

Thermometer/Datalogger Thermistor Input

External probes (-30C to 200C) [-22F to 392F]

There are 4 types available: 2 needle probes for mid-point temperature, a rounded end probe for liquid temperature, and a surface probe for surface temperature.

Built-in sensor (-20C to 50C) [-4F to 122F]

Measures ambient temperature, and allows for continuous measurement inside a warehouse or during transportation.

Memory key

Each press of this key saves the measured data, along with 3 other monitoring items: the name of the object being measured, operator's name, and date and time of measurement.

Selection of registered tag name

Select from the list of up to 50 registered tag names (objects to be measured).

Input selection key

Collector/Logging mode selector key

Switches between the collector mode (saves measured data when necessary) and logging mode (saves measured data continuously).

- When used in the collector mode only, saves up to 5000 data items.*
 - When used in the logging mode only, saves up to 20000 data items.*
- Measuring interval: 1 second to 24 hours (Under simultaneous 2-channel measurement with the HH84, 2 seconds is the minimum.)
Start-of-measurement time: timer can be set.

* Under simultaneous 2-channel measurement, the HH84 saves 2 data items for one measurement.

User-friendly FUNC key

You can select setup items in the same way as you choose options from the built-in menu of a cellular phone.

Selection of operator name

With the (1) key, you can recall a list of up to 10 operator names and can also change any of these names.

Record-keeping on measurement failure handling

By pre-registering a list of up to 32 comments on how to handle particular measurement failures, you can keep records of how the measurement failure was dealt with by selecting the desired comment from the list using the (4) key.

(The HH83 supports this feature with HH83 Version 1.10 when used with application software version 1.30 or later.)

Setup keys

Register tag names, set alarm points, and define measuring conditions, such as the measuring interval for the logging mode. These setting tasks can also be carried out from a PC.

Digital input terminal

For connecting to an optional non-contact probe.

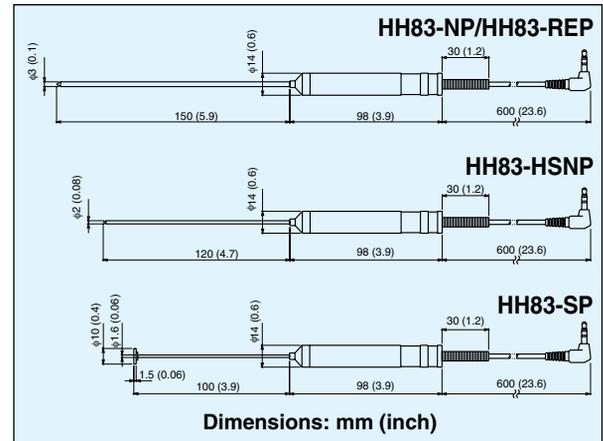
RS232C I/O terminals

Used to exchange data with a PC or send data to a dedicated printer.

HH83



Optional



Specifications

HH83-NP/HH83-REP

Measuring Range: -30 to 200°C (-22 to 392°F)

Temperature Range and Accuracy:

Temp Range (T)	Accuracy
-30°C ≤ T < -20°C	±1.0°C (Typical)
-20°C ≤ °C ≤ 0	±0.5°C (Typical)
0°C ≤ °C < 100	±0.5°C
100°C ≤ °C < 150	±1.0°C (Typical)
150°C ≤ °C < 200	±2.0°C (Typical)

Response: Approx 6 seconds for 90% of final value

HH83-HSNP/HH83-SP

Measuring range: -30 to 200°C (-22 to 392°F)

Temperature Range and Accuracy:

Temp Range (T)	Accuracy
-30°C ≤ T < -20°C	±2.0°C (Typical)
-20°C ≤ °C ≤ 0	±1.5°C (Typical)
0°C ≤ °C < 100	±1.5°C (Typical)
100°C ≤ °C < 150	±1.5°C (Typical)
150°C ≤ °C < 200	±2.5°C (Typical)

Response:

HH83-HSNP: Approximately 2 seconds for 90% of final value

HH83-SP: Approximately 6 seconds for 90% of final value

Note: The accuracy ratings above were obtained with the measurement of liquids being agitated.

Probes are 316 SS with a 98 mm handle and 600 mm cable.

Comes with software, RS232C cable, 2 "AA" batteries, waterproof cover, operator's manual.

Ordering Example: HH83, thermistor thermometer with HH83-SP, surface probe.

HH83 shown actual size.

To Order Visit omega.com/hh83_84 for Pricing and Details

Model No.	Description
HH83	Thermistor thermometer/datalogger with software and RS232 cable
Accessories	
HH83-NP	Probe, 150 x 3 mm diameter, needle tip
HH83-HSNP	Probe, 120 x 2 mm diameter, needle tip
HH83-REP	Probe, 150 x 3 mm diameter, round tip
HH83-SP	Probe, 100 x 1.6 mm diameter, 10 mm diameter surface tip
WPC-80	Spare waterproof cover
SC-83	Soft carrying case
HH84-CABLE	Spare RS232C cable
HH-NIST	NIST-traceable calibration, no points
CAL-3-HH	NIST-traceable calibration with points

Thermometer/Datalogger Universal Dual Thermocouple Input



HH84 shown actual size.

2 Thermocouples
Included Free!

Thermocouple probes (-200°C to 1372°C) [-328°F to 2501.6°F]

Type K: -200°C to 1372°C [-328°F to 2501.6°F]
Type E: -200°C to 700°C [-328°F to 1292°F]
Type J: -200°C to 1000°C [-328°F to 1832°F]
Type T: -200°C to 400°C [-328°F to 752°F]
(Possible temperature ranges with the HH84)

Analog signal input

The HH84 can accept inputs from a sensor that outputs voltage signals ranging ± 100 mV or ± 1 V. An SMPW-U-M connector is required.

HH84

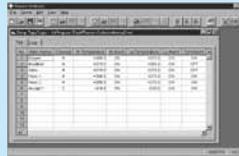


Optional*

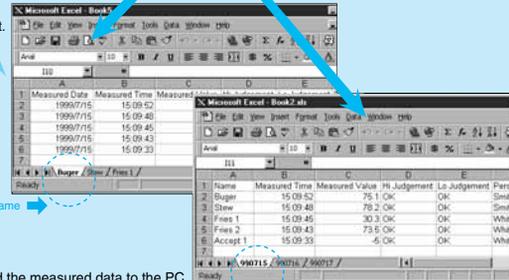
Easy data management using a PC (data management software included)

Setting measurement conditions from the PC.

(1) Download the measurement conditions to the HH83/84.



(2) Carry out measurement.



(3) Upload the measured data to the PC.

Microsoft Excel spreadsheets are automatically generated for each object being measured (tag name) and each date of measurement. Data collected later can also be added to these spreadsheets. The HH83 supports this feature with HH83 Version 1.10 when used with application software version 1.30 or later.

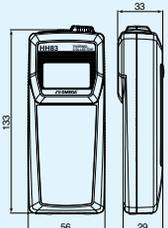
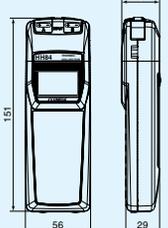
To Order Visit omega.com/HH83_84 for Pricing and Details

Model No.	Description
HH84	Thermocouple thermometer/datalogger with software and RS232 cable
Accessories	
CAL-3-HH	NIST-traceable calibration, with points
HH-NIST*	NIST-traceable calibration no points
WPC-80	Spare waterproof cover
SC-800	Soft carrying case with belt loop
HH84-CABLE	Spare RS232C cable

Comes with 2 Type K beaded wire thermocouples, 2 "AA" batteries, software, RS232C cable, waterproof cover and operator's manual.

Ordering Example: HH84 thermometer/datalogger.

Thermometer/Datalogger Thermocouple Input Specifications

Product name (Model)	HH83 Thermo-collector Thermistor model	HH84 Thermo-collector Thermocouple model																												
Number of measuring channels	1 (Selectable from 3 channels) <small>One channel is provided for each of the external thermistor probe, built-in thermistor sensor, and external non-contact probe.</small>	2 (when A and B channels are used for thermocouple or voltage input) 1 (when D channel is used with the non-contact probe)																												
Measuring range (only the main unit)	External thermistor -30C to 200C [-22F to 392F] Built-in thermistor -20C to 50C [-4F to 122F] Thermal emission (external probe) -20C to 400C [-4F to 752F]	Thermocouple Type K : -200C to 1372C [-328F to 2501.6F] Type J : -200C to 1000C [-328F to 1832F] Type E : -200C to 700C [-328F to 1292F] Type T : -200C to 400C [-328F to 752F] Thermal emission -20C to 400C [-4F to 752F] Voltage input 100 mV, 1 V																												
Resolution	External thermistor: 0.1C Built-in thermistor: 0.1C	Thermocouple: 0.1C Voltage input: 0.1 mV or 0.001 V																												
Accuracy (only the main unit)	<table border="1"> <thead> <tr> <th colspan="2">External thermistor</th> <th colspan="2">Built-in thermistor</th> </tr> <tr> <th>Temperature range (T)</th> <th>Accuracy</th> <th>Temperature range (T)</th> <th>Accuracy</th> </tr> </thead> <tbody> <tr> <td>-30C T < -20C</td> <td>1.0C</td> <td>-20C T 0C</td> <td>1.0C</td> </tr> <tr> <td>-20C T 0C</td> <td>0.4C</td> <td>0C T < 40C</td> <td>0.8C</td> </tr> <tr> <td>0C < T < 100C</td> <td>0.3C</td> <td>40C T 50C</td> <td>1.0C</td> </tr> <tr> <td>100C T < 150C</td> <td>0.4C</td> <td></td> <td></td> </tr> <tr> <td>150C T 200C</td> <td>0.7C</td> <td></td> <td></td> </tr> </tbody> </table> <p>* For the accuracy when using a non-contact probe (900 03), see the</p>	External thermistor		Built-in thermistor		Temperature range (T)	Accuracy	Temperature range (T)	Accuracy	-30C T < -20C	1.0C	-20C T 0C	1.0C	-20C T 0C	0.4C	0C T < 40C	0.8C	0C < T < 100C	0.3C	40C T 50C	1.0C	100C T < 150C	0.4C			150C T 200C	0.7C			Thermocouple -100C T: (0.1% of rdg + 0.3C) T < -100C: (0.1% of rdg + 0.6C) Reference junction compensation is 0.4C when the temperature of the input terminal is in equilibrium Thermal emission (1% of rdg + 1C) or 3C, depending on the accuracy of the non-contact probe. Voltage input (0.1% of rdg + 0.2% of range)
External thermistor		Built-in thermistor																												
Temperature range (T)	Accuracy	Temperature range (T)	Accuracy																											
-30C T < -20C	1.0C	-20C T 0C	1.0C																											
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100C T < 150C	0.4C																													
150C T 200C	0.7C																													
Measuring mode	Collector mode or Logging mode																													
Measuring interval	Collector mode: 1 second or longer Logging mode: 1 second to 24 hours	Collector mode: 0.5 seconds or longer when 1 channel is used. 1 second or longer when 2 channels are used. Logging mode: 1 second to 24 hours when 1 channel is used. 2 seconds to 24 hours when 2 channels are used.																												
Data capacity	5000 data items when used in collector mode only. 20000 data items when used in logging mode only. Measurement data obtained in collector mode and logging mode can coexist.	5000 data items when used in collector mode only. 20000 data items when used in logging mode only. Measurement data obtained in collector mode and logging mode can coexist. Under simultaneous 2-channel measurement, 2 data items are recorded at the same time.																												
Drip-proof construction	Conforms to IP54 standards (dust-proof and drip-proof requirements of IEC529)																													
Display	LCD with backlight																													
Operating temperature and humidity	-20C to 50C, 20 to 80% RH (no condensation)	0C to 50C, 20 to 80% RH (no condensation)																												
Power requirements	Two AA-size alkaline dry batteries (LR6) (included)																													
Battery life	Approx. 3 months when operated in logging mode at 10-minute intervals; Approx. 1 month when operated in logging mode at 1-minute intervals; Approx. 2 weeks when operated in collector mode 8 hours a day.	Approx. 1.5 months when operated in logging mode at 10-minute intervals; Approx. 1 month when operated in logging mode at 1-minute intervals; Approx. 5 days when operated in collector mode 8 hours a day including 30 minutes of communication.																												
Registration of tag names	A maximum of 50, each comprising up to 8 alphanumeric characters																													
Registration of operator names	A maximum of 10, each comprising up to 8 alphanumeric characters																													
Registration of comments	A maximum of 32, each comprising up to 8 alphanumeric characters																													
Alarm function	Upper- and lower-limit alarms																													
Computing function	Maximum, minimum, and average	Maximum, minimum, and average Reading of difference between the 2 channels is possible.																												
Communication function	Conforms to EIA RS-232C standard.																													
Simplified correction function	None	Corrects the measured data from thermocouple input within the range of 20.0C.																												
Scaling function	None	Scales the voltage input x according to the formula "Ax + B," which is defined from the thermo-collector software.																												
Other functions	Chime, function lock, clock display, auto power-off, and battery alarm																													
Thermo-collector software system requirements	CPU: i486DX or higher OS: Windows 95/Windows 98/Windows NT 4.0 FDD: 3.5", 1.44 MB-formatted Required space on the HDD: 10 MB or greater	Recommended memory capacity: 16 MB or greater Serial I/O capability: A serial port conforming to RS-232C standard should be available. Software: Microsoft Excel 95, Microsoft Excel 97																												
Compliance with standards	EMC standards EMI (interference signal): EN55011;1998, EN61326-1;1998+A1 (Class B, Group 1) EMS (immunity): EN50082-1;1997, EN61326;1998+A1																													
External dimensions	 <p>Approx. 133(H) × 56(W) × 33(D) mm (excluding protrusions) Weight: Approx. 170 g (including batteries)</p>	 <p>Approx. 151(H) × 56(W) × 33(D) mm (excluding protrusions) Weight: Approx. 180 g (including batteries)</p>																												
Supplied accessories	Software, two AA-size alkaline dry batteries (LR6), a waterproof cover, an instruction manual, and Type K beaded wire T/C																													