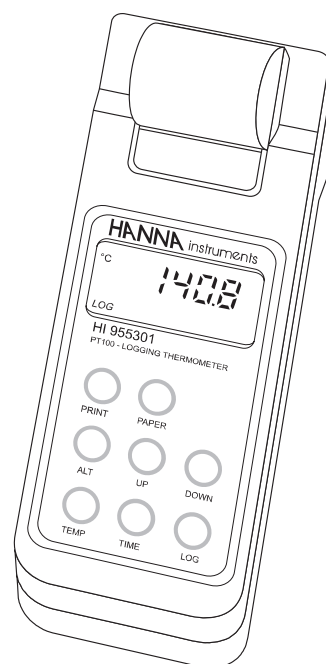


Instruction Manual

**HI 955201 • HI 955202
HI 955301 • HI 955302**

**1 or 2-Channel
Printing and Logging
Pt-100 Thermometers**



Dear Customer,
 Thank you for choosing a HANNA instruments® product.
 Please read this instruction manual carefully before using the instrument.
 This manual will provide you with all the necessary information for the correct use of the instrument, as well as a precise idea of its versatility in a wide range of applications.
 If you need additional technical support, do not hesitate to e-mail us at tech@hannainst.com
 These instruments are in compliance with the CE directives.

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WARRANTY

All Hanna Instruments **meters are warranted for two years** against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. **The probes are warranted for a period of six months.**

This warranty is limited to repair or replacement free of charge. Damages due to accident, misuse, tampering or lack of prescribed maintenance are not covered.

If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred.

If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization Number from the Customer Service department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

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Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

GENERAL DESCRIPTION

For printing and measuring temperature in the higher ranges without having to compromise high resolution, HANNA instruments® has developed the **HI 955201** single channel and the **HI 955202** dual channel, 4-wire Pt100 printing thermometers.

These thermometers have a resolution of 0.1°C in the range of -200.0 to 850.0°C. A built-in printer makes it possible to obtain a hard-copy of your temperature measurements taken on 1 or 2 channels, instantly or at determinable intervals. The low-power printer uses plain paper that will not fade over time and is widely available.

For extended time measurements, the meters can be powered with 12 Vdc.

These meters are calibrated against certified standards.

HI 955301 and **HI 955302** combine the high resolution and extended temperature range of the **HI 955201** and **HI 955202** models with extensive logging capabilities and an infrared data transfer system. In addition to supplying the user with instant printouts of date, time and temperature, they also provide data logging facilities that store data for transfer to a computer system for retrieval and/or printing at a later date.

HI 955301 accepts one temperature probe while **HI 955302** can take 2 separate Pt100 probes.

The sophisticated software allocates up to 16000 temperature readings to maximize available space, regardless of the number of channels in use.

HANNA instruments® offers a wide variety of optional 4-wire Pt100 **HI 768** temperature probes to fit any application needs.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipping. If there is any damage, notify your dealer.

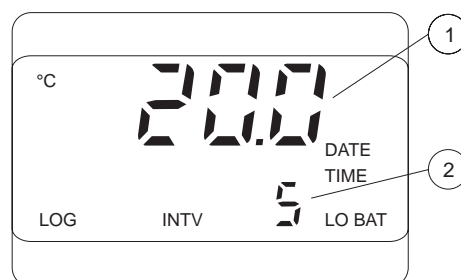
Each meter is supplied complete with:

- 5 paper rolls
- Batteries (4 x 1.5V AA alkaline)
- Rugged carrying case
- Instruction manual

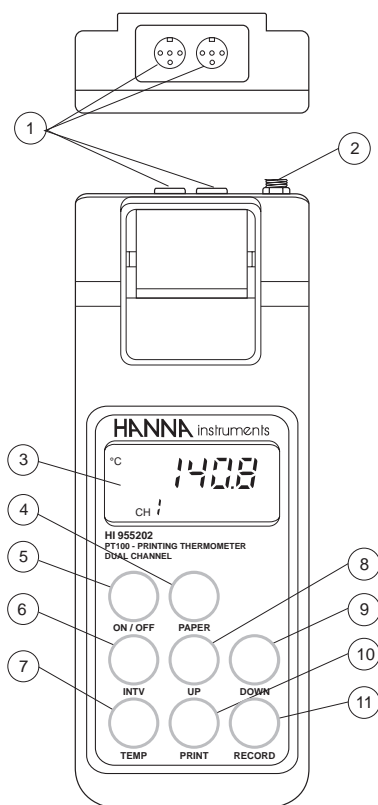
Note: Save all packing material until you are sure that the instrument functions correctly. All defective items must be returned in its original packaging together with the supplied accessories.

DISPLAY FUNCTIONAL DESCRIPTION

- 1) Primary display
- 2) Secondary display



FUNCTIONAL DESCRIPTION HI 955201 AND HI 955202

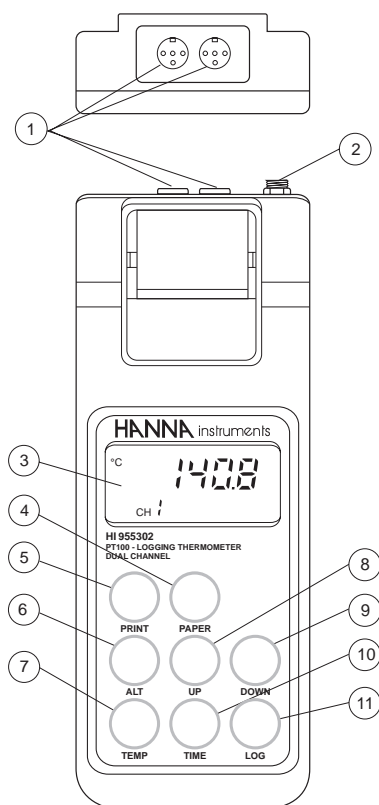


1. Connector(s) for Pt100 probe
2. Power adapter plug
3. Liquid Crystal Display
4. **PAPER** key, to feed paper
5. **ON/OFF** key, to turn meter on and off
6. **INTV** key, to select printing interval
7. **TEMP** key, to select measurement resolution
8. **UP** key, to set up or select channel number (for **HI 955202** only)
9. **DOWN** key, to set up or select channel number (for **HI 955202** only)
10. **PRINT** key, to print on-demand (current time and temperatures)
11. **RECORD** key, to enter recording mode

SPECIFICATIONS HI 955201 AND HI 955202

	HI 955201	HI 955202
Range	-200.0 to 850.0°C	
Resolution	0.1°C or 1°C, selectable	
Accuracy	±0.1°C ±0.1% of reading (for 1 year, excluding probe error)	
Typical EMC Deviation	±0.5°C	
Channels	1	2
Probe	HI 768 series (not included)	
Printer	low-power impact, 14 characters per line using 38 mm plain paper (HI 710034)	
Printing Interval	selectable at 1, 2, 5, 10, 15, 30, 60, 120 or 180 minutes	
Power Supply	4 x 1.5V AA batteries; approx. 500 hours of use (with 60' printing interval); auto-off after minutes of non-use; or 12 Vdc input	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	220 x 82 x 66 mm (8.7 x 3.2 x 2.6")	
Weight	550 g (1.2 lb.)	

FUNCTIONAL DESCRIPTION HI 955301 AND HI 955302



1. Connector(s) for Pt100 probe
2. Power adapter plug
3. Liquid Crystal Display
4. **PAPER** key, to feed paper
5. **PRINT** key, to print on-demand (current time and temperatures)
6. **ALT** key, to activate alternate function key
7. **TEMP** key, to read temperature and reactivate the meter when is in stand-by
8. **UP** key, to scan data or to set up
9. **DOWN** key, to scan data or to set up
10. **TIME** key, to display current time and printing interval
11. **LOG** key, to enter/exit the logging mode

SPECIFICATIONS HI 955301 AND HI 955302

	HI 955301	HI 955302
Range	-200.0 to 850.0°C	
Resolution	0.1°C or 1°C, selectable	
Accuracy	±0.1°C ±0.1% of reading (for 1 year, excluding probe error)	
Typical EMC Deviation	±0.5°C	
Channels	1	2
Probe	HI 768 series (not included)	
Printer	low-power impact, 14 characters per line using 38 mm plain paper (HI 710034)	
Printing Interval	selectable at 1, 2, 5, 10, 15, 30, 60, 120 or 180 minutes	
PC Connection	HI 9200 interface through serial port and using HI 92000 software	
Power Supply	4 x 1.5V AA batteries; approx. 500 hours of use (with 60' printing interval); auto-off after minutes of non-use; or 12 Vdc input	
Environment	0 to 50°C (32 to 122°F); RH max 95%	
Dimensions	220 x 82 x 66 mm (8.7 x 3.2 x 2.6")	
Weight	550 g (1.2 lb.)	

INITIAL PREPARATION

Each meter is supplied complete with batteries. Remove the back cover, unwrap the batteries and install them while paying attention to the correct polarity (see "Battery Replacement" section).

To prepare the thermometer for use, connect a Pt100 temperature probe to the connector on the top of the instrument.

To switch the **HI 955201** and **HI 955202** on, press the ON/OFF key.



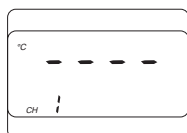
To switch the **HI 955301** and **HI 955302** on, press the TEMP key.



HI 955201 and **HI 955301** are provided with a single probe connection, while **HI 955202** and **HI 955302** feature two probe connectors.

Looking at the display side, channel #1 is the first connector on the top left hand side.

If no temperature probe is connected to the thermometer, it will display and print "----" to alert the user.



This can also indicate a broken probe cable. The channel # is displayed together with the "CH" indication (dual channel models only).

Note: With dual channel models, if only one probe is used, it must be connected to channel #1.

To save battery life, the display is automatically switched off after 5 minutes of non-use. However, if in logging/recording mode, the meter will continue to monitor the temperature.

To activate the display, press the ON/OFF (**HI 955201** and **HI 955202**) or TEMP (**HI 955301** and **HI 955302**) key.



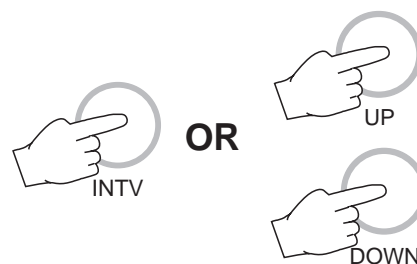
OPERATIONAL GUIDE

SETTING THE PRINTING INTERVAL (for **HI 955201** and **HI 955202** only)

Turn the instrument on by pressing the ON/OFF key.



Press the INTV and the UP or DOWN keys simultaneously.



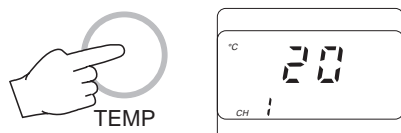
The primary display will show the log number, while the printing interval will flash on the secondary LCD.



Keep the INTV key pressed and set the printing interval using the UP or DOWN key.

SETTING MEASUREMENT RESOLUTION

Press the TEMP key to select the 0.1°C or 1°C resolution.



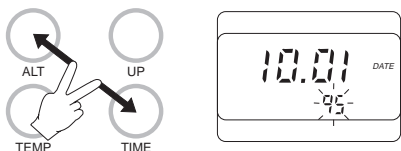
With dual channel models, the resolution of both channel readings automatically change by pressing this key.

SETTING DATE, TIME & PRINTING INTERVAL **(for HI 955301 and HI 955302 only)**

Turn the instrument on by pressing the TEMP key.



Press the ALT and TIME keys simultaneously. The display will show the date setting. At the bottom of the display the year will be blinking.



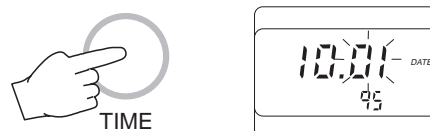
Use the UP or DOWN key to select the year.

Press the TIME key once and the month will start flashing.



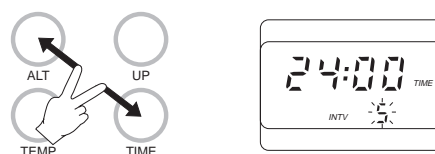
Select the month by using the UP or DOWN keys.

Press the TIME key and the day will be flashing.



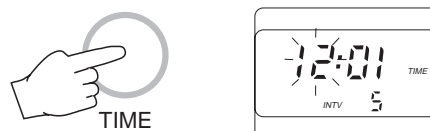
Set the correct day with the UP or DOWN key.

Press the ALT and TIME keys simultaneously and the display will show the time, together with the flashing printing interval.



Select the desired interval from among 1, 2, 5, 10, 15, 30, 60, 120 or 180 minutes, by using the UP and DOWN keys.

Press TIME key and the hour will start flashing.



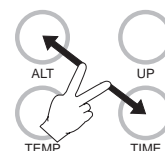
To select the hour, press the UP or DOWN keys (24 hour clock).

Press the TIME key and the minutes will start flashing.



Use the UP or the DOWN keys to select the minutes.

Press the ALT and TIME keys to leave this mode.



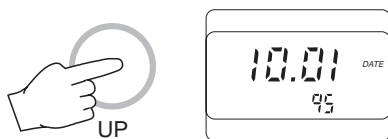
The time, date and printing interval are now set and stored in the memory even when the display is switched off.

TO VIEW DATE, TIME & TEMPERATURE **(for HI 955301 and HI 955302 only)**

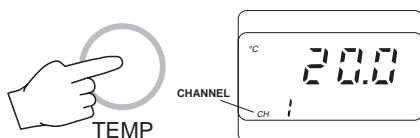
To view the time, press the TIME key. The selected interval is also displayed on the secondary LCD.



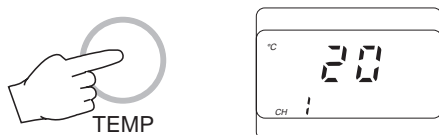
To view the date, press the UP key while the LCD is displaying the time.



To view the temperature, press TEMP. Pressing UP or DOWN key will toggle between monitoring channel #1 or #2 (**HI 955302** only). The channel# is displayed together with the "CH" indication.



If the TEMP key is pressed again, the resolution of the printed data can be selected between 0.1°C and 1°C. The resolution of logged data will always be 0.1°C.

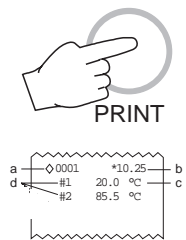


PRINTING / RECORDING **WITH HI 955201 AND HI 955202**

To print the measured values, press PRINT.

The printout provides the following information:

- a - Current sample number
- b - Accumulative time
- c - Temperature value
- d - Channel # (**HI 955202**)

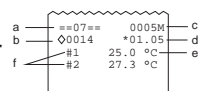


RECORDING MODE **(PROGRAMMED PRINTOUTS)**

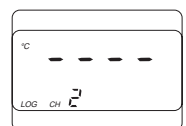
Press the RECORD key to enter the recording mode. The log number will be displayed for a few seconds to indicate the correct operational mode. The meter will write the first measurement(s) taken in that moment, and print at the selected interval thereafter until the ON/OFF key is pressed.

The printout provides the following information:

- a - Current log number
- b - Current sample number (in that particular log)
- c - Printing interval in minutes
- d - Time accumulated since printing started (HH.MM)
- e - Temperature value(s)
- f - Channel number (**HI 955202** only).

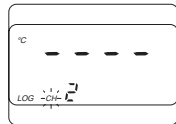


In **HI 955202**, if only one probe is plugged in, the meter will print only the value of the connected probe. If the second probe is not connected during the recording mode, the data from the second probe will not be printed.

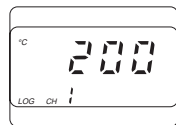


Data from the second channel can only be added if the recording mode is exited and a new log number is entered.

A blinking "CH" will appear on the display next to the channel number not utilized and/or recorded.



When the meter is in recording mode, the "LOG" indication is displayed on the secondary display.



To save battery life, if no key is pressed, the meter goes to stand-by mode.

To reactivate the display press ON/OFF.



Notes:

- It is recommended to power the instrument with an external supply during recording mode, especially when many printouts are going to be taken.
- Before proceeding with recording, make sure there is enough paper for your measurements. When the paper is finished the meter will not advise the operator and the printouts could be lost.
- It is possible to insert a new paper roll during recording session (see "Printer Maintenance" section).
- If the PRINT key is pressed while still in recording mode, a printout is produced without affecting the running number.
- Once in recording mode, the printing interval cannot be changed. First exit the recording mode by pressing ON/OFF, then set the new interval.

TO STOP RECORDING

In order to quit the recording mode, press the ON/OFF key.

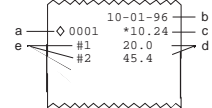
PRINTING / LOGGING WITH HI 955301 AND HI 955302

To print the displayed values, press PRINT. This function can be activated in normal operation mode



as well as during logging and scanning data on display. When in measurement mode, the printout provides the following information:

- a - Current sample number
- b - Date
- c - Time
- d - Temperature value(s)
- e - Channel # (HI955302)

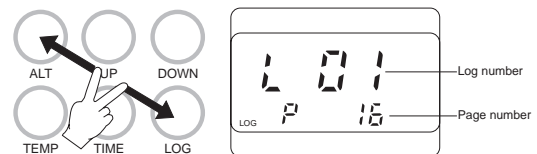


LOGGING MODE

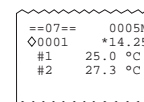
This function is suggested when remote measurements have to be taken automatically without the necessity of an operator and for a long period of time. In this mode data will be stored directly into memory.

Set the appropriate logging interval (see "Operational Guide" section).

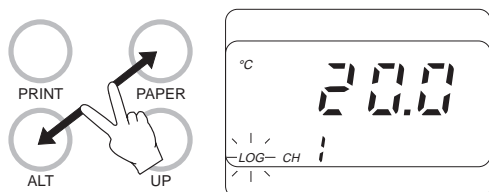
Press the ALT and LOG keys simultaneously to enter the logging mode. The log and page numbers will be displayed for a few seconds to indicate the correct operational mode.



The printer will print a complete set of data and the "LOG" symbol will appear on the secondary LCD.

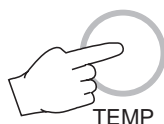


To continue logging without printing, press the ALT and PAPER keys at the same time, and "LOG" will start blinking.



After approximately 5 minutes of inactivity, the display will switch off but the logging function remains active.

To reactivate the display press TEMP key.



To restart printing, press again the ALT and PAPER keys simultaneously.

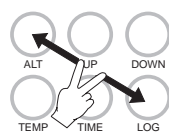
The printout provides the following information:

- a- Date (DD-MM-YY)
- b- Current log number
- c- Current sample number (in that particular lot)
- d- Printing interval in minutes
- e- Time (HH-MM)
- f - Temperature value(s)

		10-01-96	a
b	==07==	0005M	d
c	00014	*14.25	e
	#1	25.0 °C	
	#2	27.3 °C	f

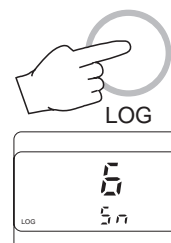
Notes:

- While in logging mode, the interval cannot be changed. First exit the logging by pressing the ALT and LOG keys, then set the new interval.
- If PRINT is pressed while in logging mode, a printout is produced without affecting the running sample number.



SAMPLE NUMBER

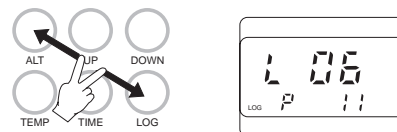
During logging it is possible to know the running sample number. Press LOG twice and the display will show the number of values stored in the current log.



LOGGING MODE WITH PRINTING

This function is suggested when an immediate report of measurement is required in addition to the data recording into memory.

Press the ALT and LOG keys simultaneously to enter the logging mode. The log and page numbers will be displayed for a few seconds to indicate the correct operational mode.



The printer will print a complete set of data and the "LOG" symbol will appear on the bottom left corner of the display.

If no key is pressed for about 5 minutes, the display turns off. During printing, the display shows time, interval and "LOG" symbol.

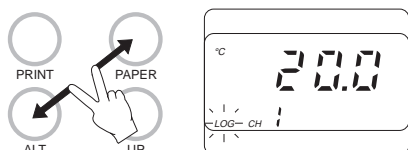
To reactivate the display press TEMP key.

The printout provides the following information:

- a- Date (DD-MM-YY)
- b- Current log number
- c- Current sample number (in that particular log)
- d- Printing interval indicator in minutes
- e- Time (HH-MM)
- f - Temperature value/s
- g- Channel # (HI 955302 only)

		10-01-96	a
b	==07==	0005M	d
c	00014	*14.25	e
	#1	25.0 °C	
	#2	27.3 °C	f

It is always possible to switch from the logging with printing function to the logging only function. Press the ALT and PAPER keys at the same time and the "LOG" symbol will start blinking to indicate that data are now only stored into memory.



Notes:

- It is recommended to use the external power adapter during logging with printing mode, especially when many printouts are going to be taken.
- Before proceeding with logging & printing, make sure there is enough paper for your measurements. When the paper is finished the meter will not advise the operator and the printouts could be lost. If this happens, data will continue to be stored into memory, and it is always possible to print them at a different time.
- It is possible to insert a new paper roll during logging session (see "Printer Maintenance" section for details).
- While in logging mode, the interval cannot be changed. First exit the logging mode by pressing the ALT and LOG keys, then set the new interval.
- If the PRINT key is pressed while in logging mode, a printout is produced without affecting the running sample number.

TO STOP LOGGING

Press ALT and LOG keys simultaneously, this will generate a log exit status printout.

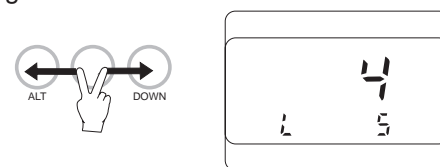
Log number {	10-01-96	} LOG EXIT Date/Time
Total sample number {	==07== 0005M	
	◇0016 *16.25	

TO SCAN STORED DATA ON DISPLAY

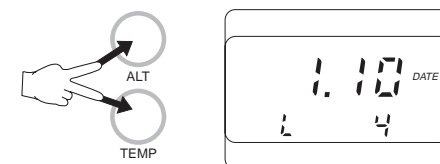
Press LOG and the display will show the log and page numbers of the next logging.



While pressing the ALT key, press DOWN until the desired log number appears on the secondary display. The primary display will show the number of samples of that particular log.



Press ALT and TEMP simultaneously, and the display will show the log starting date.



Press UP and the time will be displayed.



Press UP again to display the temperature. Continue pressing UP to display all memorized data of the same log one by one, in the above sequence, i.e. time and temperature value(s).

Press the DOWN key to revert back to sampling time and move back through samples.

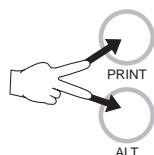
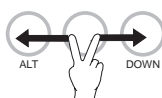
To exit the recall mode, press LOG.

Note: This mode will not alter data into memory

TO PRINT STORED DATA

Once a log number is selected by using the ALT and DOWN keys, all or part of that log section can be printed by pressing ALT and PRINT simultaneously. The printer will print the logged section, beginning with the selected sample number and without altering the memory content.

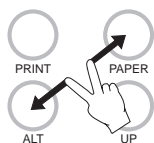
Note: It is always possible to print only the displayed sample by pressing PRINT.



Note: Before proceeding with printing, make sure there is enough paper for the data to be printed. When the paper is finished the meter will not advise the operator and printouts could be lost.

If this happens, stop the printer by pressing ALT and PAPER simultaneously. Data will be kept in memory.

Insert a new paper roll (see "Printer Maintenance" section for details) and repeat the above instruction starting from the last printed sample number.



WORKING SAMPLE

(HI 955301 and HI 955302 only)

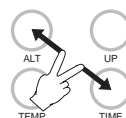
The following step by step description refers to a typical monitoring situation, after inserting the batteries and setting date and time.

Suppose that the meter is used to monitor and store every 2 minutes. The meter will log 10 samples but print only 3, display the data contained in sample #1 and print samples 5 through 10.

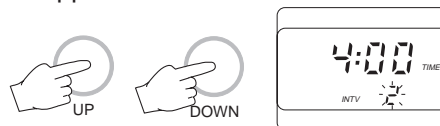
Example:

Step 1 - Setting a 2-minute interval

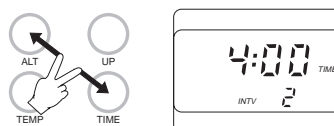
Press ALT and TIME keys twice. The time will be displayed together with the blinking printing/logging interval.



Press the UP or DOWN key until a blinking "2" appears.



Press ALT and TIME keys to exit. The display will now show the current time together with the selected interval of 2 minutes.



Step 2 - Entering the log mode

Press ALT and LOG keys. "L 01" will appear on the primary display.

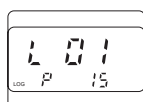


The meter is now in printing/logging mode using log #1, page 16. The "LOG" and P 15 indications on the secondary display mean that the meter has entered the log mode and has 15 pages of available memory remaining.

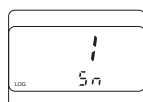
After the initial printout, the time and printing/logging interval will reappear.



Press the LOG key to view the current log and page numbers.

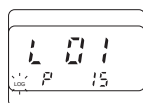
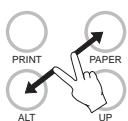


Press the LOG key again to view the running sample number.



Step 3 - Stopping the printer during log mode

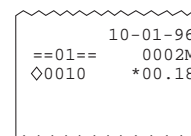
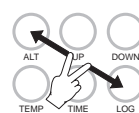
After the third printout is complete, press the ALT and PAPER keys. The meter continues to log data every 2 minutes, but it will no longer print any information. "LOG" will keep blinking on the secondary display as reminder of "L 01" (log #1).



Note: If the display has shut off press TEMP to reactivate it.

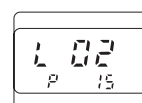
Step 4 - Leaving the log mode

Once the number of samples stored in memory has reached 10, press the ALT and LOG keys. The meter will exit the log mode after generating a log exit status printout.

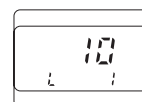
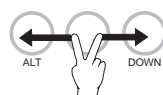


Step 5 - Viewing data stored in sample #1

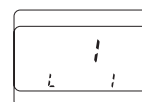
Press the LOG key to enter the memory recall mode. The next available log and page number will be shown on the display.



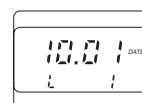
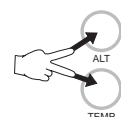
Press the ALT and DOWN keys until "10" and "L1" appear, indicating that a total of 10 samples were recorded in log #1.



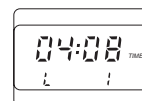
To view the data stored in the sample #1, first use the UP and DOWN keys to scroll through the sample numbers.



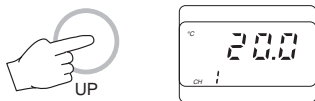
Once the number is displayed, press the ALT and TEMP keys. The date at which that sample was taken will appear first.



Press UP to view the time.



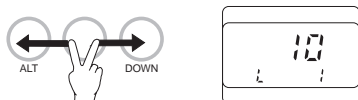
Press UP again to view the temperature.



With **HI 955302** when both probes are connected, press the UP key to view the other channel value.

Step 6 - Printing stored data (samples #5 through #10)

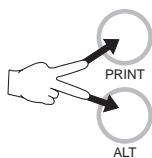
Press and hold the ALT key, then press DOWN until the total number of samples recorded in log #1 is displayed.



Scroll through the sample numbers by using either the UP or DOWN key until #5 appears.



Press ALT and PRINT.
The meter will printout samples # 5, 6, 7, 8, 9 and 10 consecutively.



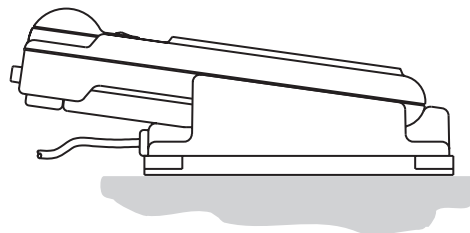
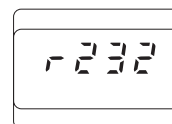
DATA TRANSFER TO PC

HI 955301 and **HI 955302** feature infrared emitting circuitry.

Set the meter to TIME mode and place it on a **HI 9200** infrared transmitter while ensuring that the infrared LEDs of instrument and interface match. The memory can be downloaded to a PC through an RS232 port.



During the data transfer the instrument displays the message "r 232".



Using the **HI 9200** infrared transmitter, all recorded data can be fed to your PC for easy reproduction, storage or elaboration without the interference of cables or cords between the meter and the transmitter.

Data transmission from the instrument to the PC is handled with the **HI 92000** Windows® compatible software by HANNA instruments®.

HI 92000 offers a variety of features to help you in all situations.

HI 92000 allows you to use the powerful means of the most common spread sheet programs (e.g. Excel®, Lotus 1-2-3®).

Simply run your favorite spread sheet and open the file downloaded by **HI 92000**. It will then be possible to make any elaboration available with your software (e.g. graphics, statistic analysis).

To install **HI 92000**, you need a 3.5" drive and a few minutes to follow the instructions conveniently printed on the disk's label.

FAULT FUNCTIONS

HI 955201, HI 955202, HI 955301 and HI 955302 are factory programmed to automatically diagnose a fault and display the corresponding error code.

Error codes:

PER0, PER1, PER2 = Short circuit on the system, the meter should be returned for repair. Contact your dealer.

PER 3 = Printer mechanism fault - repair needed. Contact your dealer.

PER 4 = Printer clutch jammed - reset the printer. See "Printer Maintenance" section.

PER 9 = Printer jammed - reset the printer. See "Printer Maintenance" section.

MEMORY ORGANIZATION

Capacity: 16000 data samples, divided into 16 pages.

Data capacity per page:

1000 data samples with 1 channel monitored;

500 data samples with 2 channels monitored (**HI 955302** only).

Each time a new logging period starts, it automatically starts from a new page.

If "LOGGING" is still on, and the available page is "0", the meter will overwrite the first LOT DATA in the existing meter memory. During logging the meter automatically returns to the oldest page in the memory overwriting existing data (if any). In this case the first log will not correspond to the oldest set of data.

It is recommended to periodically "clean" the memory. Save the data in a PC if you need to keep a record and then disconnect the batteries for about 1 minute. Remember to set date and time again, once the batteries have been reinserted.

ATTENTION

Data are stored into memory until batteries are removed.

If battery replacement is needed and data are not to be lost, power the instrument through the 12 Vdc adapter and then proceed with battery replacement. Only after new batteries have been installed, the adapter can be unplugged without losing stored data.

PRINTER MAINTENANCE

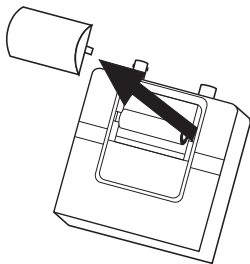
CHANGING THE INK CARTRIDGE

When printouts become faint, it might be necessary to change the ink cartridge. Contact the nearest HANNA service center.

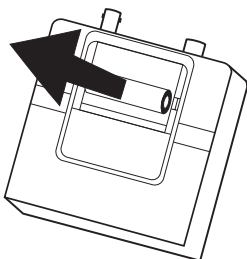
INSERTING THE PAPER ROLL

HI955201, HI955202, HI955301 and HI955302 use plain paper rolls, 38 mm width.

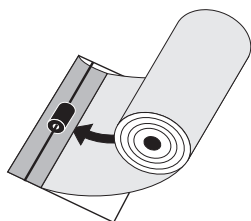
To insert a new roll open the paper cover by pulling it gently.



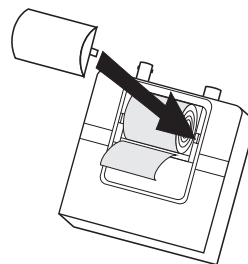
Remove the carton cylinder.



Insert the paper edge in the printer slot and feed the printer by pressing the PAPER key.



Allow approximately 5 cm (2") to exit from the printer and replace the cover.

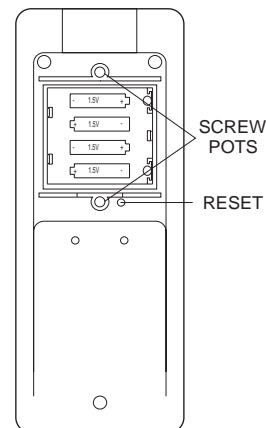


TO RESET PRINTER

To reset a jammed printer, press the PAPER key.



If the printer is still jammed, remove the battery cover on the rear of the meter, and press the RESET black button using a sharp pencil. This will reset the printing mechanism.



Before replacing the battery cover investigate the cause of the printer jam (e.g. the paper caught under the cover and prevented printer from advancing paper feed).

Replace the battery cover and tighten the screws.

BATTERY REPLACEMENT

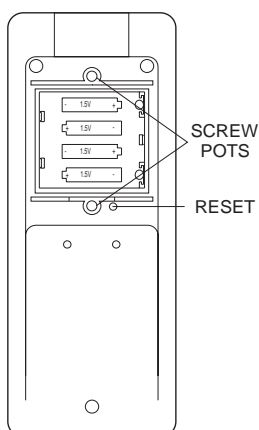
The "LO BAT" indication is displayed to warn the user that the batteries are running down.



If the warning appears during printing, it means that 200 printouts can still be made. When the battery level can only support 100 printouts, "LO BAT" is continuously displayed.

Battery replacement must only take place in a safe area and using the battery type specified in this instruction manual.

To replace batteries, simply remove the two screws on the rear cover and replace all four 1.5V AA batteries with new ones, while paying attention to the polarity.



A 12 Vdc power source can also be used to power the unit.

Note: The instrument uses the following configuration.



It is recommended to purchase a HANNA instruments® voltage adapter (**HI 710005** or **HI 710006**) that uses the proper polarity configuration.

HI955201, **HI955202**, **HI955301** and **HI955302** can also be used with other adapters.

In this case, check the correct polarity of the adapter before connecting it to the meter.

WARNING: With **HI 955301** and **HI 955302**, if the external power supply or batteries are disconnected, all stored data will be erased. Always apply external power to the instrument before changing the batteries to prevent data from being lost.

CALIBRATION

All HANNA instruments® thermometers have been accurately pre-calibrated at the factory.

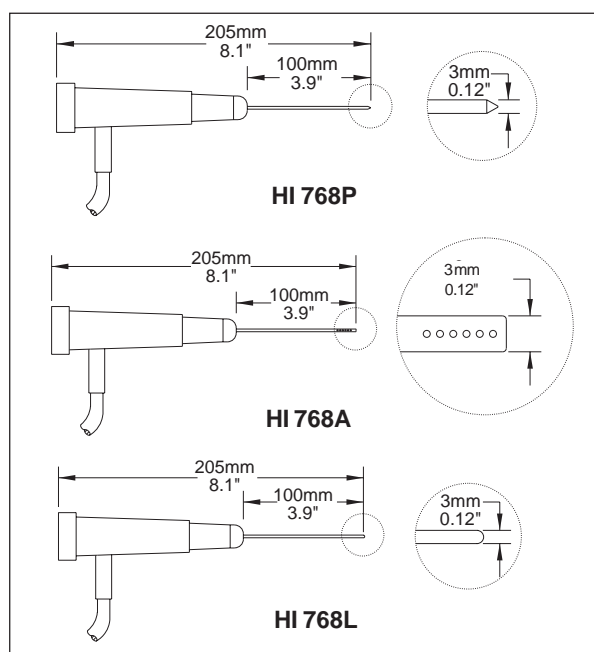
However, it is recommended to have all thermometers recalibrated at least once a year.

For an accurate annual recalibration, contact the nearest HANNA Service Center.

ACCESSORIES

4-WIRE PT100 PROBES

- HI 768A** Air/gas probe, 1 m (3.3') cable
HI 768L General purpose/liquid probe with 1 m (3.3') cable
HI 768P Penetration probe, 1 m cable



OTHER ACCESSORIES

- HI 710005** 115 Vac/12 Vdc power adapter
HI 710006 230 Vac/12 Vdc power adapter
HI 710031 Rugged carrying case
HI 710034 Paper roll (10 pcs)
HI 710035 Ink cartridge
HI 9200 Infrared transmitter
HI 92000 Windows® compatible software

Windows® is a registered Trademark of "Microsoft Co."

CE DECLARATION OF CONFORMITY



DECLARATION OF CONFORMITY

We

Hanna Instruments Italia Srl
 via E.Fermi, 10
 35030 Sarmeola di Rubano - PD
 ITALY

herewith certify that the thermometers

HI 955201 HI 955202 HI 955301 HI 955302

have been tested and found to be in compliance with EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC according to the following applicable normative:

EN 50082-1: Electromagnetic Compatibility - Generic Immunity Standard
IEC 801-2 Electrostatic Discharge
IEC 801-3 RF Radiated
IEC 801-4 Fast Transient

EN 50081-1: Electromagnetic Compatibility - Generic Emission Standard
EN 55022 Radiated, Class B

EN61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use

Date of Issue: 16-11-1998


 P. Cesa - Technical Director
 On behalf of
 Hanna Instruments S.r.l.

Recommendations for Users

Before using these products, make sure that they are entirely suitable for the environment in which they are used. Operation of these instruments in residential area could cause unacceptable interferences to radio and TV equipments, requiring the operator to take all necessary steps to correct interferences.

Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.

To avoid electrical shock, do not use these instruments when voltages at the measurement surface exceed 24 Vac or 60 Vdc.

To avoid damages or burns, do not perform any measurement in microwave ovens.

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