

Instruction Manual

I 99550 - HI 99551 Infrared Thermometers



HANNA
Instruments



This instrument is in
Compliance with the CE Directives

://www.hannacan.com

WARRANTY

550 and HI 99551 are warranted for two years against
in workmanship and materials when used for its intended pur-
and maintained according to instructions.

arranty is limited to repair or replacement free of charge.

ries due to accident, misuse, tampering or lack of prescribed
aintenance are not covered.

ce is required, contact the dealer from whom you purchased the
ent. If under warranty, report the model number, date of pur-
serial number and the nature of the failure. If the repair is not
d by the warranty, you will be notified of the charges incurred. If
rument is to be returned to Hanna Instruments, first obtain a
ad Goods Authorization Number from the Customer Service de-
ent and then send it with shipment costs prepaid. When shipping
rument, make sure it is properly packaged for complete protec-

date your warranty, fill out and return the enclosed warranty card
14 days from the date of purchase.

its are reserved. Reproduction in whole or in part is prohibited
it the written consent of the copyright owner, Hanna Instru-
Inc.

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

Dear Customer,

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

This instrument is in compliance with **CE** directives.

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, notify
your Dealer.

The instrument is supplied complete with

- 9V Battery
- Instruction manual

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

Infrared radiation emitted from any object depends on its
temperature.

HI 99550 and HI 99551 are thermometers based on the
infrared radiation technology.

The most evident advantage of infrared thermometry is the
non contact nature of measurement.

With HI 99550 and HI 99551, the temperature measure-
ment is simple: simply aim the thermometer at the object
and then press and hold down the ON/OFF button.

These instruments are equipped with a "HOLD" function,
which freezes the display, making it easy for the user to
read the measurement.

The different models are:

HI 99550-00 measures in Celsius,

HI 99551-00 measures in Celsius,

HI 99550-01 measures in Fahrenheit,

HI 99551-01 measures in Fahrenheit,

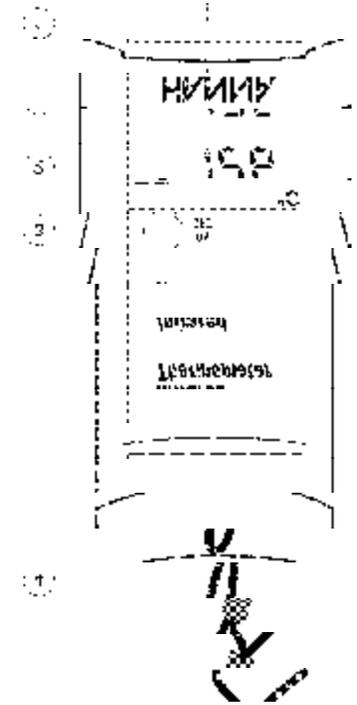
HI 99551-10 measures in Celsius.

The thermometers also provide for a low battery indication.

SPECIFICATIONS

HI 99550-00	HI 99550-01		
HI 99551-00	HI 99551-01	HI99551-10	
Range	-10 to 300 °C	14 to 572 °F	-20.0 to 199.9°C
Resolution	1 °C	1 °F	0.1°C
Accuracy (@20°C/68°F)	±2% of reading or ±2°C/±3°F		
Typical EMC Deviation	±2 °C/±4 °F		
Emissivity	0.95 (fixed)		
Wave length	6 to 14 µm		
Typical response time	1 second		
Optic coefficient	3 : 1 (ratio of distance to diameter of target)		
Battery type	1 x 9V		
Environement	0 to 50 °C (32 to 122 °F) 0 to 95% RH non-condensing		
Dimensions	143 x 80 x 38 mm (5.6x3.2x1.5")		
Weight	320 g (11.3 oz.)		

FUNCTIONAL DESCRIPTION



1. Infrared sensor
2. Liquid Crystal Display (LCD)
3. ON/OFF and hold button
4. Wrist-strap

OPERATIONAL GUIDE

Temperature Measurement

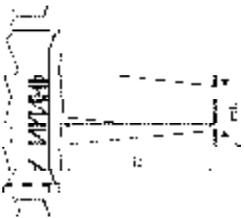
To obtain the temperature of an object, simply aim the sensor in the direction of the object. Keep the "ON/OFF" button pressed for a few seconds until the reading stabilizes.



The instrument will continue measuring the temperature, until the "ON/OFF" button is pressed. When released, the instrument freezes the reading for a few seconds and then switches off automatically to prolong the battery life.

Measuring Distance

The distance between the sensor and the object is an important factor in the infrared measurement. The relation between "distance/object area" of the instrument 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 instrument measures 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.

PRECAUTION

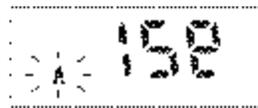
To avoid damage, do not hold the sensor too close to a heat source, for a long period.

SENSOR CLEANING

To maintain the instrument's accuracy, it is important that the sensor lens is kept clean. To clean the sensor gently pass a humid and non-abrasive cloth (HI 731318) on the lens.

WEAK BATTERY

A blinking "V" on the display, indicates a weak battery. In this case, replace the battery with a 9V alkaline one.



BATTERY REPLACEMENT

Battery replacement must only take place in a non-hazardous area 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 fresh 9V battery while paying attention to the correct polarity. Replace the battery and the cover.



ACCESSORIES

- HI 710004 Soft carrying case
- HI 710007 Blue shockproof rubber boot
- HI 710008 Orange shockproof rubber boot
- HI 721316 Rugged carrying case
- HI 731318 Wiping tissue (4 pcs)
- HI 740016 Battery cover
- HI 740029 9 V Battery
- HI 740123 Wrist-strap

CE DECLARATION OF CONFORMITY



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 equipments, requiring the operator to take all necessary steps to avoid such interferences. Any variation introduced by the user to the supplied equipment may degrade instruments' EMC performance. To avoid damages or burns, do not perform any measurement in microwave ovens.