HD2108.2 and HD2128.2
- Type: 1.1 - 2.0 electrically isolated

Connections
- Probes input connector: 2-pole female polarized standard miniature
- Serial interface and USB: 8-pole MiniDin connector
- Mains adapter: 2-pole connector (positive at centre)
Thermocouple probes accuracy:

Tolerance of a type of thermocouple corresponds to the maximum acceptable shift from the e.m.f. of any thermocouple of that type, with reference junction at 0°C. The tolerance is expressed in degrees Celsius, preceded by the sign. The percentage tolerance is given by the ratio between the tolerance expressed in degrees Celsius and the measurement junction temperature, multiplied by one hundred.

The tolerances refer to the operating temperature expected for the thermocouple, in agreement with the thermo-elements’ diameter. Those thermocouples that comply with the limits for temperatures over 0°C, do not necessarily comply with the limits for ranges below 0°C.

Thermocouple probes:

Any thermocouple probe with standard miniature connector available on the price list can be connected to these instruments. Please see pages 17 to 21.