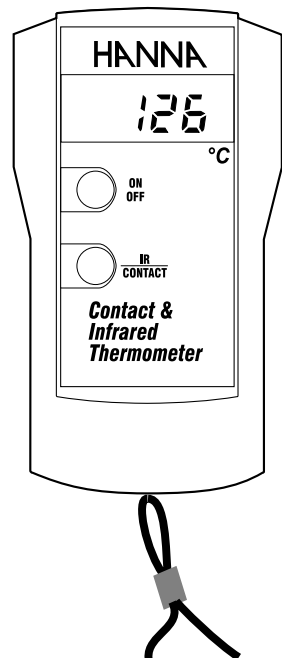


# HI99551 • HI99556

## Infrared Thermometers

### for the Food Industry



Dear Customer,  
Thank you for choosing a Hanna Instruments product. This manual will provide you with the necessary information for the correct operation of the meter. If you need additional technical information, do not hesitate to e-mail us at [tech@hannainst.com](mailto:tech@hannainst.com).

### PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully to make sure that no damage has occurred during shipment. If there is any damage, contact your local Hanna Instruments Office.

Each meter is supplied complete with:

- HI765PW temperature probe (HI99556 only)
- 9V battery
- instruction manual
- quality certificate

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

### GENERAL DESCRIPTION

HI99551 and HI99556 thermometers employ infrared technology to measure the surface temperature. Infrared measurements are extremely practical with a fast response time, typically around 1 second.

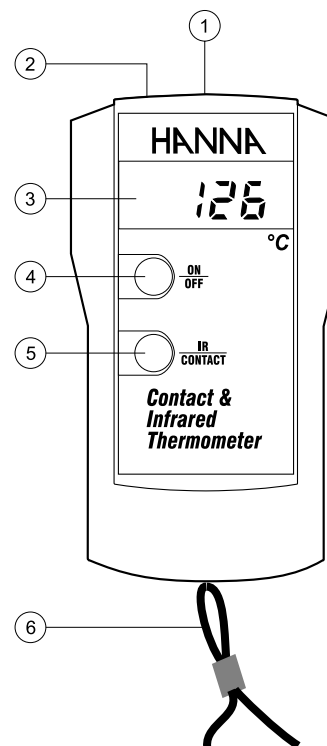
Another main advantage is the non-intrusive nature of the measurement, which is particularly attractive in the food industry since it translates itself into substantial savings by leaving products intact, especially those sealed or pre-wrapped. This type of non-intrusive measurement is also useful when the surface temperature is high, for difficult-to-reach places or due to hygiene requirements.

Simply point to the product or the spot and hold down the measurement key. The measured value will be immediately displayed on the LCD.

If in addition to surface measurement, you must check the core temperature too, then HI99556 is the ideal solution: simply attach the external probe to the meter and you will have a 2-in-1 infrared-thermistor thermometer.

Different models are available, with different temperature ranges.

### FUNCTIONAL DESCRIPTION



1. Infrared sensor
2. Temperature probe connector (HI99556 only)
3. Liquid Crystal Display (LCD)
4. ON/OFF button
5. IR/CONTACT button to select infrared sensor or external probe (HI99556 only)
6. Wrist-strap

### SPECIFICATIONS

	HI99551-00 HI99556-00	HI99551-01 HI99556-01	HI99551-10 HI99556-10
Range IR Sensor	-10 to 300 °C	14 to 572 °F	-20 to 199.9 °C
Range Probe (HI99556 only)	-40 a 150 °C	-40 a 302 °C	-40 to 150 °C
Resolution IR Sensor	1 °C	1 °F	0.1 °C
Resolution Probe (HI99556 only)	0.1 °C	1 °F	0.1 °C
Accuracy IR Sensor	±2% of reading or ±2 °C (-00 and -10 models); ±2% of reading or ±3 °F (-01 models)		
Accuracy Probe (HI99556 only)	±0.5 °C (-20 to 120 °C)/ ±1 °F (0 to 250 °F) ±0.5 °C/ ±1 °F +1% reading (outside)		
Typical EMC Deviation IR Sensor	±1 °C	±2 °F	±1 °C
Typical EMC Deviation Probe (HI99556 only)	±0.5 °C	±1 °F	±0.5 °C
<b>IR Sensor</b>			
Response Time	1 second		
Optic Coefficient	3:1 (ratio of distance to target diameter)		
Minimum Distance	30 mm (1.2")		
Emissivity	0.95 (fixed)		
Wave Length	6 - 14 μm		
Probe	HI765W (included) (HI99556 only)		
Battery Type	1 x 9V alkaline (IEC 6LR61)		
Battery Life	approx. 150 hours of continuous use		
Environment	0 to 50 °C (32 to 122 °F); RH max 95%		
Demensions	143 x 80 x 38 mm (5.6 x 3.2 x 1.5")		
Weight	320 g (11.3 oz.)		

## OPERATIONAL GUIDE

### INFRARED SENSOR MEASUREMENT

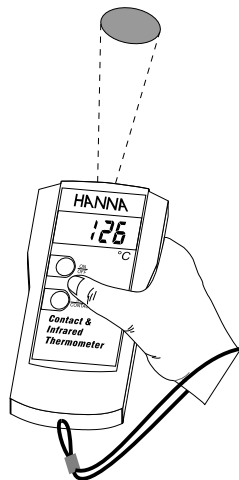
Switch the instrument on.

For **HI99556** models, check that the instrument is in IR (infrared) mode.

If necessary (a "P" tag appears on the LCD to indicate "external probe mode"), press the IR/CONTACT button to switch to IR (infrared) measurement mode.



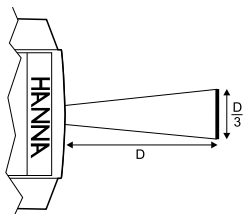
To measure the temperature of an object, simply aim the sensor in the direction of the object.



### READING DISTANCE

The distance between the sensor and the object is an important factor in infrared measurement.

The relation between "distance/object area" is 3:1. This means that the diameter of the measured area is one third of the distance between the sensor and the object.



For example, if the sensor is 15 cm away from the object, the instrument measures the temperature of an area with a 5 cm diameter.

### EMISSIVITY

The instruments measure the temperature of objects with an emissivity of 0.95, which is the characteristic of most substances, such as organic material, water, plastic, fabrics, etc.

To measure substances that have a polished surface and are very reflective, the emissivity needs to be compensated. It is advisable to cover the object with black paint or black adhesive tape to compensate for the reflectivity.

### WARNING

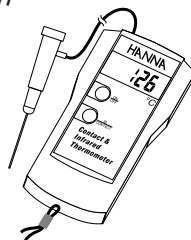
To avoid damage, do not hold the sensor too close to a heat source for a long period.

### SENSOR CLEANING

To maintain the instrument's accuracy, it is important that the sensor lens is kept clean. To clean the sensor, gently wipe the lens with a humid and non-abrasive cloth (**HI731318**).

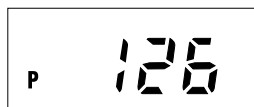
### EXTERNAL PROBE (HI99556 only)

Connect the **HI765PW** temperature probe to the connector on top of the instrument.



### MEASUREMENT MODE

Press the IR/CONTACT button to select the external probe measurement mode: "P" appears on the LCD to indicate that the mode has been entered.



Dip the probe in the substance which to be measured (an immersion level of approximately 4 cm is recommended), and wait for the reading to stabilize.

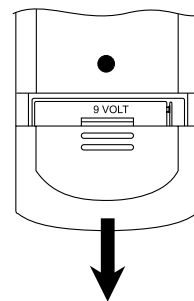
### LOW BATTERY

These instruments continuously check the battery status. If the battery level is too low to ensure reliable reading, the meter shuts off the LCD completely. In this case and if the meter can not be switched on, it is recommended to replace the battery immediately.

## BATTERY REPLACEMENT

Battery replacement must only take place in a safe area and using a 9V alkaline battery.

Simply slide off the battery cover on the back of the meter, detach the battery from the terminals and attach a new 9V battery, while paying attention to the correct polarity. Replace the battery cover.



## ACCESSORIES

HI710007	Blue shockproof rubber boot
HI710008	Orange shockproof rubber boot
HI731318	Wiping tissue (4 pcs.)
HI765PW	Penetration thermistor probe with white handle

## RECOMMENDATIONS FOR USERS

Before using this product, make sure it is entirely suitable for your specific application and for the environment in which it is used. Any variation introduced by the user to the supplied equipment may degrade the meters' performance. For yours and the meter's safety do not use or store the meter in hazardous environments.

## WARRANTY

**HI99551** and **HI99556** are warranted for two years against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. Probes are guaranteed 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 your local Hanna Instruments Office. 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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