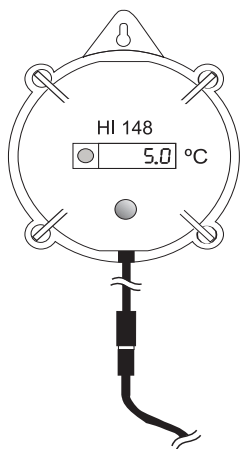


Instruction Manual

HI 148 Series Thermometers



Dear Customer,

Thank you for choosing a Hanna product. This manual will provide you with the necessary information for correct operation. Please read it carefully before using the meter. If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com.

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.

The meters are supplied with 12 VDC power adapter.

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.

GENERAL DESCRIPTION

HI 148 is an indicator for the monitoring of food temperature in different production cycles.

Constructed in a compact casing and with a molded eye, HI 148 can be installed on the QC bench or wherever necessary to control the ambient temperature of food chain, from the storage room to the point of delivery.

The housing has been completely sealed against vapors and humidity.

The measurement range is from -20 to 60°C (-4 to 140°F) with an excellent $\pm 0.5^\circ\text{C}$ ($\pm 0.9^\circ\text{F}$) accuracy. The stainless steel encapsulated sensor is positioned right on the outer body of this thermometer to provide a rapid response.

In order to ensure that temperature control is never interrupted, HI 148 runs permanently on a 12VDC power supply. Temperature is constantly displayed on a large LCD so that the operator can check it at any time.

HI 148 also offers a unique alarm control. Any value from 0 to 50.0°C or 32 to 122°F can be adjusted as the setpoint through a trimmer located on the back of the meter. Should the temperature exceed this user-selectable setpoint, the red LED blinks to warn of an abnormality. The built-in LED is well visible from a distance.

This alarm is a cost-saving feature with a tremendous potential. It can be used as a forewarning that the refrigeration or air conditioning unit is malfunctioning, or that a door has been left open, or point to any other mishaps, common in a busy workplace.

HI 148 is a convenient and very inexpensive way to ensure that temperature of the environment in which food is prepared, kept and served never varies too much from the limits imposed by the HACCP regulations. In fact, the meter frees workers from having to manually check the temperature and immediately signals if and when an abnormality arises.

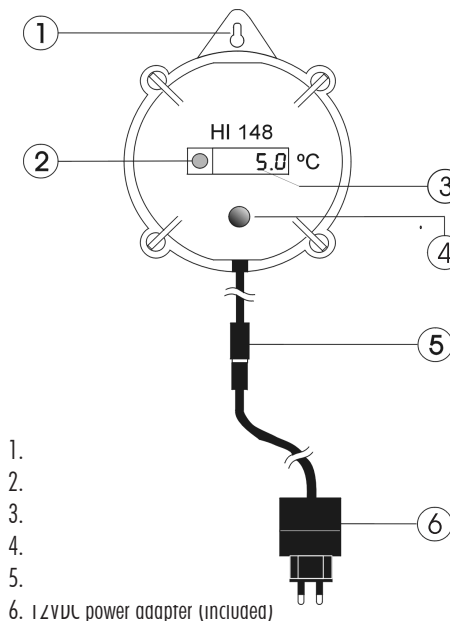
Celsius and Fahrenheit models are available.

SPECIFICATIONS

HI 148-00	
Range	-20.0 to 60.0°C
Resolution	0.1°C
Accuracy	$\pm 0.5^\circ\text{C}$
Setpoint	Selectable from 0.0 to 50.0°C
Hysteresis	$\pm 0.5^\circ\text{C}$ around setpoint
Alarm	LED blinks when measured temperature is higher than the setpoint
Sensor	Incorporated, encapsulated stainless steel
Environment	-20 to 60°C; RH 100%
Power supply	External 12 VDC (included)
Dimensions	86 x 94 x 33 mm (3.3 x 3.7 x 1.3")
Weight	150 g (5.2 oz.)

HI 148-01	
Range	-4.0 to 140.0°F
Resolution	0.1°F
Accuracy	$\pm 0.9^\circ\text{F}$
Setpoint	Selectable from 32.0 to 122.0°F
Hysteresis	$\pm 1^\circ\text{F}$ around setpoint
Alarm	LED blinks when measured temperature is higher than the setpoint
Sensor	Incorporated, encapsulated stainless steel
Environment	-4 to 140°F; RH 100%
Power supply	External 12 VDC (included)
Dimensions	86 x 94 x 33 mm (3.3 x 3.7 x 1.3")
Weight	150 g (5.2 oz.)

FUNCTIONAL DESCRIPTION



- 1.
- 2.
- 3.
- 4.
- 5.
6. 12VDC power adapter (included)

OPERATIONAL GUIDE

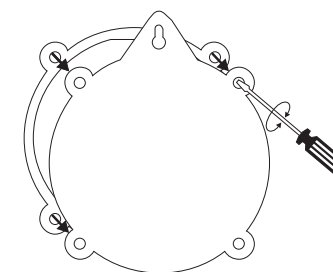
TAKING MEASUREMENTS

- Turn the meter on by connecting the 12 VDC power adapter to the meter and to the mains.
- A value will appear on the LCD, to indicate the temperature. Wait a few minutes for the display to stabilize.

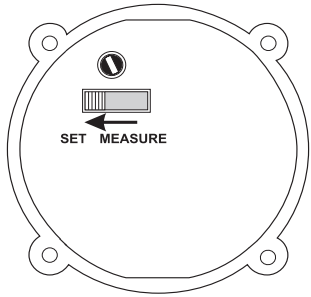
ADJUSTING THE SETPOINT

With HI 148 you can select your own setpoint and be alerted with a visual LED alarm when an abnormal situation arises.

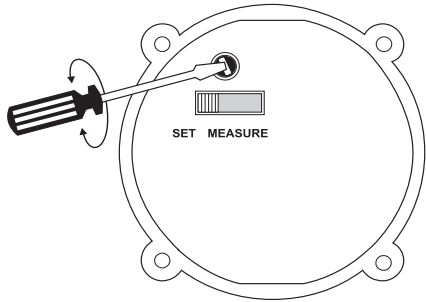
- Unscrew and remove the rear panel and gasket seal to access the MEASURE/SET switch.



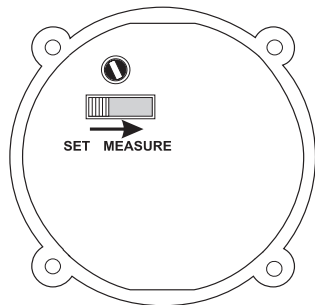
- Move the switch to the left (SET Mode).



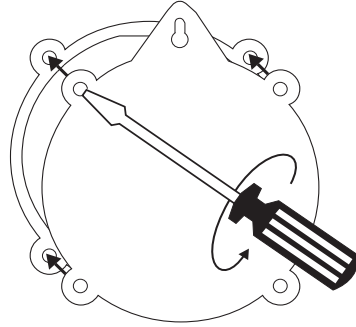
- With a small screwdriver adjust the setpoint trimmer to display the desired value in the 0 to 50 °C or in the 32 to 122°F range for the Celsius or Fahrenheit models, respectively.



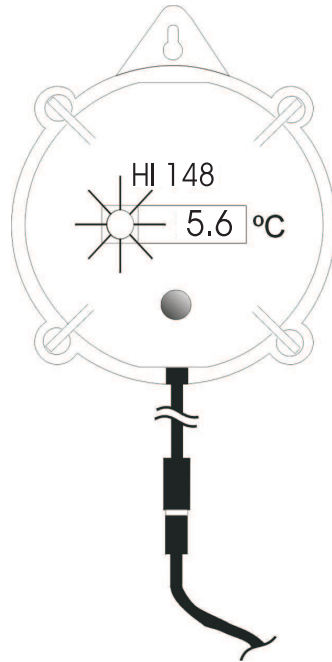
- Make sure the switch is moved back to the right (MEASURE Mode).



- Replace the rear panel and the gasket, ensuring the unit is properly closed.



- Whenever the temperature reading reaches the setpoint value (considering the hysteresis) the alarm LED starts blinking.



WARRANTY

HI 148-00/01 Thermometer are warranted for one year against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. The sensor are warranted for a period of one year also. 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.

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 areas could cause unacceptable interference to radio and TV equipment.

The metal band at the end of the probe is sensitive to electrostatic discharges. Avoid touching this metal band at all times.

During operation, ESD wrist straps should be worn to avoid possible damage to the probe by electrostatic discharges.

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 voltage at the measurement surface exceed 24 VAC or 60 VDC.

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

All rights are reserved. Reproduction in whole or in part is prohibited without the written consent of the copyright owner.

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

HANNA
instruments

www.hannainst.com