

Instruction Manual

HI 99556 Contact and Infrared Thermometer



HANNA
instruments
<http://www.hannacan.com>

CE
This Instrument is in
Compliance with the CE Directives

WARRANTY

HI 99556 is warranted for two years against defects in workmanship and materials when used for its 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.

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

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Hanna Instruments reserves the right to modify the design, construction and 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 EN 50081-1 and EN 50082-1.

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 99556 is a thermometer based on the infrared radiation technology.

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

HI 99556 also accepts an external thermistor temperature probe. The selection of measurement between the external probe and infrared sensor is simply through a key.

The different models are:

HI 99556-00 measures in Celsius,

HI 99556-01 measures in Fahrenheit,

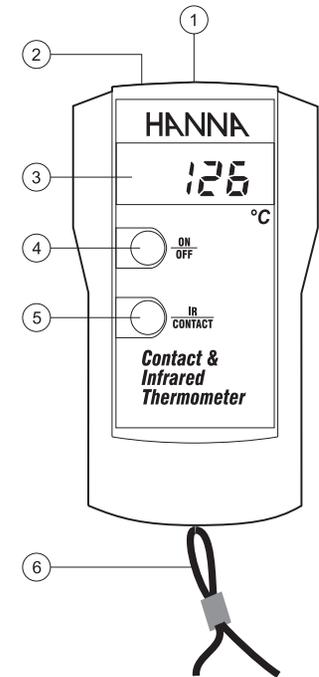
HI 99556-10 measures in Celsius.

The thermometers also provide for a low battery indication.

SPECIFICATIONS

	HI 99556-00	HI 99556-01	HI 99556-10
Range			
IR:	-10 to 300 °C	14 to 572 °F	-20 to 199.9°C
Probe:	-40 a 150 °C	-40 a 302 °F	-40 to 150.0°C
Resolution			
IR:	1 °C	1 °F	0.1 °C
Probe:	0.1 °C	1 °F	0.1 °C
Accuracy			
IR:	±2% of reading or ±2°C/ ±3°F		
Probe:	±0.5°C (-20 to +120°C) / ±1°F (0 to +250°F) ±0.5°C / ±1°F +1% reading (outside)		
EMC Deviation			
IR:	±1 °C	±2 °F	±1 °C
Probe:	±0.5 °C	±1 °F	±0.5 °C
Temperature probe	HI 765PWL (included)		
Emissivity (IR)	0.95 (fixed)		
Wave length (IR)	6 a 14 μm		
Optic coefficient	3 : 1 (ratio of distance to diameter of target)		
Battery type	9V battery		
Environment	0 a 50 °C (32 to 122 °F) 0 a 95% RH non-condensing		
Dimensions	143x80x38 mm (5.6x3.2x1.5")		
Weight	320 g (11.3 oz.)		

FUNCTIONAL DESCRIPTION



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

OPERATIONAL GUIDE

INFRARED SENSOR MEASUREMENT

Switch on the instrument and be sure that it is in the IR (infrared) mode.



Note: If a "P" appears on the LCD, it means that the thermometer is in the external probe mode. Press the IR/CONTACT button to switch to IR (infrared) measurement mode.

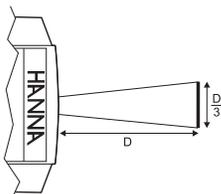
To obtain the temperature of an object, simply aim the sensor in the direction of the object.



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 5cm diameter.

EMISSIVITY

The instrument measures the temperature of objects containing 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 pass a humid and non-abrasive cloth (HI 731318) on the lens.

EXTERNAL PROBE

Connect the temperature probe HI 765PWL to the connector on top of the instrument.



MEASUREMENT MODE

Press the IR/CONTACT button to select measurement mode. "P" on the LCD indicates external probe.



Dip the probe in the substance which you intend to measure (4cm immersion level is recommended) and wait for the reading to stabilize.

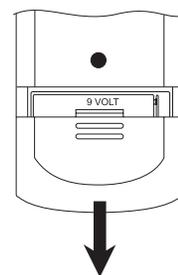
WEAK BATTERY

HI 99556 continuously checks the battery status. If the battery level is too low to guarantee the stated accuracy, it shuts off the LCD completely. If the meter cannot be switched on, or switches itself off after being switched on, replace the battery.

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
- HI 765PWL Reinforced penetration thermistor probe

CE DECLARATION OF CONFORMITY



DECLARATION OF CONFORMITY

We

Hanna Instruments Italia Srl
via E. Fermi, 10
35039 Sarmeola di Rubano - PD
ITALY

herewith certify that the thermometers:

HI 99556

have been tested and found to be in compliance with the following regulations:

IEC 801-2	Electrostatic Discharge
IEC 801-3	RF Radiated
EN 55022	Radiated, Class B
EN 61010-1	User Safety Requirement

Date of Issue: 28-04-1999

D. Volpato
D. Volpato - Engineering Manager
On behalf of
Hanna Instruments Italia 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 interference to radio and TV equipment, requiring the operator to take all necessary steps to correct interferences.

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

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