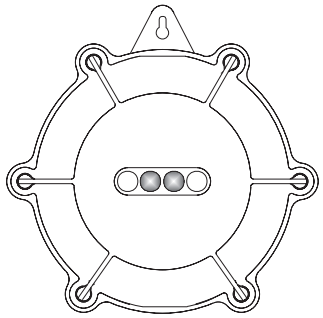
**Instruction Manual**

# HI142 Series Thermologgers



HANNA instruments
www.hannainst.com

Dear Customer,

Thank you for choosing a Hanna product.

Please read carefully this instruction manual before using the logger. If you need additional technical information, do not hesitate to e-mail us at **tech@hannainst.com** or contact your nearest technical office.

These instruments are in compliance with the CE directives.

## PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center.

**Note:** Conserve all packing material until the instrument has been observed to function correctly because any defective item must be returned to the Dealer in its original packing.

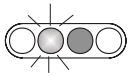
## SPECIFICATIONS

| Model | Range | Resolution | Accuracy |
|---|---|---|---|
| HI142AH | -30.0 to 70.0°C | 0.5 °C | ±1.5°C |
| HI142BH | -10.0 to 30.0°C | 0.2°C | ±0.5°C |
| HI142CH | -30.0 to 10.0°C | 0.2°C | ±0.5°C |
| HI142DH | 20.0 to 60.0°C | 0.2°C | ±0.5°C |
| HI142EH | -30.0 to -10.0°C | 0.1°C | ±0.3°C |
| HI142FH | 20.0 to 40.0°C | 0.1°C | ±0.3°C |
| HI142GH | -5.0 to 15.0°C | 0.1°C | ±0.3°C |
| HI142HH | 10 to 120°C | 1°C | ±2°C |

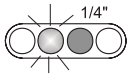
| Common characteristics | |
|---|---|
| Probe (fixed) | 1.5 m cable, food compatible |
| Power supply | 10-20 Vdc |
| Dimensions | dia 86.5 x H 35 mm (3.4x1.4") |
| Weight | 150 g (5.54 oz.) |

## LED INDICATORS

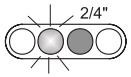
The status of the logger is indicated by the 2 front LEDs (green and red) as follows:



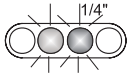
1. **Green LED always ON**: the meter has been reset and requires new setting of the parameters.



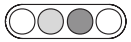

2. **Green LED flashes once every 4"**: the meter is logging.




3. **Green LED flashes twice every 4"**: the meter is waiting for a delayed logging start.




4. **Green & Red LEDs flash alternatively once every 4"**: the meter is logging and an alarm condition is occurred (at least once).



5. **Green & Red LEDs OFF**: the meter completed the logging procedure.

## WARRANTY

**HI 142 loggers are warranted for one year** against defects in workmanship and materials when used for their intended purpose and maintained according to instructions.

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.

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

## GENERAL DESCRIPTION

**HI142** series is a family of temperature dataloggers especially designed for applications in supermarket shelves and warehouses. It is possible to monitor continuously and simultaneously the temperature condition in up to 31 locations.

They can all be wired through RS485 to the **HI504903** GSM supervisor or to a local PC, allowing data downloading without removing the loggers from their sites.

Moreover, with **HI504903** GSM supervisor it is possible to receive SMS when an alarm occurs (low/high temperature, low battery level, etc.) or upon user request.

The user can interact with the meters through a PC using the **HI92140** Windows® compatible software for setting High and Low alarm thresholds, logging interval, logging delay start, alarm mask time, lot ID, etc.

The logger can memorize up to 7600 samples (i.e. stops when memory is full) and can also work in a cyclic way (i.e. old data are replaced by new samples when memory is full).

In case of power failure, an internal battery assures a working time of at least 1 week.

## OPERATIONAL GUIDE

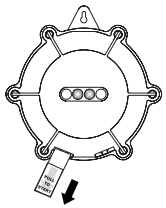
For connecting the **HI142** loggers with the **HI504903** GSM supervisor, please refer to the **HI504903** instruction manual. It is possible to connect up to 31 units within the same RS485 network with a wires total length up to 1 km.

After connection to the GSM supervisor, the user can program and real-time monitor the loggers and also download the data from a PC with the **HI92140** software installed. Refer to the on-line-help for further details.

The PC can be locally connected to the **HI504903** supervisor with a serial cable or can call the **HI504903** from remote location through a modem connection.

Before starting any operation, activate each logger by pulling the nylon strip in the indicated direction.

Simply hang the logger out of the site to be monitored and insert the temperature probe (1.5 m cable).



## TECHNICAL SERVICE

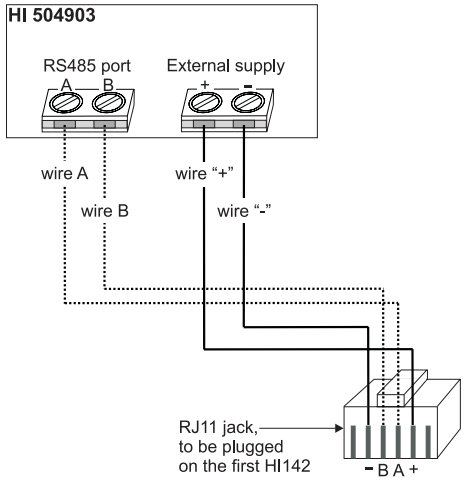
These instruments have been accurately pre-calibrated at the factory; anyway, it is generally recommended to have all thermometers recalibrated at least once a year.

For an accurate recalibration, contact the nearest Hanna Customer Service Center.

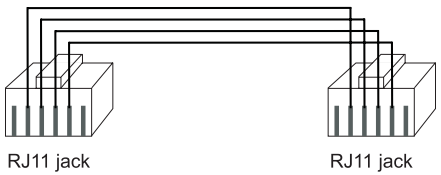
If necessary, contact the nearest Hanna Customer Service Center also for replacement of internal backup battery and/or temperature probe.

## CONNECTION CABLES

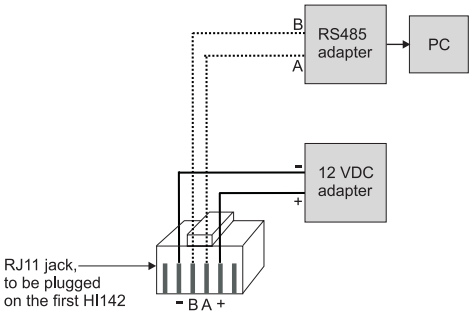
For connecting the first **HI142** datalogger to the **HI504903** supervisor, make a cable for both RS485 and power supply connections.
A 4-wire cable and an RJ11 jack (male connector) are necessary, then follow the below diagram:



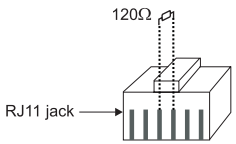

For connecting one **HI142** datalogger to the next one, make a cable as explained on the below diagram, by using a 4-wire cable and two RJ11 jacks (male connectors):




For connecting the **HI142** datalogger network to a local PC and to external power supply, make a cable following the below diagram and plug it to either RJ11 female connector on the logger.
Necessary material: a 4-wire cable, an RJ11 jack (male connector), a 12 VDC adapter and an RS485 adapter with Send Data Control connected to PC.




**Note**: It is recommended to terminate the line of the RS485 network, by plugging on the last **HI142** the termination key supplied with the **HI504903** supervisor, or connecting a resistor of about 120Ω as shown here below.




## ACCESSORIES

| | |
|---|---|
| **HI 504903-1** | GSM Supervisor (dual-band 900/1900 MHz; with 115 Vac to 12 Vdc adapter) |
| **HI 504903-2** | GSM Supervisor (dual-band 900/1800 MHz; with 230 Vac to 12 Vdc adapter) |
| **HI 710005** | 115 Vac to 12 Vdc adapter, US plug |
| **HI 710006** | 230 Vac to 12 Vdc adapter, European plug |
| **HI 92140** | Windows® compatible software |



## SALES & TECHNICAL SERVICE CONTACTS


**Australia:**
Tel. (03) 9769.0666 • Fax (03) 9769.0699

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Tel. (10) 88570068 • Fax (10) 88570060

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