

Cardinal Health™ temperature monitoring products

# Precision temperature



# Thermometers – Digital Bottle

## Cardinal Health™ Triple Display Large Digit Digital Thermometers



CH-4148



CH-4648



CH2960-5

### Triple Display - Large Digit Alarm Digital Thermometer

The Triple Display Digital Thermometer simultaneously shows the current, minimum, and maximum temperatures and updates continuously. An audible alarm will sound when the temperature rises above or goes below the set temperatures. The minimum/maximum feature monitors critical temperature for any period of time, such as overnight or weekend. Reset buttons on front panel. Temperature probe is housed in a plastic bottle filled with a Bio-Safe nontoxic, non-hazardous liquid medium. Bottles are supplied with dual magnets, thermometers have velcro fasteners for attachment. AAA alkaline 1.5 V batteries included. Each thermometer is certified, serialized and traceable to NIST.

- **NIST Compliant® with certificate**
- Audible alarm
- Bio-Safe glycol/water probe medium
- Displays current, minimum and maximum temperatures
- °C/°F switchable
- 9 ft. micro-cable probe
- Flip out desk stand
- Wall mounting key hole
- Magnets and velcro for attachment

#### Specifications:

Range ..... -50°C to 70°C

Resolution ..... 0.1°C / °F

Accuracy ..... ±0.5°C / °F

| Cat. No. | Description                                     | Qty. |
|----------|---|------|
| CH-4148  | Thermometer with probe only                     | 1/ea |
| CH-4648  | Vaccine bottle - glycol/water 5mL bottle        | 1/ea |
| CH-4548  | Incubator - glycol/water 30mL bottle            | 1/ea |
| CH2960-5 | Refrigerator/Freezer - glycol/water 30mL bottle | 1/ea |

# Thermometers – Digital Bottle

## Cardinal Health™ Triple Display Time/Date Stamp Digital Thermometers

### Triple Display - Time and Date Stamp Digital Alarm Thermometer

Temperature monitors for refrigerators, freezers and incubators. Simultaneously shows the current, minimum, and maximum temperatures and updates continuously. An audible and visual alarm will trigger when the temperatures goes above or below the set temperatures. The minimum/maximum feature monitors critical temperature for any period of time, such as overnight or weekends. The thermometer probe is housed in an unbreakable plastic vial filled with a Bio-Safe buffering media which maintains the thermometer reading while the refrigerator or freezer door is open. Thermometers are supplied with dual magnets and velcro sets to allow attachment to walls or doors. Two AAA alkaline 1.5 V batteries included. Each thermometer is certified, serialized and traceable to NIST in Thermco's ISO17025, calibration laboratory and accredited by ilac-MRA (Accreditation No. 69071) to assure accuracy and compliance with regulatory agencies.

- **NIST Compliant® with certificate**
- Visual LED and audible beeping alarms
- Bio-Safe glycol/water probe medium
- Min/max temperature with time and date stamp readings in memory
- Low/high alarm limit setting
- °C/°F switchable
- Low battery indication
- 12/24 hour time display format
- Flip out desk stand
- Wall mounting key hole
- Magnets and velcro for attachment

**Specifications:**

Range ..... -50°C to 70°C (-58°F to 158°F)  
 Resolution ..... 0.1°C  
 Accuracy ..... ±0.3°C (±0.5°F)  
 Display Reading Update ..... 10 Seconds  
 Alarm Setting Resolution ..... 0.1°C  
 Time Accuracy ..... ±1 second per day  
 Working Temperature ..... 0°C to 50°C (32°F to 122°F)  
 Dimensions ..... Display: 47 x 39 mm (W x H) Product: 75 x 120 x 19 mm (W x H x D)



CH2960-4

| Cat. No. | Description                           | Qty. |
|----------|---------------------------------------|------|
| CH2960-3 | Thermometer - probe only no bottle    | 1/ea |
| CH2960-4 | Thermometer - glycol/water 5mL bottle | 1/ea |

# Thermometers – Digital Bottle

## Cardinal Health™ Dual and Hi Temp Digital Thermometers

### Dual Temp Digital Thermometers

Buffered bottle media models contain glycol/water a thermal dampening media housed in a 5 mL bottle, used to minimize temperature spikes caused when a instrument door is opened for a period of time and thereby preventing false alarms.

Dual temp thermometers allow putting one probe in the freezer and another in the refrigerator (or measure two areas of a refrigerator). Audible and visual alarm feature provides alert when temperature rises above or falls below two set points. Alarm is programmable in 1° increments. Three foot micro-cable permits refrigerator or freezer doors to close without seal on it.

Suction cup probes attach to refrigerator or freezer wall. Each thermometer is certified, serialized and traceable to NIST in Thermco's ISO17025, calibration laboratory and accredited by ilac-MRA (Accreditation No. 69071) to assure accuracy and compliance with regulatory agencies.

- **NIST Compliant® with certificate**
- Bio-Safe glycol/water probe medium
- Min/max temperature memory recall
- Visual and buzzer alarm
- °C/°F switchable
- Programmable alarm in 1° increments
- 3 ft. micro-cable probe
- Alarm duration indication
- Low battery indication
- Flip out desk stand
- Magnets and velcro for attachment
- Two AAA alkaline 1.5 V batteries included

#### Specifications:

Range .....-40°C to 70°C (-40°F to 158°F)  
 Resolution .....0.1°C/°F  
 Accuracy .....±1°C  
 Dimensions.....3½ x 1¾ x 1 in.

| Cat. No. | Description  | Qty. |
|----------|--|------|
| CH2941-5 | -40°C to 70°C range - glycol/water 5 mL                    | 1/ea |
| CH2941-6 | -40°F to 158°F range - glycol/water 5 mL                   | 1/ea |
| CH8002CL | -40°C to 70°C (-40°F to 158°F) range - suction cup holders | 1/ea |



### Hi-Temp Digital Thermometer

Each thermometer is certified, serialized and traceable to NIST.

- **NIST Compliant® with certificate**
- Min/max temperature memory recall
- Temperature probe housed in plastic bottle filled with USP sand.
- Bottles and thermometers have double magnets for attachment
- °C/°F switchable
- Stainless steel probe has a 32 in. cable

#### Specifications:

Range .....-50°C to 130°C  
 Resolution .....0.1°C/°F  
 Accuracy .....±0.5°C  
 Dimensions.....Display: 35 x 15 mm, thermometer: 95 x 65 x 18 mm

| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH240056 | Thermometer - oven, incubator, water bath - 60mL bottle with sand | 1/ea |



# Thermometers – General Use

## Cardinal Health™ Refrigerator, Freezer and Room/Wall Thermometers



CH2971-8



CH2971-7

### Big See-Thru Glass Door Digital Thermometer

- NIST Compliant® with certificate
- Triple display current, minimum/maximum temperatures
- Weather resistant
- Manual reset

#### Specifications:

Range ..... Celsius: -25°C to 70°C, Fahrenheit: -13°F to 158°

| Cat. No. | Description                                | Qty. |
|----------|--|------|
| CH2971-8 | Celsius see-thru glass door thermometer    | 1/ea |
| CH2971-7 | Fahrenheit see-thru glass door thermometer | 1/ea |

### Economy Refrigerator Thermometer

- NIST Compliant® with certificate
- LCD viewing area: 20 x 30 mm
- Suction pad affixes to any flat surface

#### Specifications:

Range ..... -20°C to 60°C

Accuracy ..... ±1°C

Dimensions ..... 43 x 85 mm



| Cat. No. | Description              | Qty. |
|----------|--------------------------|------|
| CH2971-5 | Refrigerator thermometer | 1/ea |

### High-Precision Wall Thermometer

This high-precision certified thermometer monitors laboratory room temperature to comply with regulatory agencies. Calibrated for total immersion, it is certified against NIST standards. Specifications are approved by NIST, ANSI and ASTM. Each 305 mm long thermometer is supplied with an individual serial number, certified against NIST standards and specifications approved by NIST, ANSI and ASTM.

- NIST Compliant® with certificate
- Red-Spirit filled

#### Specifications:

Range ..... -35°C to +50°C

Divisions ..... 1°C

| Cat. No.   | Description                     | Qty. |
|------------|---------------------------------|------|
| T8400-152A | High-precision wall thermometer | 1/ea |



### Minimum/Maximum Thermometer

This minimum/maximum thermometer is used to monitor temperatures in freezers, refrigerators and incubators as well as ambient air. It registers the highest and lowest temperatures reached over a certain time frame. Spirit filled total immersion thermometer is enclosed in ABS plastic housing.

- Fahrenheit and Celsius scales
- Push-button reset

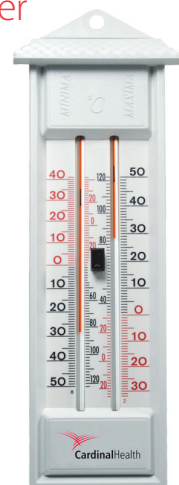
#### Specifications:

Range ..... -40°C to 50°C (-40°F to 120°F)

Accuracy ..... ±2%

Divisions ..... 1°C and 2°F

Dimensions ..... 8 x 2½ x 1 in. (H x L x W)



| Cat. No. | Description                 | Qty. |
|----------|-----------------------------|------|
| CHB12408 | Minimum/maximum thermometer | 1/ea |



### Refrigerator/Freezer Hanging Thermometer

This dual-scale thermometer is ideal for both refrigerators and freezers. It features an enclosed bulb to help ensure average temperature readings and an open scale for easy, accurate readings. The thermometer's rust-resistant case has stainless steel hangers with keyhole brackets for easy hanging and removal. Enameled aluminum scale. Thermometer can hang or stand.

#### Specifications:

Temperature range ..... -40°C to 25°C (-40°F to 80)

| Cat. No. | Description                              | Qty. |
|----------|--|------|
| CH5001   | Refrigerator/freezer hanging thermometer | 1/ea |

### Wall/Room Thermometer

This easy-to-read, 8 in. long plastic thermometer can be wall mounted. It is red spirit filled and features both Fahrenheit and Celsius scales.

- Wall mountable
- Easy to read
- Dual scales

#### Specifications:

Range ..... -40°C to 50°C (-40°F to 120°F)

Divisions ..... 1°C and 2°F

| Cat. No.   | Description           | Qty. |
|------------|-----------------------|------|
| T8400-141A | Wall/room thermometer | 1/ea |





# Thermometers – Hygrometers

## Cardinal Health™ Digital Thermometers with Hygrometers

### Large Digit Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- Minimum/maximum temperature and humidity memory recalling
- °C/°F selectable
- Key hole and flip-out stand
- Low battery indicator
- Battery included



#### Specifications:

Temperature range..... -10°C to 60°C (-14°F to 140°F)  
 Temperature accuracy..... ±1°C (±1.8°F)  
 Humidity range..... +10% to 99% RH  
 Humidity accuracy..... ±5%, 25% to 75% RH  
 at 0°C to 50°C (32°F to 122°F)  
 Resolution..... 0.1° temperature and relative humidity

| Cat. No.  | Description                        | Qty. |
|-----------|------------------------------------|------|
| CH9506-11 | Large digit thermometer/hygrometer | 1/ea |

### Large Digit Thermometer/Hygrometer with Alarm Clock

- **NIST Compliant® with certificate**
- 12/24 hour format alarm clock
- Display size 79 x 66 mm
- Minimum/maximum memory recalling function
- °C/°F selectable
- 10 second display refresh
- Flip-out stand or hanging
- Product size 98 x 110 x 21 mm (W x H x D)
- 1.5 V AAA battery included



#### Specifications:

Temperature range..... Internal 0°C to 50°C (32°F to 122°F)  
 External -50°C to 70°C (-58°F to 158°F)  
 Temperature accuracy..... ±1°C (±1.8°F)  
 Humidity range..... 20% to 100% RH  
 Humidity accuracy..... ±5% RH

| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH2972   | Large digit thermometer/hygrometer with alarm clock | 1/ea |

### Min/Max Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- Time/temperature/humidity/week display with month and day
- Min/max memory of temperature and humidity
- °C/°F selectable
- Product size: 102 x 21 x 110 mm
- Key hole and flip-out stand
- 1.5 V AAA battery included



#### Specifications:

Temperature range..... -10°C to 60°C (+14°F to +140°F)  
 Temperature accuracy..... ±1°C, 10°C to 50°C (±1.8°F, 14°F to 122°F)  
 Humidity range..... 10% to 99% RH  
 Humidity accuracy..... ±5%, 25% to 75% RH  
 at 0°C to 50°C (32°F to 122°F)

| Cat. No.  | Description                    | Qty. |
|-----------|--------------------------------|------|
| CH9506-15 | Min/max thermometer/hygrometer | 1/ea |

### Min/Max Thermometer/Hygrometer with Internal-External Temperature

- **NIST Compliant® with certificate**
- Jumbo display for two temperatures, humidity and time
- Minimum/maximum reading memory
- Time and alarm clock
- °C/°F selectable
- Foldaway stand and mounting keyhole
- CE marked
- Product size: 100 x 110 mm (W x H)



#### Specifications:

Temperature range: ... Internal 0°C to +50°C (+32°F to +122°F)  
 External -50°C to +70°C (-58°F to +158°F)  
 Humidity range..... 10% to 99% RH

| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH9506-2 | Min/max thermometer/hygrometer with internal-external temperature | 1/ea |

# Thermometers – Hygrometers

## Cardinal Health™ Digital Thermometers with Hygrometers

### Multi-Remote Environment Monitoring Station

- **NIST Compliant® with certificate**
- 12/24 hour time display
- Time zone option  $\pm 12$  hours
- Weekday and day calendar display (year and month only in setting mode)
- Weather forecasting with weather tendency indicator
- Temperature display in  $^{\circ}\text{C}/^{\circ}\text{F}$
- Indoor and outdoor temperature display with min/max records and time of reception
- Humidity data display as RH %
- Indoor and outdoor humidity display with min/max records
- Relative air pressure hPa/inHg with adjustable reference value
- Weather icon sensitivity setting
- Relative air pressure history for last 24 hours (electronic barometer with barometric pressure trend)
- LCD contrast selectable
- Wireless transmission at 868 MHz
- Signal reception intervals at 4 seconds
- Can receive up to 3 outdoor transmitters
- Low battery indicator
- Table standing or wall mounting base station
- Batteries – weather station 3 x AAA 1.5 V, transmitter 2 x AAA 1.5 V



#### Specifications:

##### Weather Station

Temperature range . . . . .  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ )  $0.1^{\circ}\text{C}$  ( $0.2^{\circ}\text{F}$ ) resolution

Humidity range. . . . . 1% to 99% RH with 1% resolution

##### Remote Transmitter

Temperature range . . . . .  $-40^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ )  $0.1^{\circ}\text{C}$  ( $0.2^{\circ}\text{F}$ ) resolution

Humidity range. . . . . 1% to 99% RH with 1% resolution

| Cat. No. | Description                                 | Qty. |
|----------|---|------|
| CH4195   | Multi-remote environment monitoring station | 1/ea |

# Thermometers – Hygrometers

## Cardinal Health™ Digital Thermometers with Hygrometers



### Pocket Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- Minimum/maximum temperature and humidity memory recalling
- °C/°F selectable
- Rubber coated
- LCD display: 2¼ x ½ in.
- Dimensions: 6½ x 1½ in.
- Low battery indicator
- Plastic storage case and battery included

#### Specifications:

Temperature range..... 0°C to 50°C (-32°F to 120°F)  
 Temperature accuracy..... ±0.5° Celsius and Fahrenheit  
 Humidity range..... +20% to 100% RH  
 Humidity accuracy..... ±4% mid range ±6% elsewhere  
 Resolution..... 0.1 temperature and relative humidity

| Cat. No. | Description                   | Qty. |
|----------|-------------------------------|------|
| CH9509   | Pocket thermometer/hygrometer | 1/ea |

### Precision Bench Thermometer/Hygrometer

The Precision Bench Thermometer/Hygrometer is an ideal measuring instrument for checking room, storage and test area conditions (according to ISO 9001).

- **NIST Compliant® with certificate**
- Room temperature
- Indoor relative air humidity
- Minimum/maximum values
- Dew point indication and wet bulb temperatures
- Acoustic and optical alarm function for all parameters



#### Specifications:

Temperature range..... -40°C to 70°C  
 Temperature accuracy..... ±0.5°C, 0°C to 60°C, otherwise ±1°C  
 Humidity range..... 1% to 99% RH  
 Humidity accuracy..... ±3%, 35% to 75% RH, otherwise ±5%

| Cat. No. | Description                            | Qty. |
|----------|--|------|
| CH4410   | Precision bench thermometer/hygrometer | 1/ea |



### Thermometer/Hygrometer with Remote Sensor

- **NIST Compliant® with certificate**
- LCD displays temperature and humidity with comfort level icons
- Local/remote temperature min/max memory with time stamp
- Temperature display in °C/°F
- Relative Humidity (RH) % with min/max memory
- Wireless monitor up to 2 remote transmitters
- Transmission at 868 MHz - max distance 300 ft. (100 m)
- Radio controlled time with manual setting options
- 12/24 hour time display
- Time zone option ±12 hours
- Weekday and day calendar display

#### Base station

- Low battery indicator
- Batteries: 2 x AA 1.5 V
- Wall mounting or table standing
- 81 x 32 x 143.5 mm

#### Remote transmitter

- Batteries: 2 x AAA 1.5 V
- 41 x 19 x 128 mm
- Optional external probe

#### Specifications:

##### Base Station

Temperature range..... -10°C to 60°C (14°F to 140°F)  
 0.1°C (0.2°F) resolution

Humidity range..... 1% to 99% RH with 1% resolution

##### Remote Transmitter

Temperature range..... -40°C to 60°C (-40°F to 140°F)  
 0.1°C (0.2°F) Resolution

| Cat. No.  | Description                            | Qty. |
|-----------|--|------|
| CH9506-14 | Thermometer/hygrometer w/remote sensor | 1/ea |



# Thermometers – Hygrometers

## Cardinal Health™ Digital and Analog Thermometers with Hygrometers

### Digital 2-Point Thermometer with Hygrometer

- **NIST Compliant® with certificate**
- Internal and external temperature with humidity LCD display
- External probe with 9 ft. sensor probe wire
- °C/°F selectable
- Flip-out stand or hang
- Low battery indicator
- 1.5 V AAA battery included



#### Specifications:

Temperature range . . . . . Internal 0°C to 50°C (32°F to 122°F)  
 External -40°C to 70°C (-40°F to 158°F)  
 Temperature accuracy . . . . ±1°C, 0°C to 40°C (±1.8°F, 32°F to 104°F)  
 Humidity range . . . . . 20% to 99% RH  
 Humidity accuracy . . . . . ±5%, 30% to 80% RH rest ±7%

| Cat. No.  | Description   | Qty. |
|-----------|---|------|
| CH9506-1  | Digital 2-point thermometer/hygrometer                    | 1/ea |
| CH9506-13 | Digital 2-point thermometer/hygrometer with outside probe | 1/ea |

### Double - Triple Digit Display Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- Double - triple digits display
- Current, minimum/maximum temperature and humidity readings
- Minimum/maximum with daily auto or manual reset
- °C/°F selectable
- Flip-out stand or hang
- Low battery indicator
- 1.5 V AAA battery included



#### Specifications:

Temperature range . . . . . -10°C to 70°C (14°F to 158°F)  
 Temperature accuracy . . . . . ±1°C (±1.8°F)  
 Humidity range . . . . . 20% to 99% RH  
 Humidity accuracy . . . . . ±4%, 35% to 75% RH rest 5%

| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH9506-3 | Digital 2-point thermometer/hygrometer with outside probe | 1/ea |

### Analog Dial Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- 4½ in. diameter, 112 x 40 x 120 mm
- "Super-ex-sensor" for particularly exact and fast measurement



#### Specifications:

Temperature range . . . . . -30°C to 50°C  
 Temperature accuracy . . . ±1°C, from -20° to 40°C  
 Humidity range . . . . . 10% to 90% RH  
 Humidity accuracy . . . . . ±3%, from 35% to 70% RH

| Cat. No.  | Description                        | Qty. |
|-----------|------------------------------------|------|
| CH9506-16 | Analog dial thermometer/hygrometer | 1/ea |

### Dial Barometer Thermometer/Hygrometer

- **NIST Compliant® with certificate**
- Min/max with memory recall



#### Specifications:

Temperature range . . . . -10°C to 55°C  
 Humidity range . . . . . 20% to 100% RH

| Cat. No. | Description                           | Qty. |
|----------|---------------------------------------|------|
| CH2504-1 | Dial barometer thermometer/hygrometer | 1/ea |

### 5 in. Dial Thermo-Hygrometer

This Thermo-hygrometer measures both temperature and humidity in a wide variety of laboratory settings. Housed in a 6 in. brass case with an easy-to-read 5 in. dial. It is externally calibrated and certified to meet ANSI/SAMA standards.



- **NIST Compliant® with certificate**
- Monitors temperature and humidity
- Externally calibrated

#### Specifications:

Temperature range . . . . . 0° and 100°C (0° and 210°F)  
 Temperature accuracy . . . . . ±1% full scale  
 Humidity range . . . . . 0% to 100%  
 Humidity accuracy . . . . . ±3% full scale

| Cat. No.  | Description                  | Qty. |
|-----------|------------------------------|------|
| T8400-57A | 5 in. dial thermo-hygrometer | 1/ea |

# Thermometers – Liquid in Glass

## Cardinal Health™ NIST Accredited Spirit-Filled Thermometers



### NIST Accredited Thermometers

These thermometers come in a variety of lengths and divisions and are NIST Compliant®. All thermometers come with an individual serial number and are packed in a deluxe, felt-lined storage box. Choose from red spirit-filled or mercury-filled models in either total or partial immersion options. All certified thermometers come with a calibration report with certified temperature corrections calibrated to the nearest tenth of a scale division. These thermometers include an test number and a record of all set conditions under which the thermometers were tested.

- **NIST Compliant® with certificate**
- Choose from red spirit filled or mercury filled
- Individually serialized
- Partial and total immersion models

| Cat. No.   | Range          | Divisions | Immersion | Length | Calibration Temperatures                               | Qty. |
|--|----------------|-----------|-----------|--------|--|------|
| <b>NIST Traceable Spirit-Filled Thermometers</b> |                |           |           |        |  | 1/ea |
| <b>T8400-24A</b>                                 | -20° to +110°C | 0.5°C     | 76mm      | 305 mm | -10°, 0°, 4°, 25°, 37°, 56°, 100°C                     | 1/ea |
| <b>T8400-31A</b>                                 | -100° to +50°C | 1°C       | 76mm      | 305 mm | -78°, -20°, 0°, 4°, 25°, 37°C                          | 1/ea |
| <b>T8400-5A</b>                                  | -100° to +50°C | 1°C       | Total     | 305 mm | -78°, -20°, 0°, 4°, 25°, 37°C                          | 1/ea |
| <b>T8400-105A</b>                                | -1° to +51°C   | 0.1°C     | 76mm      | 405 mm | 0°, 10°, 20°, 30°, 37°, 40°, 50°C                      | 1/ea |
| <b>T8400-107A</b>                                | -1° to +51°C   | 0.1°C     | Total     | 405 mm | 0°, 10°, 20°, 30°, 37°, 40°, 50°C                      | 1/ea |
| <b>CH10053</b>                                   | -1° to +101°C  | 0.2°C     | 76mm      | 460 mm | 0°, 10°, 20°, 30°, 37°, 40°, 50°C                      | 1/ea |
| <b>T8400-236A</b>                                | -1° to +101°C  | 0.1°C     | 76mm      | 460 mm | 0°, 10°, 20°, 30°, 40°, 50°, 60°, 70°, 80°, 90°, 100°C | 1/ea |
| <b>T8400-250A</b>                                | +30° to +124°F | 2°F       | 76mm      | 610 mm | 32°, 40°, 60°, 100°, 120°F                             | 1/ea |



### ACCU-SAFE Enclosed Chamber Bottle Thermometers

High-precision bottle thermometer kits are reliable, economical and easy to read. Each kit consists of a thermometer housed in a break resistant plastic bottle filled with a *bio-safe glycol/water* solution (or sand for oven thermometers). The thermometer bulbs are insulated to ensure accurate temperature readings with no temperature drift, even when the instrument door is opened. Thermometers are graduated in 0.1°C, 0.5°C and 1.0°C divisions and feature a fluoropolymer coating for safety if broken. Each thermometer is individually serialized and includes a **NIST Compliant® certificate**.

- **NIST traceable**
- Individually serialized and certificate provided with each thermometer kit
- Thermometers in 0.1°C - 0.5°C and 1.0°C divisions
- Choose environmentally friendly spirit filled or mercury filled thermometers
- Thermometers are fluoropolymer coated for protection
- Unbreakable bottle filled with bio-safe glycol / water bottle medium

| Cat. No.   | Description              | Range         | Divisions | Height | Bottle Media                   | Qty. |
|--|--------------------------|---------------|-----------|--------|--------------------------------|------|
| <b>Environmentally friendly spirit filled thermometers (non-mercury)</b> |                          |               |           |        |                                |      |
| <b>T8401-6</b>   | Blood banks refrigerator | -5°C to 20°C  | 0.5°C     | 145 mm | Bio-safe glycol/water - 250 mL | 1/ea |
| <b>T8400-81A</b>   | Blood banks refrigerator | 2°C to 10°C   | 0.1°C     | 180 mm | Bio-safe glycol/water - 250 mL | 1/ea |
| <b>T8400-134A</b>  | Freezers                 | -25°C to -5°C | 0.1°C     | 120 mm | Bio-safe glycol/water - 60 mL  | 1/ea |
| <b>T8401-4</b>   | Freezers                 | -30°C to 0°C  | 0.5°C     | 125 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>CH0101S</b>   | Freezers                 | -30°C to 0°C  | 0.5°C     | 125 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8401-7</b>   | Ultra-low freezers       | -90°C to 20°C | 1.0°C     | 145 mm | Sand - 60 mL                   | 1/ea |
| <b>T8401-1</b>   | Refrigerators            | -5°C to 15°C  | 0.5°C     | 125 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8400-60A</b>   | Refrigerators            | -2°C to 10°C  | 0.1°C     | 240 mm | Bio-safe glycol/water - 60 mL  | 1/ea |
| <b>T8401-3</b>   | Incubators               | 18°C to 50°C  | 0.5°C     | 135 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8400-118A</b>  | Incubators               | 15°C to 30°C  | 0.1°C     | 180 mm | Bio-safe glycol/water - 60 mL  | 1/ea |
| <b>T8400-106A</b>  | Incubators               | 25°C to 45°C  | 0.1°C     | 190 mm | Bio-safe glycol/water - 60 mL  | 1/ea |
| <b>T8401-25</b>  | Oven                     | 20°C to 130°C | 1.0°C     | 135 mm | Sand - 30 mL                   | 1/ea |
| <b>T8400-54A</b>   | Oven                     | 35°C to 180°C | 1.0°C     | 145 mm | Sand - 100 mL glass bottle     | 1/ea |
| <b>T8400-136A</b>  | Oven                     | 50°C to 115°C | 0.5°C     | 240 mm | Sand - 60 mL                   | 1/ea |
| <b>Mercury filled thermometers (Hg)</b>                                  |                          |               |           |        |                                |      |
| <b>T8401-9</b>   | Freezers                 | -30°C to 0°C  | 0.5°C     | 115 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8401-2</b>   | Refrigerators            | -5°C to 15°C  | 0.5°C     | 125 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8401-13</b>  | Incubators               | 18°C to 50°C  | 0.5°C     | 135 mm | Bio-safe glycol/water - 30 mL  | 1/ea |
| <b>T8401-47</b>  | Oven                     | 20°C to 130°C | 1.0°C     | 135 mm | Sand - 30 mL                   | 1/ea |

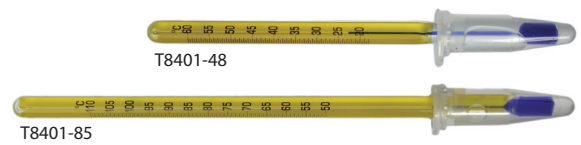
# Thermometers – Bottle

## Cardinal Health™ Bottle Chamber/Block Heater and Cooler Thermometers

### Dry Bath/Block Heater Thermometer Kits

High-precision, spirit-filled block heater thermometer kits are reliable, economical and easy to read. Each kit consists of a thermometer and a 1.5 mL microcentrifuge tube. The thermometer bulb is housed in the tube, which contains 1 mL of white mineral oil to insulate the bulb, ensuring accurate measurements. Temperature is marked in 0.5°C divisions. Each thermometer kit is individually serialized and includes NIST traceable certificate.

- **NIST Compliant® with certificate**
- Fluoropolymer coated thermometer for safety

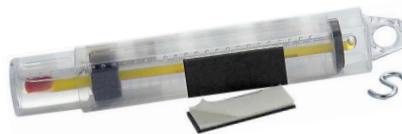


| Cat. No.   | Description                     | Range         | Divisions | Height | Bottle Media       | Qty. |
|--|---------------------------------|---------------|-----------|--------|--------------------|------|
| <b>Spirit filled thermometers (environmentally friendly)</b> |                                 |               |           |        |                    |      |
| <b>T8401-48</b>  | Block heater bottle thermometer | 18°C to 60°C  | 0.5°C     | 125 mm | mineral oil - 1 mL | 1/ea |
| <b>T8401-85</b>  | Block heater bottle thermometer | 50°C to 110°C | 0.5°C     | 160 mm | mineral oil - 1 mL | 1/ea |

### Therm-Chex Environmental Chamber Thermometer Kits

Therm-Chex thermometers are completely sealed in a fluoropolymer PTEF jacket and then enclosed with the buffered media bottle in a plastic sleeve to contain fluids should breakage occur, preventing product contamination. Therm-Chex thermometers can be strategically placed anywhere within fridge or freezer wall using supplied magnetic pair.

- **NIST Compliant® with certificate**
- Thermometers in 0.5°C and 1°C divisions
- Thermometer housed in protective sleeve
- Fluoropolymer coated thermometer for safety
- Red and blue spirit
- Bio-Safe glycol/water bottle medium
- Suspend or attach magnetically
- Monitor refrigerators, freezers, incubators



| Cat. No.         | Description                                 | Range         | Divisions | Bottle Media       | Qty. |
|------------------|---|---------------|-----------|--------------------|------|
| <b>CH2401BLS</b> | Freezer blue spirit-filled thermometer      | -30°C to 0°C  | 0.5°C     | glycol/water - 5mL | 1/ea |
| <b>CH240046</b>  | Freezer red spirit-filled thermometer       | -30°C to 0°C  | 0.5°C     | glycol/water - 5mL | 1/ea |
| <b>CH240045</b>  | Freezer-ultra-low spirit-filled thermometer | -90°C to 20°C | 1°C       | sand               | 1/ea |
| <b>CH240052</b>  | Refrigerator blue spirit-filled thermometer | -5°C to 15°C  | 0.5°C     | glycol/water - 5mL | 1/ea |
| <b>CH240043</b>  | Refrigerator red spirit-filled thermometer  | -5°C to 15°C  | 0.5°C     | glycol/water - 5mL | 1/ea |
| <b>CH240053</b>  | Incubator blue spirit-filled thermometer    | 18°C to 50°C  | 0.5°C     | glycol/water - 5mL | 1/ea |
| <b>CH24035</b>   | Incubator red spirit-filled thermometer     | 18°C to 50°C  | 0.5°C     | glycol/water - 5mL | 1/ea |

### Cooler Thermometer

- **N.I.S.T. traceable**

| Cat. No.         | Description        | Range         | Bottle Media       | Qty. |
|------------------|--------------------|---------------|--------------------|------|
| <b>CHER-0040</b> | Cooler thermometer | -10°C to 20°C | 50mL vial w/liquid | 1/ea |





# Thermometers – Laboratory Use

## Cardinal Health™ Thermometers for Laboratory Equipment Use



### Blood Bank Thermometer

Our blood bank thermometer is designed to be placed in a liquid solution for indicating the critical temperature in blood bank refrigerators. Total immersion thermometer meets NIH recommendation. Glass with a 6 in. etched stem.

- Critical 4°C to 6°C range indicated by etched arrows

#### Specifications:

Range ..... 5°C to 20°C

Divisions..... 1°C

| Cat. No.  | Description            | Qty. |
|-----------|------------------------|------|
| T8400-21A | Blood bank thermometer | 1/ea |



### Equipment Thermometers

Use these Celsius thermometers with a variety of laboratory instruments including block heaters, incubators, water baths, blood bank refrigerators, and ovens. Choose from either total or partial immersion. Red-spirit-filled thermometers have white-backed tubing for easy, accurate readings. Thermometers T8400-33A, -23A, -55A, -37A, -90A, -115A, -96A, -82A, -116A, -104A, -130A and -133A have stem enlargements to ensure proper immersion in water baths. Several models are fluoropolymer coated for safety. Choose from divisions of 0.5° and 1°C.

- **NIST Compliant®** for true temperature values
- Red-Spirit Celsius Thermometers
- Choose from polymer-coated or uncoated models in a variety of lengths

| Cat. No.  | Polymer Coated | Range          | Immersion | Length | Qty. |
|---|----------------|----------------|-----------|--------|------|
| <b>Red-spirit-filled thermometers for block heaters, 0.5°C divisions</b>              |                |                |           |        |      |
| T8400-28A   | No             | 0° to 110°C    | 35 mm     | 220 mm | 1/ea |
| T8400-17A   | Yes            | 0° to 110°C    | 35 mm     | 220 mm | 1/ea |
| T8400-14A   | No             | 25° to 57°C    | 35 mm     | 175 mm | 1/ea |
| T8400-8A  | Yes            | 25° to 57°C    | 35 mm     | 175 mm | 1/ea |
| <b>Red-spirit-filled thermometers for incubators and water baths, 0.5°C divisions</b> |                |                |           |        |      |
| T8400-33A   | No             | 20° to 100°C   | 76 mm     | 305 mm | 1/ea |
| T8400-23A   | Yes            | 20° to 100°C   | 76 mm     | 305 mm | 1/ea |
| T8400-94A   | No             | 25°, 37°, 56°C | 76 mm     | 240 mm | 1/ea |
| T8400-39A   | Yes            | 25°, 37°, 56°C | 76 mm     | 240 mm | 1/ea |
| T8400-56A   | No             | 0° to 80°C     | 100 mm    | 250 mm | 1/ea |
| T8400-26A   | Yes            | 0° to 80°C     | 100 mm    | 250 mm | 1/ea |
| T8400-55A   | No             | 0° to 50°C     | 150 mm    | 305 mm | 1/ea |
| T8400-37A   | Yes            | 0° to 50°C     | 150 mm    | 305 mm | 1/ea |
| T8400-90A   | No             | 0° to 70°C     | 150 mm    | 330 mm | 1/ea |
| T8400-115A  | Yes            | 0° to 70°C     | 150 mm    | 330 mm | 1/ea |
| <b>Red-spirit-filled thermometers for blood bank refrigerators, 1°C divisions</b>     |                |                |           |        |      |
| T8400-21A   | No             | -5° to +20°C   | Total     | 152 mm | 1/ea |
| T8400-19A   | Yes            | -5° to +20°C   | Total     | 152 mm | 1/ea |
| <b>Red-spirit-filled thermometers for ovens, 1°C divisions</b>                        |                |                |           |        |      |
| T8400-78A   | No             | 0° to 200°C    | 76 mm     | 280 mm | 1/ea |
| T8400-49A   | Yes            | 0° to 200°C    | 76 mm     | 280 mm | 1/ea |
| T8400-93A   | No             | 20° to 130°C   | Total     | 135 mm | 1/ea |



# Thermometers – Laboratory Use

## Cardinal Health™ Glass Thermometers



CH50CW3BLS



CH6371



CH230FW3S - CH230F3SSC



CH645



CH1050CWS



CH535S-1



CH260CW



CH300FWS

## Glass Thermometers

### • NIST Compliant®

| Cat. No.   | Description  | Range          | Divisions | Qty. |
|------------|--|----------------|-----------|------|
| CH10053    | 76mm immersion thermometer   | -1°C to 101°C  | 0.2°C     | 1/ea |
| CH50CW3BLS | 76mm immersion spirit-filled thermometer                                       | -35°C to 50°C  | 1°C       | 1/ea |
| CH6371     | Incubator thermometer - enlargement for correct immersion - mercury            | 0°C to 50°C    | 0.5°C     | 1/ea |
| CH230FW3S  | Organic thermometer  | 0°F to 230°F   | 2°F       | 1/ea |
| CH230F3SSC | Organic thermometer - safety coated  | 0°F to 230°F   | 2°F       | 1/ea |
| CH645      | Short-immersion thermometer - mercury - length 75mm - 12mm immersion           | 0°C to 50°C    | 1°C       | 1/ea |
| CH1050CWS  | Spirit-filled thermometer  | -10°C to 50°C  | 0.5°C     | 1/ea |
| CH535S-1   | Tissue flotation bath thermometer - lays flat on bottom of bath - easy to read | -20°C to 105°C | 1°C       | 1/ea |
| CH260CW    | Total-immersion spirit-filled thermometer                                      | -20°C to 260°C | 1°C       | 1/ea |
| CH300FWS   | Total-immersion spirit-filled thermometer                                      | 0°F to 300°F   | 2°F       | 1/ea |

### High-Precision Pocket Thermometers

These high-precision Celsius thermometers are calibrated against NIST traceable standards. Choose from nonhazardous red or blue spirit filled models. Spirit filled thermometers have white-backed tubing. Thermometers are individually serialized. All thermometers are 6 inches in length and have 1°C divisions. Each thermometer is supplied in an aluminum case with a pocket clip. Blue-spirit filled thermometers are available with open or closed case design. Thermometer refills are available separately.



- Total immersion models calibrated against NIST standards
- Refills available separately
- NIST Compliant® with certificate provided

| Cat. No.   | Range           | Qty. |
|--|-----------------|------|
| <b>Red-spirit filled pocket thermometers</b>                   |                 |      |
| T8400-52A  | -35°C to +50°C  | 1/ea |
| T8400-46A  | -15°C to +105°C | 1/ea |
| <b>Red-spirit filled thermometer refills</b>                   |                 |      |
| T8400-30A  | -35°C to +50°C  | 1/ea |
| T8400-53A  | -15°C to +105°C | 1/ea |
| <b>Blue-spirit filled pocket thermometers with closed case</b> |                 |      |
| T8400-164A   | -15°C to +105°C | 1/ea |
| T8400-167A   | -5°C to +50°C   | 1/ea |
| <b>Blue-spirit filled pocket thermometers with open case</b>   |                 |      |
| T8400-244A   | -15°C to +105°C | 1/ea |
| <b>Blue-spirit filled thermometer refills</b>                  |                 |      |
| T8400-206A   | -15°C to +105°C | 1/ea |
| T8400-160A   | -5°C to +50°C   | 1/ea |



### High-Precision Pocket Thermometers with Clear Plastic Case

These high-precision Celsius thermometers are calibrated against NIST traceable standards. Choose from nonhazardous red or blue spirit filled models. Spirit-filled thermometers have white-backed tubing. Thermometers are individually serialized. All thermometers are 6 inches in length and have 1°C divisions. Each thermometer is supplied in an aluminum case with a pocket clip. Blue-spirit filled thermometers are available with open or closed case design. Thermometer refills are available separately.

- Total immersion models calibrated against NIST standards
- Thermometers can be used in or out of the see-through case

| Cat. No.                                     | Range           | Divisions | Qty. |
|--|-----------------|-----------|------|
| <b>Red-spirit filled pocket thermometers</b> |                 |           |      |
| T8400-22A                                    | -35°C to +50°C  | 1°C       | 1/ea |
| T8400-73A                                    | +30°F to 120°F  | 1°F       | 1/ea |
| T8400-45A                                    | -15°C to +105°C | 1°C       | 1/ea |

# Thermometers – Blue Spirit

## Cardinal Health™ Precision Blue-Spirit Filled Thermometers

### Thermco Precision individually serialized blue-spirit filled thermometers

Meet ANSI/SAMA and NIST standards, individually serialized filled with a blue nonhazardous liquid dye.



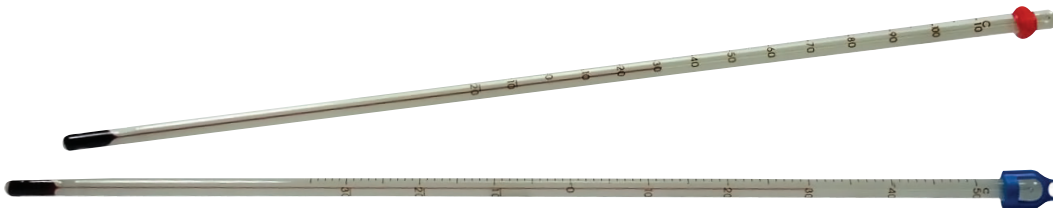
### Precision Blue-Spirit Filled Laboratory Thermometers

- **NIST Compliant® with certificate**
- Available in Celsius and Fahrenheit scales; some Celsius models have fractional degrees
- Total or partial immersion
- Permanently fused markings on white backed tubing

| Cat. No.   | Range           | Divisions | Length | Qty. |
|--|-----------------|-----------|--------|------|
| <b>Partial Immersion (76 mm)</b>                         |                 |           |        |      |
| <b>T8400-40A</b>   | -20°C to +110°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-100A</b>  | -20°C to +150°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-66A</b>   | -35°C to +50°C  | 1°C       | 305 mm | 1/ea |
| <b>Partial Immersion (76mm), with Fractional Degrees</b> |                 |           |        |      |
| <b>T8400-119A</b>  | -10°C to +50°C  | 0.5°C     | 305 mm | 1/ea |
| <b>Total Immersion</b>                                   |                 |           |        |      |
| <b>T8400-197A</b>  | -10°C to +210°C | 1°C       | 405 mm | 1/ea |
| <b>T8400-77A</b>   | -20°C to +110°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-154A</b>  | -20°C to +150°C | 1°C       | 305 mm | 1/ea |

### Thermco Precision individually serialized red-spirit filled thermometers

Meet ANSI/SAMA and NIST standards, individually serialized filled with a red nonhazardous liquid dye.



### Precision Red-Spirit Filled Laboratory Thermometers

- Partial and total immersion models
- Permanently fused markings on white backed tubing

| Cat. No.                         | Range          | Divisions | Length | Qty. |
|----------------------------------|----------------|-----------|--------|------|
| <b>Partial Immersion (76 mm)</b> |                |           |        |      |
| <b>T8400-128A</b>                | 30°F to +120°F | 1°C       | 305 mm | 1/ea |
| <b>Total Immersion</b>           |                |           |        |      |
| <b>T8400-155A</b>                | 20°C to +110°C | 1°C       | 305 mm | 1/ea |

### Low Temperature Precision Red-Spirit Filled Laboratory Thermometers

- Total or partial immersion
- Permanently fused markings on white backed tubing

| Cat. No.                         | Range          | Divisions | Length | Qty. |
|----------------------------------|----------------|-----------|--------|------|
| <b>Partial Immersion (76 mm)</b> |                |           |        |      |
| <b>T8400-79A</b>                 | 50°C to +50°C  | 1°C       | 305 mm | 1/ea |
| <b>T8400-75A</b>                 | 100°C to +50°C | 1°C       | 305 mm | 1/ea |
| <b>Total Immersion</b>           |                |           |        |      |
| <b>T8400-36A</b>                 | 50°C to +50°C  | 1°C       | 305 mm | 1/ea |
| <b>T8400-29A</b>                 | 100°C to +50°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-51A</b>                 | 200°C to +30°C | 1°C       | 305 mm | 1/ea |

### Precision Red-Spirit Filled Safety Thermometers

- Total or partial immersion
- Permanently fused markings on white backed tubing
- Fluoropolymer coated to protect against shock and help contain liquid and glass if broken

| Cat. No.                        | Range          | Divisions | Length | Qty. |
|---------------------------------|----------------|-----------|--------|------|
| <b>Partial Immersion (76mm)</b> |                |           |        |      |
| <b>T8400-98A</b>                | 0°F to 230°F   | 2°F       | 305 mm | 1/ea |
| <b>T8400-247A</b>               | 10°C to +200°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-32A</b>                | 20°C to +110°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-50A</b>                | 50°C to +50°C  | 1°C       | 305 mm | 1/ea |
| <b>T8400-61A</b>                | 100°C to +50°C | 1°C       | 305 mm | 1/ea |
| <b>Total Immersion</b>          |                |           |        |      |
| <b>T8400-108A</b>               | 20°C to +110°C | 1°C       | 305 mm | 1/ea |
| <b>T8400-76A</b>                | 50°C to +50°C  | 1°C       | 305 mm | 1/ea |
| <b>T8400-62A</b>                | 100°C to +50°C | 1°C       | 305 mm | 1/ea |

# Data Loggers

## Cardinal Health™ USB Temperature and Humidity Data Loggers

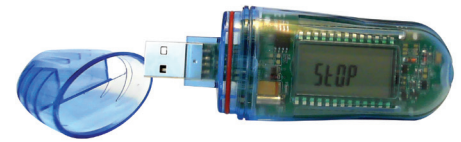
### MICRO-THERM USB Data Loggers

Data loggers are small, rugged, waterproof and dust proof devices with LCD display and built-in USB 2.0 connector for monitoring and recording temperature and/or relative humidity (RH). Manufactured to stringent standards, the MICROTHERM loggers are only 4.3 in. long and 1 in. thick. The data loggers features a three digit LCD display, direct USB connection, wide temperature range, high accuracy and large 32K sampling memory.

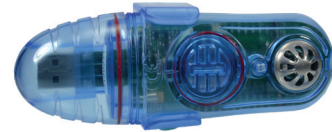
Features include analysis functionality such as statistics maximum, minimum and average, enabling a quick glance summary of the environment and historical analysis. Data can be displayed on the small numeric LCD screen or downloaded to PC via the USB 2.0 connector. To further ensure easy global usage, the battery is easily replaceable since it is a standard model used worldwide.

Typical applications for this product include food, pharmaceutical, medical, storage and transportation industries.

- **NIST Compliant® with certificate**
- High functionality low cost multi-trip logger for an unbroken cold chain
- USB 2.0 interface for fast track communication and firmware updates
- Unique Boomerang feature that automatically creates and emails PDF data report when logger is connected to PC
- Rapid data download to Graph, Table view and Excel spreadsheet
- Built-in LCD with decimal point readings and LED alarm indicator
- 2-year battery life, using Nano Watt Technology
- Reed switch using magnet key to mark time stamps, activate and stop logging
- Built-in real-time clock and calendar
- Dust and water proof
- Cradle wall mounting for fixed monitoring
- Includes Micro-Therm Lite Software and Manual



CHD00408, Temperature logger



Back of CHD00408RH, Temperature and RH logger

| Cat. No.             | CHD00408                                 | CHD00408RH                                    |
|----------------------|--|---|
| Temperature range    | -40°C to 80°C (-40°F to 176°F)           | -40°C to 80°C (-40°F to 176°F) / 5% to 95% RH |
| Temperature accuracy | 0.3°C                                    | 0.3°C / 2% RH                                 |
| Resolution (16-bit)  | 0.1°C display / 0.06°C software          | 0.04°C display / 0.06°C software / 0.5% RH    |
| Data capacity        | 32,000 samples                           | 32,000 samples                                |
| Sampling rate        | 1 per second to 1 every 2 hours          | 1 per second to 1 every 18 hours              |
| Boomerang feature    | No                                       | Yes   |
| Alarm                | None                                     | LED indicator                                 |
| Battery life         | ~ 1.5 years                              | ~ 2 years                                     |
| Dimensions with cap  | 4.3 x 1.5 x 1 in. (11 x 3.9 x 2.6 cm)    | 4.3 x 1.5 x 1.2 in. (11 x 3.9 x 3 cm)         |
| Compliance           | IP68, EN12830, CE                        | IP54, EN12830, CE                             |
| Wall mount           | No                                       | Yes   |
| Output               | USB 2.0 interface                        |   |
| Weight               | 1.6 oz. (45.5 grams)                     |   |
| Display              | 3-digit 7-segment LCD with decimal point |   |
| Indicator            | Low battery warning                      |   |
| Battery              | Replaceable 3 V lithium battery - CR2032 |   |
| Software             | Micro-Therm Lite for Windows (included)  |   |

**LCD display:** When exposed to temperatures below 5°F (-15°C) Liquid Crystal Displays (LCD) lose contrast and their refresh rate slows. This may result in illegible readings shown on the display. The decline of the LCD function does not affect the sensor recording temperature and the correct values are captured. Digital Contact/Photo Tachometer - Touch





# Thermometers – Digital Probe/Stem

## Cardinal Health™ Digital Probe and Stem Thermometers

### Large Digit Internal-External Min/Max Digital Thermometer

- **NIST Compliant® with certificate**
- Large dual display
- Min/max temperature memory recall
- External sensor cable length 10 ft.
- °C/°F switchable
- Wall mounting or flip-out table stand
- AAA 1.5 V battery included



#### Specifications:

Range ..... Internal -10°C to 60°C (14°F to 140°F)  
 External -50°C to 70°C (-58°F to 158°F)

Resolution ..... 0.1° C/F

Accuracy ..... ±1°C, 0°C to 50°C (±1.8°F, 32°F to 122°F)  
 ±2°C, -50°C to 0°C (±3.6°F, -58°F to 32°F)

| Cat. No. | Description                               | Qty. |
|----------|---|------|
| CH4126   | Large digit internal-external thermometer | 1/ea |

### Mini Digital Thermometer

- **NIST Compliant® with certificate**
- 5 in. stainless steel probe with protective plastic cap
- One second normal temperature sensing time
- Min/max temperature memory recall
- One hour auto shut off
- °C/°F switchable
- Data hold/test function selectable
- Low battery indicator
- 1.5 V, G13/A76 battery included



#### Specifications:

Range ..... -50°C to 150°C (-58°F to 302°F)

Resolution .... 0.1°C, -19.9°C to 199.9°C,  
 otherwise 1°

Accuracy ..... ±1°C, -30°C to 150°C (±1.8°F, -22°F to 302°F)

| Cat. No. | Description              | Qty. |
|----------|--------------------------|------|
| CH-4146  | Mini digital thermometer | 1/ea |

### Low Temp Digital Thermometer

Thermometer accurately monitors temperatures in ultra-low freezers, water baths, incubators and refrigerators.

- **NIST Compliant® with certificate**
- Fast-response 100 ohm platinum probe
- Probe 0.16 x 3 in. long, overall length 5 in.
- Micro-cable permits freezer doors to close (9.6 ft. of cable)
- Triple purpose probe liquids -air/gas-frozen material
- Magnets and velcro for attachment
- 9 V battery and carrying case included

#### Specifications:

Range ..... -99.9°C to 199.9°C

Resolution ..... 0.1°C

Accuracy ..... ±2°C

Dimensions ..... 2.75 x 4.25 x 0.75 in.

Weight ..... 4.25 oz.



| Cat. No. | Description          | Qty. |
|----------|----------------------|------|
| CH2971-6 | Low temp thermometer | 1/ea |

# Thermometers – Digital Probe/Stem

## Cardinal Health™ Digital Probe and Stem Thermometers

### Minimum-Maximum Alarm Digital Thermometer

- **NIST Compliant® with certificate**
- Triple display simultaneously shows temperature, alarm limit, timer/clock
- Programmable high temperature alarm limit
- Magnets on back for vertical mounting
- Count down-up timer max 24 hours
- 12/24 hour format clock display
- Adjustable display angle
- °C/°F switchable
- Curved stainless steel probe 0.25 x 8.5 in. long.
- Two AAA 1.5 V batteries included



**Specifications:**

Range ..... 0°C to 300°C (32°F to 582°F)

Dimensions ..... LCD display: 1.5 x 2 in. - visible 9 ft. away, product: 75 x 128 x 21 mm (W x H x D)

| Cat. No. | Description                       | Qty. |
|----------|-----------------------------------|------|
| CH2941-2 | Minimum-maximum alarm thermometer | 1/ea |



### Monitoring/Control Thermometer

- **NIST Compliant® with certificate**
- Minimum/maximum - hold functions
- Programmable high/low buzzer and flashing icon alarm
- Dust and waterproof IP65
- Magnet sensor holder and bench stand
- °C/°F switchable
- Low battery indicator
- Probe and 3 meter cable
- CR2032 battery included

**Specifications:**

Range ..... -40°C to 70°C (-40°F to 158°F)

Resolution ..... 0.1°

Accuracy ..... ±0.5°C -25°C to 25°C otherwise ±1°C

Dimensions ..... 86 x 57 x 30 mm (W x H x D)

| Cat. No. | Description                    | Qty. |
|----------|--------------------------------|------|
| CH4047   | Monitoring/control thermometer | 1/ea |



### Pocket Digital Thermometer

- **NIST Compliant® with certificate**
- One second normal temperature sensing time
- Min/max temperature memory recall
- °C/°F switchable
- Data hold/test function selectable
- Low battery indicator
- One hour auto shut off
- 4 in. stainless steel sensor probe
- Protective plastic sleeve with clip
- Rubber coated housing
- Battery included

**Specifications:**

Range ..... -50°C to 300°C (-58°F to 572°F)

Resolution ..... 0.1°C, -19.9°C to 199.9°C, otherwise 1°

Accuracy ..... ±1°C (1.8°F)

| Cat. No. | Description                | Qty. |
|----------|----------------------------|------|
| CH-4050  | Pocket digital thermometer | 1/ea |

# Thermometers – Digital Probe/Stem

## Cardinal Health™ Digital Probe and Stem Thermometers



### Long-Stem and Ultra Long-Stem Digital Thermometer

#### CH2960-9

- NIST Compliant® with certificate

- 12 in. probe

#### CH2960-10

- NIST Compliant® with certificate

- 12 in. probe
- Calibrated to 0.5°C

#### Specifications:

Range ..... -50°C to 300°C (-58°F to 572°F)

| Cat. No.  | Description                 | Qty. |
|-----------|-----------------------------|------|
| CH2960-9  | Long-stem thermometer       | 1/ea |
| CH2960-10 | Ultra long-stem thermometer | 1/ea |



### Waterproof and Ultra Waterproof Digital Thermometer

#### CH2960-15

- NIST Compliant® with certificate

- 5 in. probe

#### CH2960-16

- NIST Compliant® with certificate

- 5 in. probe
- Calibrated to 0.5°

#### Specifications:

Range ..... -50°C to 300°C (-58°F to 572°F)

| Cat. No.  | Description                  | Qty. |
|-----------|------------------------------|------|
| CH2960-15 | Waterproof thermometer       | 1/ea |
| CH2960-16 | Ultra waterproof thermometer | 1/ea |

### Wide Range and Ultra Wide Range Long-Stem Digital Thermometer

- NIST Compliant® with certificate

- °C/°F switchable
- 8 in. stainless steel stem with probe cover

#### Specifications:

#### CH2939-1

Range ..... -50°C to +300°C (-58°F to +572°F)  
 Resolution ..... 0.1°C, -20°C to 200°C, otherwise 1°  
 Accuracy ..... ±1°C between -30°C to 150°C

#### CH3018SUP

Range ..... -50°C to 150°C (-58°F to 302°F)  
 Resolution ..... 0.1°  
 Accuracy ..... ±1°C between -20°C to 120°C "Supra" model ±0.2°C and 0.5°C @ test points



| Cat. No.  | Description                            | Qty. |
|-----------|--|------|
| CH2939-1  | Wide range long-stem thermometer       | 1/ea |
| CH3018SUP | Ultra wide range long-stem thermometer | 1/ea |

# Thermometers – Digital Precision Probe

## Cardinal Health™ Digital Precision Single Probe Thermometers

### Digital “K” Single Probe Thermocouple Thermometers

- **NIST Compliant® with certificate**
- Ten memory storage
- Min/max temperature memory recall
- High-low audible alarm function
- Count up timer (set from 1 min. to 23 hr. 59 min.)
- Optional 1 hour shut off
- Low battery indicator
- Back light
- PVC boot for protection
- Flip-out stand
- Immersion probe included
- Three AAA batteries, dust protector, water resistant case included

#### Specifications:

Range ..... –200°C to 1370°C (–328°F to 2498°F) 2°C, –200°C to 50°C (4°F, –328°F to –58°F)  
 Accuracy ..... 1°C/2°F –50° to 250°, 2°C/4°F –200° to –51°, 251° to –500°, 3°C/6°F 50° to 740°  
 Resolution ..... 0.1° for the whole range  
 Differential Measurement . . (ΔT = T1-T2), ACC960K2 only

| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH2960-6 | Digital “K” thermocouple thermometer with immersion probe | 1/ea |



### Precision - Single Probe Pt100 Thermometers

The handheld Pt100 thermometers are high precision, metrology grade, NIST Compliant® instruments. These high accuracy thermometers are used when temperature measurements are critical and/or when online documentation is required. Optional DE-Graph windows software for graphic and tabular documentation.

- **NIST Compliant® - DKD/DakKS**
- Includes Pt100 platinum probe
- USB interface
- High measuring accuracy
- Integrated calibration function for simple compensation of sensor tolerances
- Two-line LCD, simultaneous display of two measured values
- Physical one-point, two-point or three-point calibration function
- Measuring channels are freely assignable
- Recording of minimum, maximum, hold and average values
- Integrated sensor holder for one hand operation
- 9 V battery

#### Specifications:

Measuring Range ..... –200°C to 850°C  
 Resolution ..... 0.01°C (–200°C to 200°C) otherwise 0.1°C respectively 0.1 %  
 Accuracy ..... ±0.03°C from –50°C to 199.99°C, ±0.05°C from –200°C to 200°C otherwise 0.05 % of reading  
 Connectors ..... DIN 8-pole  
 Probe Type ..... Temp and humidity immersion  
 Measuring Range ..... 30°C to 80°C, 0 to 100% RH  
 T90 Response Time. .... 8 seconds  
 Working Temperature ..... 0°C to 40°C (32°F to 104°F)  
 Dimensions ..... 8 x 3.5 x 1.5 in. (L x W x H)  
 Battery life ..... Approx. 20 hr.

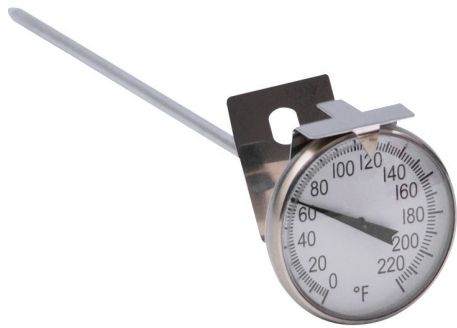
| Cat. No. | Description   | Qty. |
|----------|---|------|
| CHD650PP | Single Probe Pt100 high precision digital thermometer | 1/ea |





# Thermometers – Bi-Metal

## Cardinal Health™ Bi-Metal Dial Thermometers



### Blanket Warmer Cabinet Thermometer

The precision bi-metal dial thermometer monitors temperatures in hospital blanket warming cabinets. It has an 8 in. stem and also features a recalibration nut to ensure accuracy.

- Fahrenheit scale
- 8 in. long stem

#### Specifications:

Temperature range. . . . . 0° to 220°F

Divisions. . . . . 2°F

| Cat. No.          | Description                        | Qty. |
|-------------------|------------------------------------|------|
| <b>T8400-221A</b> | Blanket warmer cabinet thermometer | 1/ea |



### 1 in. Dial Pocket Thermometers

These compact and durable dial pocket thermometers have a 5 in. stainless steel pointed stem and a polycarbonate lens. They are supplied with a plastic cover and pocket clip. An adjustment nut allows the thermometer to be easily calibrated. Choose from either Celsius or Fahrenheit models. Both are accurate to ±1% of full scale and must be immersed up to approximately 2 in. (50.8 mm).

| Cat. No.                  | Description         | Qty. |
|---------------------------|---------------------|------|
| <b>With 1°C divisions</b> |                     |      |
| <b>T8400-68A</b>          | -40° to 70°C range  | 1/ea |
| <b>T8400-238A</b>         | -10° to 110°C range | 1/ea |
| <b>T8400-184A</b>         | 0° to 150°C range   | 1/ea |
| <b>With 2°F divisions</b> |                     |      |
| <b>T8400-163A</b>         | -40° to 120°F range | 1/ea |
| <b>T8400-95A</b>          | 0° to 220°F range   | 1/ea |

### 1¾ in. and 2 in. Dial Laboratory Thermometers

These stainless steel dial thermometers feature a polycarbonate lens and an 8 in. stem length. An external calibration nut allows accurate calibration to ±1% of full scale. Thermometer T8400-191A has dual-scale divisions. All thermometers include beaker clip.

- Stainless steel case and 8 in. stem
- Choose from Fahrenheit or Celsius models
- Immersion depth of approximately 2 in. (50.8 mm)



T8400-198A

| Cat. No.                        | Description                       | Divisions | Qty. |
|---------------------------------|-----------------------------------|-----------|------|
| <b>1¾ in. dial thermometers</b> |                                   |           |      |
| <b>T8400-241A</b>               | -10°C to 110°C range              | 1°C       | 1/ea |
| <b>T8400-157A</b>               | -50°C to 100°C range              | 1°C       | 1/ea |
| <b>T8400-142A</b>               | 0°C to 150°C range                | 1°C       | 1/ea |
| <b>T8400-198A</b>               | 0°F to 220°F range                | 2°F       | 1/ea |
| <b>T8400-186A</b>               | 50°F to 300°F range               | 2°F       | 1/ea |
| <b>2 in. dial thermometers</b>  |                                   |           |      |
| <b>T8400-191A</b>               | -10°C to 100°C/0°F to 220°F range | 1°C       | 1/ea |
| <b>T8400-242A</b>               | -50°C to 100°C range              | 1°C/2°F   | 1/ea |
| <b>T8400-169A</b>               | 0°C to 50°C range                 | 1°C       | 1/ea |

# Thermometers – Infrared

## Cardinal Health™ Pocket Infrared Thermometers

### Flash III Infrared Thermometer with Laser Spotting

- °C/°F switchable
- Min/max memory recall
- Automatic hold
- Lock-mode for continued measurements with laser
- Adjustable emissivity
- Two CR2032 cell batteries included

#### Specifications:

|                           |                          |
|---------------------------|--------------------------|
| Range .....               | -55°C to 250°C           |
| Accuracy .....            | ±2% or ±2°C              |
| Repeatability .....       | 1% or ±1°C               |
| Display resolution.....   | 0.1°C                    |
| Response time .....       | 0.05 second              |
| Working temperature ..... | 0°C to 50°C              |
| Storage temperature.....  | -20°C to 50°C            |
| Emissivity.....           | 0.01 to 1.00 adjustable  |
| Optical Resolution .....  | 6:1                      |
| Dimensions/weight .....   | 104 x 60 x 21.5 mm/110 g |



| Cat. No.  | Description                    | Qty. |
|-----------|--------------------------------|------|
| CH2971-10 | Flash III infrared thermometer | 1/ea |



### Flash-Pen Infrared Thermometer

Rely on this IR thermometer for quick and easy surface temperature measurements. Ideal for HVAC, plant maintenance, technicians, electricians, mechanics, health care workers and many others.

- °C/°F switchable
- Pocket with clip
- Made of durable metal
- Digital readout
- Two LR 44 button cell batteries included

#### Specifications:

|                     |                                 |
|---------------------|---------------------------------|
| Range .....         | -33°C to 220°C (-27°F to 428°F) |
| Accuracy .....      | ±2% or ± 2°C                    |
| Response time ..... | Approx. 1 second                |
| Dimensions.....     | 87 x 18 x 16 mm                 |

| Cat. No. | Description                    | Qty. |
|----------|--------------------------------|------|
| CH2971-9 | Flash-pen infrared thermometer | 1/ea |

### Mini-Flash Infrared Thermometer

Mini-Flash Infrared thermometer is very simple to use. To measure a temperature point unit at object, pull the trigger and read the measuring value from the display. Used for easy and quick measurements on surfaces.

- °C/°F switchable
- Min/max memory recall
- Automatic hold
- Lock-mode for continued measurements
- CR2032 cell battery included

#### Specifications:

|                           |  |
|---------------------------|--|
| Range .....               | -33°C to 220°C (-27°F to 428°F)          |
| Accuracy .....            | 0°C to 50°C ±1.5°C, otherwise 2% or ±2°C |
| Repeatability .....       | 1% or ±1°C                               |
| Display resolution.....   | 0.1°C                                    |
| Response time .....       | 0.5 second                               |
| Working temperature ....  | 0°C to 50°C                              |
| Storage temperature.....  | -20°C to 50°C                            |
| Emissivity.....           | 0.95 fix                                 |
| Distance: Spot size ..... | 1.3:1                                    |
| Dimensions.....           | 68 x 37 x 18 mm                          |

| Cat. No.  | Description                     | Qty. |
|-----------|---------------------------------|------|
| CH2960-12 | Mini-flash infrared thermometer | 1/ea |



All thermometers on this page are temperature monitoring products not intended for human use.

# Thermometers – Infrared

## Cardinal Health™ Handheld Infrared Thermometers

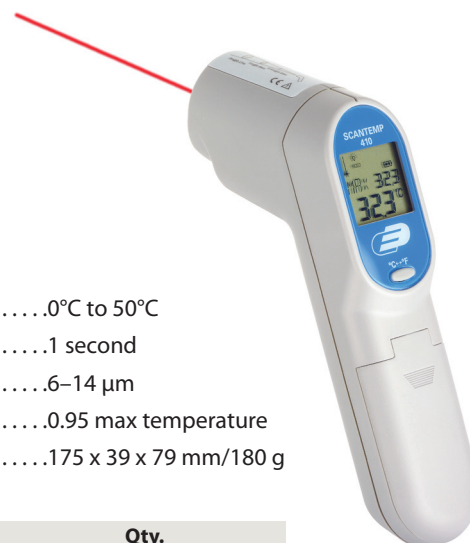
### ScanTemp 410 Handheld Infrared Thermometer

- Applications: HVAC, electrical maintenance, detect process maintenance problems
- Display hold
- °C/°F switchable
- Backlight display
- Pouch and two AAA 1.5 V batteries Included

**Specifications:**

Range .....-33°C to 500°C  
 Accuracy .....±2% or 2°C whichever is greater  
 Repeatability .....±1% of reading or ±1°C,  
 whichever is greater  
 Optical Resolution .....11:1  
 Display Resolution .....0.1°C (4 digit LCD)

Working Temperature ....0°C to 50°C  
 Response time .....1 second  
 Spectral Response .....6–14 µm  
 Emissivity.....0.95 max temperature  
 Dimensions/weight .....175 x 39 x 79 mm/180 g



| Cat. No.  | Description  | Qty. |
|-----------|--|------|
| CH2960-11 | ScanTemp 410 infrared thermometer - min/max readings | 1/ea |
| CH2960-14 | ScanTemp 410 infrared thermometer                    | 1/ea |

### ScanTemp 440 Handheld Infrared Thermometer

- **NIST Compliant® with certificate**
- Type K Probe Input (use any standard K probe)
- Simultaneous display of max/min and alarm
- Laser sighting
- °C/°F switchable
- Backlight display
- Adjustable emissivity
- Functions: hold, min/max, dif and avg
- Alarm function, high/low, audible and visual
- Lock mode for continuous measurements
- Pouch and two AAA 1.5V batteries included

**Specifications:**

Range laser .....-33°C to 500°C  
 Thermocouple input .....-64°C to 1400°C  
 Accuracy laser .....±2% or 2°C whichever is greater  
 Thermocouple input .....±1% or 1°C whichever is greater  
 Optical resolution..... 11:1  
 Display resolution..... 0.1°C (above 200°C 1°C)

Working temperature .... 0°C to 50°C  
 Response time ..... 1 second  
 Spectral response..... 6–14 µm  
 Emissivity..... Adjustable 0.10 to 1.00  
 Dimensions/weight ..... 175 x 39 x 79 mm/180 g



| Cat. No.  | Description                       | Qty. |
|-----------|-----------------------------------|------|
| CH2971-11 | ScanTemp 440 infrared thermometer | 1/ea |

**All thermometers on this page are temperature monitoring products not intended for human use.**

### ScanTemp - 485 Professional Handheld Infrared

ScanTemp 485 infrared thermometer is high precision due to a special glass lens with double-laser sighting. It shows the exact spot size area and an optical resolution of 20:1. This allows technicians to carry out accurate non-contact surface measurements for electrical, mechanical maintenance, HVAC checks, automotive testing and other applications that temperature is a factor.

- **NIST Compliant® with certificate**
- Precision glass optics for accurate non-contact temperature measurement
- Laser sighting with narrow beam aiming for accurate readings
- °C/°F switchable
- Backlight display
- Functions: hold, min/max, Ems and scan
- Alarm function, high/low, audible and visual
- Pouch and 9V alkaline battery included



**Specifications:**

|                                    |                                     |                             |  |
|------------------------------------|-------------------------------------|-----------------------------|--|
| Range . . . . .                    | -50°C to 800°C<br>(-58°F to 1472°F) | Spectral response . . . . . | 8-14 µm  |
| Accuracy . . . . .                 | ±2% or ±2°C                         | Emissivity . . . . .        | 0.10 - 1.00  |
| Optical resolution (D:S) . . . . . | 20:1, (0.8340277778)                | Spectral response . . . . . | 6-14 µm  |
| Display resolution . . . . .       | 0.1°C (0.1°F)                       | Laser . . . . .             | <1mW laser class IIa   |
| Response time (95%) . . . . .      | Approx. 0.2 second                  | Battery life . . . . .      | 20 hours with 50% laser and backlight;<br>40 hours laser and backlight off |
| Ambient temperature . . . . .      | 0°C to 50°C                         | Dimensions/weight . . . . . | 146 x 104 x 43 mm/450 g  |

| Cat. No. | Description                       | Qty. |
|----------|-----------------------------------|------|
| CH-4375  | ScanTemp 485 infrared thermometer | 1/ea |

### High-Temperature Plus Infrared Thermometer

**Specifications:**

|                         |                     |
|-------------------------|---------------------|
| Range . . . . .         | -50°C to 1000°C/°F) |
| Accuracy . . . . .      | ±2%                 |
| Response time . . . . . | 0.2 seconds         |

| Cat. No.  | Description                                | Qty. |
|-----------|--|------|
| CH2971-13 | High-temperature plus infrared thermometer | 1/ea |



**All thermometers on this page are temperature monitoring products not intended for human use.**

# Tachometers

## Cardinal Health™ Contact and Touchless Tachometers

### Digital Contact/Photo Tachometer - Touch

The Contact/Photo Tachometer measures the rpm safely and accurately without attachment to the object. The five-digit LCD display is easily read.

A NIST Compliant® certificate is provided from a ISO 17025 ilac accredited laboratory.

- Memory: last value, min. and max. values
- Test range select: automatic
- Included with unit: carry case, reflective tape, rpm adapter cone and rpm adapter funnel
- Four AA 1.5 V batteries included

#### Specifications:

Range ..... Contact: 2.5 to 19,999 rpm,  
Photo: 2.5 to 99,999 rpm  
Resolution ..... ±0.1 rpm (2.5 to 999.9 rpm)  
±1 rpm (above 1000 rpm)  
Accuracy ..... ±0.05% +1 rpm  
Sample Time ..... 1 second  
Detecting Distance.... 50 to 250 mm (2 to 10 in.)



| Cat. No. | Description                              | Qty. |
|----------|--|------|
| CH3316-7 | Digital contact/photo tachometer - touch | 1/ea |

### Digital Photo (Laser) Tachometer - Touchless

Laser type/touchless operation, although complex and advanced, it is easy to use and operate. A five-digit LCD display shows the readings. The tachometer uses a precision quartz crystal for an accurate time base.

A NIST Compliant® certificate is provided from a ISO 17025 ilac accredited laboratory. The certificate shows traceability to a NIST standard.

- Memory: last value, min. and max. values
- Test range select: automatic
- Included with unit: carry case and reflective tape
- Four AA 1.5 V batteries included

#### Specifications:

Range ..... 2.3 to 9,999 rpm  
Resolution ..... ±0.1 rpm (2.5 to 999.9 rpm)  
±1 rpm (above 1000 rpm)  
Accuracy ..... ±0.05% +1 rpm  
Sample Time ..... 1 second  
Detecting Distance.... 50 to 250 mm (2 to 10 in.)



| Cat. No. | Description                                  | Qty. |
|----------|--|------|
| CH3316-8 | Digital photo (laser) tachometer - touchless | 1/ea |

### Multifunctional Photo, Contact and Surface Tachometer

This instrument combines the measurements in rpm of many lab instruments such as centrifuges, motors, and stirrers. The measurement is made in 1 to 3 seconds and the memory feature allows recalling the minimum, maximum and the last reading. One end of the tachometer provides contact readings with a rotating spindle; the other end makes touchless readings with a light beam utilizing self adhesive tabs. The CH3316-6 utilizes a precision quartz crystal for an accurate time base.

A NIST Compliant® certificate is provided from a ISO 17025 ilac accredited laboratory. The certificate shows traceability to a NIST standard.

- Memory: last value, minimum and maximum values
- Test range select: automatic
- Four AA 1.5 V batteries included
- Included with unit: carry case, reflective tape, rpm adapter cone, rpm adapter funnel and surface speed test wheel

#### Specifications:

Contact range ..... 2.5 to 19,999 rpm  
Photo range ..... 2.5 to 99,999 rpm  
Surface range ..... 0.05 to 1,999.9 meter/min.  
and 0.2 to 6,560 ft./min.  
Resolution ..... 0.1 rpm (2.5 to 999.9 rpm) 1 rpm above  
Accuracy ..... Tach: 0.05% + 1 rpm,  
surface speed: 0.05% +  
0.03 meter/min  
Sample time ..... 1 second  
Detecting distance.... 50 to 250 mm (2 to 10 in.)



| Cat. No. | Description   | Qty. |
|----------|---|------|
| CH3316-6 | Multifunctional photo, contact and surface tachometer | 1/ea |





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