HD32.7 - HD32.8.8 - HD32.8.16

DATALOGGER

HD32.7

8 INPUTS DATA LOGGER FOR Pt100 SENSOR PROBES

The instrument HD32.7 is a robust 8 inputs data logger for Pt100 sensor temperature probes equipped with SCRAM module and 4 wires Pt100 Probe.

- Unit of measurement °C, °F, °K configurable.
- Flash memory organized in 64 sections with a total capacity of 96.000 acquisitions for each one of the 8 inputs. Storage can be managed in two ways:
  - when the available memory is full, data are overwritten by starting from the oldest ones (circular memory),
  - storage stops when the available memory is full.
- Simultaneous display of the 8 inputs.
- Maximum, minimum or average of the stored values.
- Selectable storage interval: 2, 5, 10, 15, 30 seconds, 1, 2, 5, 10, 15, 20, 30 minutes and 1 hour.
- Data logging: instantaneous or postponed, with the possibility of selecting the storage start and end.
- Data download: RS232C, 1200…38400 baud or USB 1.1 – 2.0.
- DeltaLog9 software for data download and processing.
- LCD backlit graphic display 128x64 pixel.
- Instrument setup through the keyboard; no connection required to the PC.
- Security password for keyboard locking.
- Power supply: 4 1.5V alkaline C-BABY type batteries or external power supply 12VDC-1A.
- Consumption @6VDC:
  - <60μA when the instrument is off
  - <60μA in sleep mode with 8 probes connected
  - <40mA during data logging with 8 probes connected
- Use of the HD32.7 data logger: in the field for machine or equipment measurements, plant or machine testing, production check, oven mapping.

### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Inputs</td>
<td>8 DIN 45326 8-poles male connectors.</td>
</tr>
<tr>
<td>Instrument accuracy when storing</td>
<td>±0.01°C ±1digit (in the range ±199.99°C)</td>
</tr>
<tr>
<td></td>
<td>±0.1°C ±1digit in the remaining range</td>
</tr>
<tr>
<td>Internal watch accuracy</td>
<td>1min/month max drift</td>
</tr>
<tr>
<td>Unit of measurement</td>
<td>°C, °F, °K</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.01°C (in the range ±199.99°C)</td>
</tr>
<tr>
<td></td>
<td>0.1°C in the remaining range</td>
</tr>
<tr>
<td>Measuring range</td>
<td>-200°C … 650°C</td>
</tr>
<tr>
<td>Display</td>
<td>Backlit graphic LCD 128x64 pixel.</td>
</tr>
<tr>
<td>Keyboard</td>
<td>15 keys, configurable also without PC.</td>
</tr>
<tr>
<td>Keyboard locking function</td>
<td>with password.</td>
</tr>
<tr>
<td>Memory</td>
<td>divided into 64 blocks.</td>
</tr>
<tr>
<td>Memory capacity</td>
<td>96.000 storages for each one of the inputs.</td>
</tr>
<tr>
<td>Security of data stored</td>
<td>unlimited</td>
</tr>
<tr>
<td>Power supply</td>
<td>4 per 1.5V alkaline Batteries type C-BABY</td>
</tr>
<tr>
<td></td>
<td>External 12Vdc-1A power supply.</td>
</tr>
<tr>
<td></td>
<td>Connector, external Ø 5.5mm, internal Ø 2.1mm.</td>
</tr>
<tr>
<td>Current consumption @6Vdc</td>
<td>&lt;60μA when the instrument is off</td>
</tr>
<tr>
<td></td>
<td>&lt;60μA in sleep mode with 8 probes connected</td>
</tr>
<tr>
<td></td>
<td>&lt;40mA during data logging with 8 probes connected</td>
</tr>
<tr>
<td>Autonomy</td>
<td>200 hours with 7800mAh alkaline batteries and 8</td>
</tr>
<tr>
<td></td>
<td>probes connected</td>
</tr>
<tr>
<td>Data download</td>
<td>RS232C from 1200 to 38400 baud, galvanically</td>
</tr>
<tr>
<td></td>
<td>isolated. Sub D 9-pole male connector. USB 1.1 – 2.0</td>
</tr>
<tr>
<td></td>
<td>galvanically isolated.</td>
</tr>
</tbody>
</table>

12 Vdc 1A

USB 1.1 - 2.0

RS232C
**Operating conditions**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>-5 ... 50°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-25 ... 65°C</td>
</tr>
<tr>
<td>Working relative humidity</td>
<td>0 ... 90% RH no condensation</td>
</tr>
<tr>
<td>Protection degree</td>
<td>IP64</td>
</tr>
</tbody>
</table>

**Instrument**

| Dimension (Length x Width x Height) | 220x180x50 mm |
| Weight | 1100 g (complete with batteries) |
| Materials | ABS, polycarbonate and aluminium |

**Probes**

- all Delta Ohm Pt100 probes equipped with SICRAM module belonging to the series TP47..., TP49..., TP87 and 4 wires Pt100 sensor probes can be connected. Please see pages TP-7 to TP-9. Probes of different form can be supplied upon request.

**ORDERING CODES**

**HD32.7:** Instrument Data logger with 8 inputs for temperature Pt100 sensor probes equipped with SICRAM module and 4 wires Pt100 probes. The kit consists of instrument HD32.7, 4 per 1.5Vdc alkaline C-Baby type Batteries, instruction manual, software DeltaLog9 and support and carrying strap. Probes, tripod, carrying case and cables have to be ordered separately.

**DeltaLog9:** Further copy of the software for download and management of data by PC for Windows operating systems.

- Probes for HD32.7
- All temperature Pt100 probes equipped with SICRAM module and 4 wires Pt100 sensor probes can be connected to the instrument. Probes of different form can be supplied upon request.

**Accessories for HD32.7**

- 9CPRS232: Connection cable with Sub D 9-pole female connectors for RS232C (null modem)
- CP22: Connection cable USB 2.0 connector type A - connector type B.
- BAG32.2: Carrying case for the HD32.7 instrument and accessories.
- HD32CS: Support and carrying strap
- SWD16: 100-240VAC/12VDC-1A stabilized mains power supply
- VTRAP32: Tripod complete with 6-input head and 5 probe holders code HD3218K
- HD3218K: Shaft for another probe

**HD32.8.8**

8 INPUTS DATA LOGGER FOR THERMOCOUPLES

**HD32.8.16**

16 INPUTS DATA LOGGER FOR THERMOCOUPLES

**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Number of inputs</th>
<th>8 for HD32.8.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 for HD32.8.16</td>
<td></td>
</tr>
</tbody>
</table>

**Connection**

- Miniature female socket for thermocouple

**Measuring range and accuracy of the instrument**

<table>
<thead>
<tr>
<th>Thermocouple Type</th>
<th>Measuring Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc: K</td>
<td>-200...+1370°C</td>
<td>±0.1°C up to 600°C, ±0.2°C over 600°C</td>
</tr>
<tr>
<td>Tc: J</td>
<td>-100...+750°C</td>
<td>±0.1°C up to 400°C, ±0.2°C over 400°C</td>
</tr>
<tr>
<td>Tc: T</td>
<td>-200...+1200°C</td>
<td>±0.1°C up to 600°C, ±0.2°C over 600°C</td>
</tr>
<tr>
<td>Tc: N</td>
<td>-200...+1300°C</td>
<td>±0.1°C up to 600°C, ±0.2°C over 600°C</td>
</tr>
<tr>
<td>Tc: R</td>
<td>+200...+1480°C</td>
<td>±0.3°C</td>
</tr>
<tr>
<td>Tc: S</td>
<td>+200...+1480°C</td>
<td>±0.3°C</td>
</tr>
<tr>
<td>Tc: B</td>
<td>+200...+1800°C</td>
<td>±0.4°C</td>
</tr>
<tr>
<td>Tc: E</td>
<td>-200...+750°C</td>
<td>±0.1°C up to 300°C, ±0.2°C over 300°C</td>
</tr>
</tbody>
</table>

**Accuracy is referred to the instrument only; error due to the thermocouple or to the cold junction reference sensor is not included.**

**Resolution**

- 0.05°C in the range ±199.95°C
- 0.1°C in the remaining range

**Drift in temperature @20°C**

- 0.02%/°C

**Drift after 1 year**

- 0.1°C/year

**Internal watch accuracy**

- 1min/month max drift

**Unit of measurement**

- °C, °F, °K

**Display**

- LCD backlit graphic display 128x64 pixel.

**Keyboard**

- 15 keys; the instruments can be configured also without a PC.
Keyboard locking function

with password.

Memory

Memory capacity divided into 64 blocks
up to 800,000 acquisitions to be divided among all
the present inputs. For example, when one probe
is connected you get 800,000 acquisitions. When 8
probes are connected you get 96,000 acquisitions
each probe.

Security of data stored

Unlimited.

Power supply

4 per 1.5V 4 1.5V alkaline C-BABY type batteries
External power supply 12VDC-1A. Connector,
external Ø 5.5mm, internal Ø 2.1mm.
Power supply via the PC USB port.

Current consumption @6Vdc

<80μA when the instrument is off
<60μA in sleep mode with all probes connected
<40mA during data logging with all probes connected

Autonomy

200 hours with 7800mAh alkaline batteries and all
probes connected

Data download

RS232C from 1200 to 38400 baud, galvanically
isolated. Sub D 9-pole male connector.
USB 1.1 – 2.0 galvanically isolated.

Operating conditions

Operating temperature -5 ... 50°C
Storage temperature -25 ... 65°C
Working relative humidity 0 ... 90% RH no condensation
Protection degree IP64

Instrument

Dimensions
(Length x Width x Height) 220x180x50 mm
Weight 1100 g (complete with batteries)
Materials ABS, polycarbonate and aluminium

Probes

All thermocouples K, J, T, N, R, S, B and E type
probes with male miniature connector can be
connected. Further to the K probes available on the
catalogue from page TP-15 to TP-19, Delta Ohm can
supply other kind of probes with different forms as
well, upon request.

ORDERING CODES

HD32.8.8: Instrument Data logger with 8 inputs for thermocouples K, J, T, N, R, S, B
and E type temperature probes. The kit consists of instrument HD32.8.8, 4 per
1.5Vdc alkaline C-Baby type batteries, instruction manual, software DeltaLog9
and support and carrying strap. Probes, tripod, carrying case and cables
have to be ordered separately.

HD32.8.16: Instrument Data logger with 16 inputs for thermocouples K, J, T, N, R,
S, B and E type temperature probes. The kit consists of instrument HD32.8.16,
4 per 1.5Vdc alkaline C-Baby type batteries, instruction manual, software
DeltaLog9 and support and carrying strap. Probes, tripod, carrying case and
cables have to be ordered separately

DeltaLog9: Further copy of the software for download and management of data by PC
for Windows operating systems.

Probes for HD32.8.8 and for HD32.8.16
All thermocouples K, J, T, N, R, S, B and E type temperature probes with miniature
standard connector can be connected to the instruments.

Probes of different form can be supplied upon request.

Accessories for HD32.8.8 and for HD32.8.16

9CPRS232: Connection cable with Sub D 9-pole female connectors for RS232C (null
modem)
CP22: Connection cable USB 2.0 connector type A - connector type B.
BAG32.2: Carrying case for the HD32.7 instrument and accessories.
HD32CS: Support and carrying strap
SWD10: 100-240VAC/12VDC-1A stabilized mains power supply
VTRAP32: Tripod complete with 6-input head and 5 probe holders code HD3218K
HD3218K: Shaft for another probe