

# CareTemp™ Touch Free Thermometer

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Directions for use

**WelchAllyn®**

Advancing Frontline Care™

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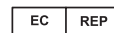
For information about any Welch Allyn product, call Welch Allyn Technical Support (<http://www.welchallyn.com/support>) or visit [www.welchallyn.com/en/about-us/locations.html](http://www.welchallyn.com/en/about-us/locations.html).

# 106090 (CD)  
DIR 80018998 Ver. B



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9F., No. 78, Sec. 1 Kwang-Fu Rd.,  
San-Chung District,  
24158 New Taipei City, Taiwan

This manual applies to REF 901094 Non Contact Thermometer



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29 Harley St.  
W1G 9QR  
London, U.K.



**WelchAllyn**<sup>®</sup>  
Advancing Frontline Care<sup>™</sup>

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# Symbols

## Documentation symbols



**WARNING** The warning statements in this manual identify conditions or practices that could lead to illness, injury, or death.



**Caution** The caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property, or loss of data. This definition applies to both yellow and black and white symbols.



Consult operating instructions/directions for use (DFU).

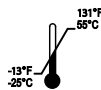
A copy of the DFU is available on this website.

A printed copy of the DFU can be ordered from Welch Allyn for delivery within 7 calendar days.



Meets essential requirements of European Medical Device Directive 93/42/EEC.

## Shipping, storing, and environment symbols



Temperature limits



Keep dry



This device shall be disposed of in accordance with national laws after its useful life.



Fragile




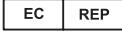







Humidity limitation




**IP22**

This product meets the basic safety and essential performance requirements indicated in the IP22 conditioning test (IP22: Protection level against solid foreign objects and falling water)






## Miscellaneous symbols

	Manufacturer		Reorder/Catalog number
	Product identifier		European authorized representative
	Global trade identification number		Serial number
	Conforms to AAMI STD ES 60601-1, IEC STD 60601-1-6, ISO STD 80601-2-56; Certified to CSA STD C22.2 NO. 60601-1, NO. 60601-1-6, No. 80601-2-56		Type BF applied part
	By prescription or order of licensed healthcare professional		

## Indicator symbols

	One short beep indicating a button press		Three beeps indicating the completion of a process
	Two-second beep indicating an error		

## Battery level indicators

	100 to 76 percent of useable battery capacity remaining Approximately 3,300 measurements		75 to 51 percent of useable battery capacity remaining Approximately 1,900 measurements
	50 to 26 percent of useable battery capacity remaining Approximately 880 measurements		25 to 11 percent of useable battery capacity remaining Approximately 200 measurements
	10 to 0 percent of useable battery capacity remaining When the battery flashes, no measurements can be taken		

# Introduction

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## Intended use

The CareTemp™ Touch Free thermometer is a clinical-grade device intended for the intermittent measurement of human body temperature in patients of all ages in a professional-use environment.

## General warnings and cautions

Warning and caution statements can appear on the thermometer, the packaging, the shipping container, or in this document.

The thermometer is safe for patients and clinicians when used in accordance with the instructions and with the warning and caution statements presented in this manual.

Before using the thermometer, familiarize all operating personnel with the general safety information in this summary. Specific warnings and cautions are also found throughout this manual.

- Failure to understand and observe any warning statement in this manual could lead to patient illness, injury, or death.
- Failure to understand and observe any caution statement in this manual could lead to damage to the equipment or other property, or loss of patient data.



**WARNING** Patient safety. The thermometer is designed for the intermittent measurement of the human body's temperature, and can be used upon people of all ages. The following recommendations must be carefully observed during the product's use. Any activities that are inconsistent with or do not take into account these recommendations could result in personal injury or could affect the accuracy of the thermometer itself.



**WARNING** Patient safety. If the accuracy of any measurement is in question, check the patient's temperature with an alternate method and then check to verify the device is functioning properly.



**WARNING** Safety risk. The thermometer battery must be kept strictly out of the reach of children, as ingestion of the battery could result in poisoning or other serious health risks.



**WARNING** Safety risk. Always dispose of batteries in accordance with applicable legal regulations.



**CAUTION** Always use new batteries of the type and specification indicated in this manual. Mixing old and new batteries will shorten the battery life.



**CAUTION** Do not use rechargeable batteries, as these may be of inferior quality and duration. The use of rechargeable batteries could compromise the performance of this device.



**CAUTION** Leaking batteries can damage the device. Remove the batteries whenever the device is not expected to be used for an extended period of time (e.g. multiple months).



**CAUTION** If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.



**CAUTION** Federal US law restricts sale of the device identified in this manual to, or on the order of, a licensed healthcare practitioner



**CAUTION** Proper measurement distance between 4 and 6 cm from the patient's forehead is essential to the accuracy of the temperature measurement determination.



**CAUTION** Unauthorized modifications to the device are not permitted. Do not modify the product in any way without the manufacturer's prior authorization.



**CAUTION** In order to avoid incorrect measurements, make sure that the lens on the thermometer's infrared sensor lens is clean and intact prior to use.



**CAUTION** Avoid touching the infrared sensor lens directly with your fingers.



**CAUTION** Do not expose the thermometer to extreme temperatures or humidity levels. Make sure that you follow the instructions provided in this manual. Do not expose to direct sunlight.



**CAUTION** The thermometer is NOT waterproof.



**CAUTION** Avoid dropping the device.



**CAUTION** Do not autoclave. Follow only the cleaning procedures described in this manual.

**Note**

Both the patient and the thermometer should be kept within the same environmental conditions for at least 30 minutes prior to each measurement.

**Note**

Avoid taking temperature measurements for at least 30 minutes after physical activity, bathing, swimming, consuming food or beverages, or spending time outdoors.

**Note**

Wait at least 1 minute between temperature measurements. Measurements performed too frequently could result in incorrect temperature readings.

**Note**

Contact Welch Allyn or your local Welch Allyn representative for any assistance with configuration, use, and maintenance operations.



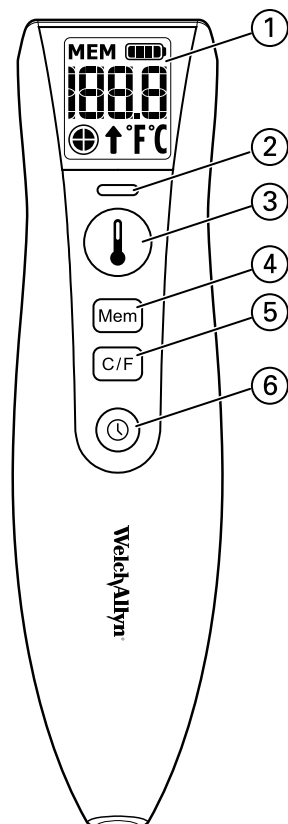
- Note** Avoid pointing the infrared sensor at any heat source other than a patient. This might affect patient measurements.
- Note** Avoid exposing the device to external heat sources. This might affect patient measurements.
- Note** If possible, measurements should always be taken by pointing the infrared sensor at the same area of the forehead. Temperatures measured at different locations on the temples or on opposite sides of the head can vary considerably.
- Note** Holding the thermometer in your hands for too long or exposing the device to external heat sources could result in distorted temperature readings. For this reason, the body temperature reading could result as being higher or lower than the actual value.



# Using the thermometer

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## Button functions



- 1. Display
- 2. LED bar
- 3. Measure

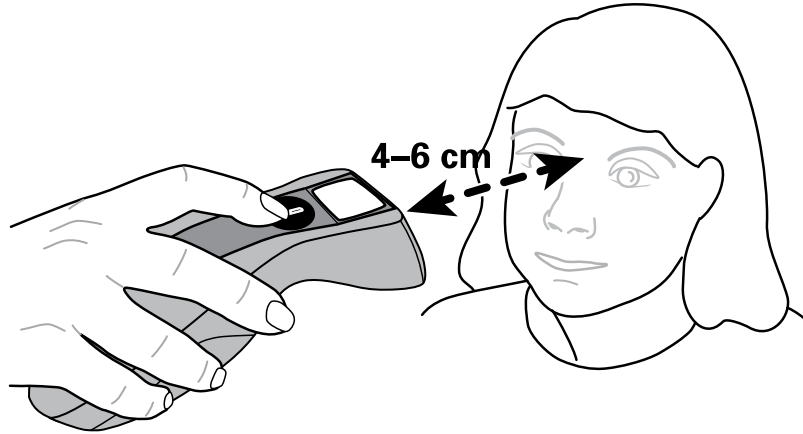
- 4. Memory
- 5. C/F (Celsius/Fahrenheit)
- 6. Pulse timer

## Take a measurement

1. Press **Measure** to power on the thermometer.

When the device is ready, a single dash appears on the screen, and a beeps sounds.

2. Position the thermometer between 4 and 6 cm from the center of the patient's forehead, and aim between the eyebrows.



**Note** If the eyebrow area is covered with hair, sweat, or dirt, clean the area and wait 10 minutes to before taking a measurement.

**Note** Hold the thermometer and the forehead steady during measurement. Movement can impact the measurement.

3. Press **Measure**. **Slowly** move the device toward or farther from the forehead.

The arrow on the display flashes until the correct distance is achieved.

**Note** After pressing **Measure**, the thermometer allows 20 seconds to capture the measurement. If you press **Measure** again before the 20 second time limit is up, the process restarts. If the measurement is not completed in 20 seconds, the device displays **Err** ↑. Press **Measure** to restart the process.

4. When the correct distance is reached the LED bar will illuminate, three beeps sound, and the measurement is displayed.

To repeat the process, return to step 2.

**Note** The complete measurement or **Err** ↑ message displays for 3 seconds. After 3 seconds, the thermometer returns to ready.

5. The thermometer automatically turns off after 10 seconds of inactivity.

## Recall a measurement

Pressing the Memory button (**MEM**) will display the temperature in memory with a MEM indicator. Memory is available directly from the off state, when no measurement is displayed, or immediately following a new measurement if a comparison to the prior reading is needed. Once the thermometer is powered off or a new measurement is initiated, the last temperature taken becomes the reading in memory.

1. Press and release **MEM**.

The LCD displays the temperature stored in the thermometer's memory for 10 seconds.

2. Press and hold **MEM** for 3 seconds to force the measurement on the display to memory and clear the display.

The thermometer beeps three times to indicate the measurement is moved to memory and the thermometer is ready to take a new measurement with a clear display.

**Note** It is not required to force a reading to memory. A new reading will automatically move to memory when the thermometer turns off or a new measurement is initiated.

## Use the timer

1. Press and release the **Timer** button.

The timer is activated. Audible beeps sound at 0, 15, 45, and 60 seconds.

2. Press the **Timer** button again to exit at any time.

After the full 60 second cycle, the thermometer turns off automatically after 2 seconds.

## Change the temperature scale

1. Press **C/F** to temporarily view the measurement in the alternate temperature scale.

This scale conversion feature is available any time a temperature value is displayed, and can be used to continuously alternate between temperature scales.

2. Press and hold both the **MEM** and **C/F** buttons for 3 seconds to change the default scale.

Three beeps sound to confirm the setting is changed.





The alternate scale remains until one of the following occurs, returning the thermometer to the default temperature scale:

- The C/F button is pressed again.
- A new measurement is taken.
- Any other action is taken.
- The thermometer turns off.



## Troubleshooting and error messages

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Error message displayed	Possible cause	Suggested action
	The thermometer distance to the patient is out of range	Take the measurement again, and make sure the thermometer is 4 to 6 cm away from the center of the patient's forehead, just between the eyebrows.
	The ambient temperature of the room is outside the operating range of 60.8 °F to 104 °F (16 °C to 40 °C)	Move to a room with the proper ambient temperature and wait 30 minutes for the thermometer to stabilize.
	The measurement is lower than 93.2 °F (34 °C)	Take the measurement again. Follow the steps in the "Take a measurement" section.
	The measurement is higher than 109.4 °F (43 °C)	Take the measurement again. Follow the steps in the "Take a measurement" section.
Flashing battery symbol on the display	The battery is low on power	Replace the battery with two AAA (LR03) alkaline batteries.
Blank display	The thermometer does not have power	Make sure the battery has been loaded properly. Contact your local Welch Allyn service center or representative if the thermometer still does not function.





# Maintenance

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## Replace the batteries

The thermometer comes with two AAA (LR03) batteries. Replace with two new AAA (LR03) batteries when the flashing battery symbol appears on the display

1. Use a Phillips screwdriver to loosen the battery cover screw.
2. Slide open the battery cover and remove the batteries.
3. Replace the batteries. Make sure to align the batteries as indicated inside the battery compartment.
4. Replace the battery cover and tighten the battery cover screw.

Remove the batteries before storing the thermometer for an extended period of time.

## Clean and disinfect the thermometer

The thermometer can be cleaned and an intermediate-level of disinfection can be achieved using the following method.



**CAUTION** Never submerge the thermometer in water or any other liquid



**CAUTION** Never use abrasive cleaning agents, thinners or benzene for cleaning and never immerse the instrument in water or other cleaning liquids.



**CAUTION** Never insert a sharp object into the scanner area or any other open surface on the thermometer.



**CAUTION** Do not use unapproved cleaning or disinfection agents. Use of these agents may cause damage to components.



**CAUTION** Do not use chemicals other than isopropyl or ethyl alcohol on the lens.

## Cleaning the sensor window

Slightly moisten a cotton swab or cloth with isopropyl or ethyl alcohol and gently wipe the surface of the lens using a side-to-side (not circular) motion. Avoid touching the lens except when cleaning is required.

## Cleaning the thermometer

Use a pre-moistened wipe or soft cloth slightly moistened with an approved cleaner to gently clean the thermometer.

## Disinfecting the thermometer

Use a pre-moistened wipe or soft cloth slightly moistened with an approved disinfectant to disinfect the thermometer. Follow the manufacturers recommendations.

**Note** After cleaning or disinfecting, wait at least 10 minutes before taking another measurement.

## Approved cleaning agents

Use only the following approved cleaning agents on the thermometer:

CaviWipes	Super HDQ® L10
Sani-Cloth® Plus	Cleancide
Super Sani-Cloth®	Clorox HealthCare Bleach Germicidal Cleaner
Sani-Cloth® Bleach	Virex II (256)
Oxiver Tb	Tuffie5 Cleaning Wipes
Clinell® Universal Wipes	70% IPA
Accel INTERVention	10% bleach (.5% - 1% Sodium Hypochlorite)
Accel TB	Desko

Additional cleaning agents may be periodically evaluated for compatibility. If your cleaning agent is not listed, contact Welch Allyn to determine if additional cleaning agents are approved for use.

Welch Allyn has validated these instructions as being capable of preparing the thermometer for re-use. You must ensure that cleaning and disinfection as actually performed by your personnel, with your equipment and materials, achieves the desired result. This may require validation and routine monitoring of your actual process.

## Calibration testing

The thermometer is calibrated at the time of manufacture. If the thermometer is operating according to these instructions, periodic readjustment is not required. Welch Allyn recommends checking calibration on an annual basis or whenever clinical accuracy of the thermometer is in question.

Procedures for checking calibration are outlined in the Welch Allyn 9600 Plus Calibration Tester directions for use (P/N 701754).

These recommendations do not supersede any legal requirements. You must always comply with legal requirements for the control of the measurement, functionality, and

accuracy of the device. These controls are required by the scope of relevant laws, directives or ordinances where the device is used.

## Disposal

### **Thermometer**

The thermometer contains no hazardous materials. Discard without environmental risk. Remove the batteries before disposal.

### **Battery**

Dispose of empty batteries in accordance with national or local regulations.



# Specifications

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Type	Touch-free infrared thermometer
Model no.	NT18, REF 901094, #105801
Displayed temperature range	93.2 to 109.4 °F (34 to 43 °C)
Display resolution	0.1 °F (0.1 °C)
Laboratory accuracy	±0.4 °F (±0.2 °C) for the range 93.2 to 109.4 °F (34 to 43 °C)
Clinical accuracy	±0.5 °F (±0.3 °C) for the range 93.2 to 109.4 °F (34 to 43 °C)
Display	Liquid crystal display, four digits plus special icons
Operating temperature	60.8 to 104 °F (16 to 40 °C )
Operating humidity	Up to 85% non condensing
Storage temperature	−13 to 131 °F (−25 to 55 °C)
Storage humidity	Up to 85% non condensing
Automatic power off	Approximately 10 seconds after last measurement has been taken
Battery	2 × 1.5V AAA (LR03)
Battery life	3,300 measurements
Weight	100.5g (with battery), 78.0g (without battery)
Dimensions	159.3 x 41.3 x 55.8 mm
Software version	NT18 V001

## Standards

ASTM 1965-98	EN 12470-5:2003
MDD (93/42/EEC) Annex II	ISO STD 80601-2-56



# Guidance and manufacturer's declaration

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## EMC compliance

Special precautions concerning electromagnetic compatibility (EMC) must be taken for all medical electrical equipment. This device complies with IEC EN 60601-1-2:2007.

- All medical electrical equipment must be installed and put into service in accordance with the EMC information provided in this document.
- Portable and mobile RF communications equipment can affect the behavior of medical electrical equipment.

The thermometer complies with all applicable and required standards for electromagnetic interference.

- It does not normally affect nearby equipment and devices.
- It is not normally affected by nearby equipment and devices.
- It is not safe to operate the thermometer in the presence of high-frequency surgical equipment.

## Emissions and immunity information

For information about electromagnetic compatibility (EMC), see the Welch Allyn website:  
[direct link to the thermometer's URL.]





# Warranty

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Welch Allyn warrants the product to be free of defects in material and workmanship and to perform in accordance with manufacturer's specifications for the period of two years from the date of purchase from Welch Allyn or its authorized distributors or agents.

The warranty period shall start on the date of purchase. The date of purchase is: 1) the invoiced ship date if the device was purchased directly from Welch Allyn, 2) the date specified during product registration, 3) the date of purchase of the product from a Welch Allyn authorized distributor as documented from a receipt from said distributor.

This warranty does not cover damage caused by: 1) handling during shipping, 2) use or maintenance contrary to labeled instructions, 3) alteration or repair by anyone not authorized by Welch Allyn, and 4) accidents.

Shipping cost to return a device to a Welch Allyn Service center is not included.

A service notification number must be obtained from Welch Allyn prior to returning any products or accessories to Welch Allyn's designated service centers for repair. To obtain a service notification number, contact Welch Allyn Technical Support.

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