

Comark C30 Series Handheld Thermometers

Models C30 and C32

Operator Manual

Meets the requirements of
DIN EN 13485:2002

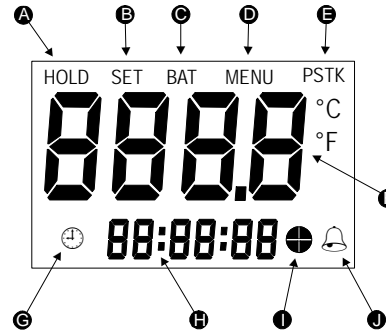
“Thermometers for measuring the air and product temperature for the transport, storage and distribution of chilled, frozen, deep-frozen/quick frozen food and ice-cream.”

Description

The C30 series handheld thermometers represent a leap forward in case design and specification combining a number of innovative features, with a significant advance in performance.

C30 series thermometers all have a high strength, polycarbonate case with rubber over moulding. This offers a very high level of strength, durability and protection against dust and water ingress. The C30 range is certified to meet IP65. Not all models include all features. For the full range of features please refer to Appendix 1, Page 9.

Overview of Display Symbols



- A – Indicates that HOLD has been selected.
- B – Setting menu item to ON/OFF
- C – Indicates Low Battery.
- D – The Set Up menu is active.
- E – Indicates probe type.
- F – Main Display for Temperature
- G – Clock Indicator.
- H – Display for time and countdown timer.
- I – Indicates countdown active.
- J – Alarm indication

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Connecting Probes to the Thermometers

C30 and C32 have Lumberg socket for the probe connection, Comark offers a wide choice of suitable probes.

Switching On and Off

Display Test/Mode

The 'ON/OFF' button on the keypad is used to switch on the thermometer. After a short pause the display will show the model of the instrument and will then revert to normal temperature display. The current time is also permanently displayed on the LCD (C32 Only).

Data Hold (C32 Only)

If the 'H' button is pressed at any time during normal temperature mode, the current temperature will be held on the display. To release press 'H'.

Countdown Timer (C32 Only)

This function is activated from the Set Up Menu – see section below, and can be calibrated in seconds/minutes or hours. Pressing the countdown timer button will start this function. Pressing the button again during the countdown period will stop the count. The instrument will beep for 30 seconds at the end of a countdown period to indicate to the user that it has been completed.

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Auto Switch Off/Power Saving Mode

C30 thermometers are factory set to 3 minutes auto-switch off feature. C32 thermometer also has a selectable auto-switch off feature. Please refer to Set Up Menu for instructions on changing this setting.

Set Up Menu

C32 has a hidden menu that allows change of settings within the instrument. See Appendix 1 on Page 8 – C30 Series Model Range Options, to see which options are available on each model.

To enter the set up menu, first ensure the instrument is off, then press the Count Down button and keep this held down while pressing the On button to switch the instrument on. After the thermometer has completed self-checks, it will enter the menu.

N.B. After each menu item use the ON/OFF button to save and move to the next menu item.

Clock selection is the first item in the menu:

Clock – the display will show 'CLOC'

Use the countdown timer button and the hold button to adjust the clock time up or down.

Countdown Timer On/Off – the display will show 'Cd'

Use the countdown timer button and the hold button to select timer on or off.

Countdown Timer Operation

Use the Hold and Countdown timer buttons to scroll up and down in seconds up to 5 minutes then in 1 minute intervals up to 24 Hours.

Scale – the display will show 'SCAL'

After entering the SCALE menu, use the Countdown Timer button and the Hold button to scroll between the available scales.

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Auto Power OFF – the display will show 'AOFF'

Use the countdown timer button and the hold button to scroll between the available options of 3, 10, 30 minutes or none.

Resolution – the display will show 'HRES'

Use the countdown and hold buttons to select temperature display in high resolution 0.1° or low resolution 1°.

Care of the Thermometer

C30 series thermometers are dust and waterproof as stated in the specifications and will withstand harsh environments. Use a damp cloth or warm soapy water to remove deposits and prevent them from hardening or becoming sticky. Do not use solvent-based cleaners or methylated spirit, etc.

It is recommended that the thread on the Lumberg connector is regularly cleaned and wiped with a food safe oil for ease of probe replacement.

Caution: Do not place any C30 series thermometers in a dishwasher.

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Changing the Batteries

The symbol BAT appears on the display when the battery voltage has reduced. Battery replacement is recommended at this time.

The C30 models have a sealed life battery fitted. When the battery is due for replacement please return to your local Distributor or Comark for new battery fitment.

Specifications for C30 Series Thermometers

Measurement

Sensor Type	Thermistor 10 K Ohms uncurve Thermocouple Type T (C32 Only)
Probe Connection	6-pin Lumberg
Measurement Span	-50°C (-58°F) to +150°C (302°F) Thermistor -200°C (-328°F) to +400°C (+752°F) Type T
Scales	°C (C30 and C32) and °F (C32 Only)
Displayed Resolution	0.1° > -100° 1° ≤ -100°
Accuracy (@ 23°C Ambient)	
Thermistor (system)	0°C (+32°F) to +70°C (+158°F) ±0.3°C (±0.6°) -25°C (-13°F) to +100°C (+212°F) ±0.5°C (±0.9°F)
Type T (system)	0°C (+32°F) to +70°C (+158°F) ±0.5°C (±0.9°F)
Thermocouple (instrument only)	0.1% ±0.2°C (±0.4°F) full range
Temperature Coefficient	
Thermistor	less than 0.005°C/°C (0.01°F per °F)
Thermocouple	less than ± 0.01% of reading ±0.02°C per °C (±0.04°F per °F) change from 23°C

Specifications Continued

Ambient Temperature Range

-20°C (-4°F) to +50°C (122°F) operating

Display 4 digit, 12.5 mm LCD

Battery Two Type I.E.C. LR6 Size 1.5V AA Lithium
(Factory Sealed)

Battery Life (continuous) Up to 14000 hours

Environmental Protection IP65, BS 60529, IEC 529

Dimensions

Length 152mm/6 inches

Width 58mm/2.3 inches

Depth 22/27mm/09./1.1 inches

Weight 178g/6.3ozs

WEEE



The C30 and C32 Thermometers contain a non-rechargeable lithium battery. This battery must be disposed of in accordance with local regulations.

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Declaration of Conformity

We:

Comark Instruments
Bury Mead Road
Hitчин
Herts
SG5 1RT



Declare that the products:

Comark C30 Series Hand Held Thermometers C30 and C32

Is in conformity with the requirements of the following documents (Directives):

EMC Directive 2004/108/EEC

Standards:
DIN EN 13485:2002

Signed for on behalf of
Comark Instruments

at:

Bury Mead Road
Hitчин, Herts
SG5 1RT


David Goulden
Development Manager

DIN EN13485:2002

This standard sets out the requirements that thermometers used in the transport storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice-cream need to meet from January 2006.

The following Comark instruments are fully tested and certified to meet the requirements of this standard.

C30

Classification: EN13485 Air, Product, Transport, Storage, E 0.5

The C30 product is required by EN13485 to be suitable for both air and product measurement in transport, storage & distribution within the operating temperature range of -20°C to +30°C. With an accuracy of ±0.5°C over the range -20°C to +100°C only when used with the following Comark probe:

Product/Air Probe: PX37L

C32

Classification: EN13485 Air, Product, Transport, Storage, E 0.5

The C32 product is required by EN13485 to be suitable for both air and product measurement in transport, storage & distribution within the operating temperature range of -20°C to +30°C. With an accuracy of ±0.5°C over the range -20°C to +100°C only when used with the following Comark probe:

Product/Air Probe: PX37L

Appendix 1 – C30 Series Model Range Options

Models	C30	C32
Part No.	C30	C32
Options		
Countdown Timer	-	✓
Data Hold	-	✓
Real Time Clock	-	✓
Clock Alarms	-	-
Scale Selection	-	✓
High Alarm	-	-
Low Alarm	-	-
Selectable Resolution	-	✓
Type T	-	✓
Type K	-	-
Thermistor	✓	✓
Connector*	L	L
Auto Off	✓	✓
IP65	✓	✓

* L – Lumberg

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