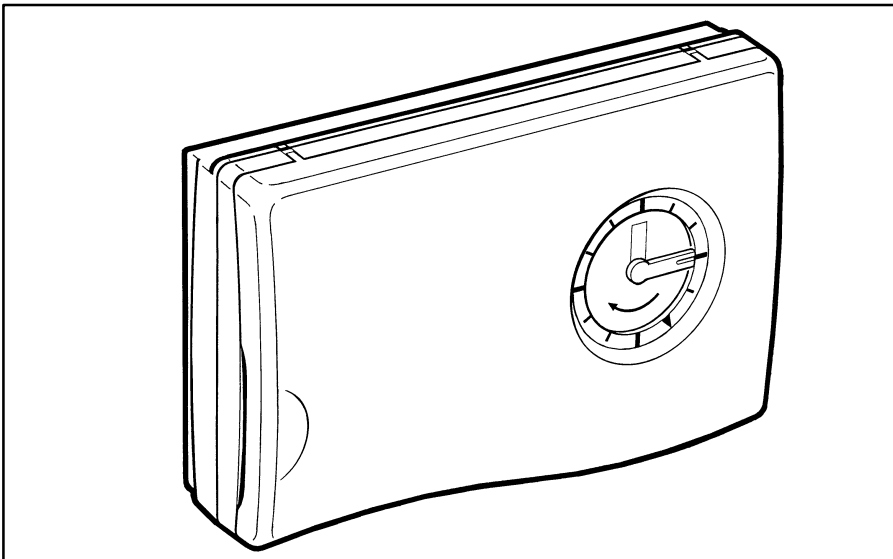


## CM31 & CM37 ANALOGUE CHRONOTHERMS

### PRODUCT SPECIFICATION SHEET



The CM31 and CM37 chronotherms are designed to provide automatic time and temperature control of heating systems in the home.

CM31 is a simple to use battery powered analogue clock-thermostat with electronic temperature control and 24 hour programming capability.

CM37 has the same features as CM31 but with the addition of a 7 day clock programme.

Both products meet the requirements of CE.

### FEATURES

- Attractive modern styling
- Easy to use programming controls
- Quartz crystal clock with 12 hour clock face, hour and minute hands
- CM31 has 24 hour programme with 96 programming tappets (15 minute steps)
- CM37 has 7 day programme with 168 programming tappets (1 hour steps)
- P+I temperature control
- $\pm 0.5^{\circ}\text{C}$  control differential
- Two temperature levels (Comfort and Economy)
- Comfort temperature range 10 to 30°C
- Economy temperature range 5 to 25°C
- Choice of operating modes : Automatic / Comfort / Economy
- Battery powered by 2 AA size (LR6) alkaline cells
- Battery life 1 year (nominal)
- 24...240 V SPDT potential free contacts for wide flexibility of application
- Normally-closed (nc) contact terminal protected by break-off tab to guide installer in 2 wire applications
- 8 A resistive, 3 A inductive switch rating
- Batteries supplied
- Replaceable clock module
  - 24 hour clock, part number R42009899-001
  - 7 day clock, part number R42009899-002

## SPECIFICATIONS

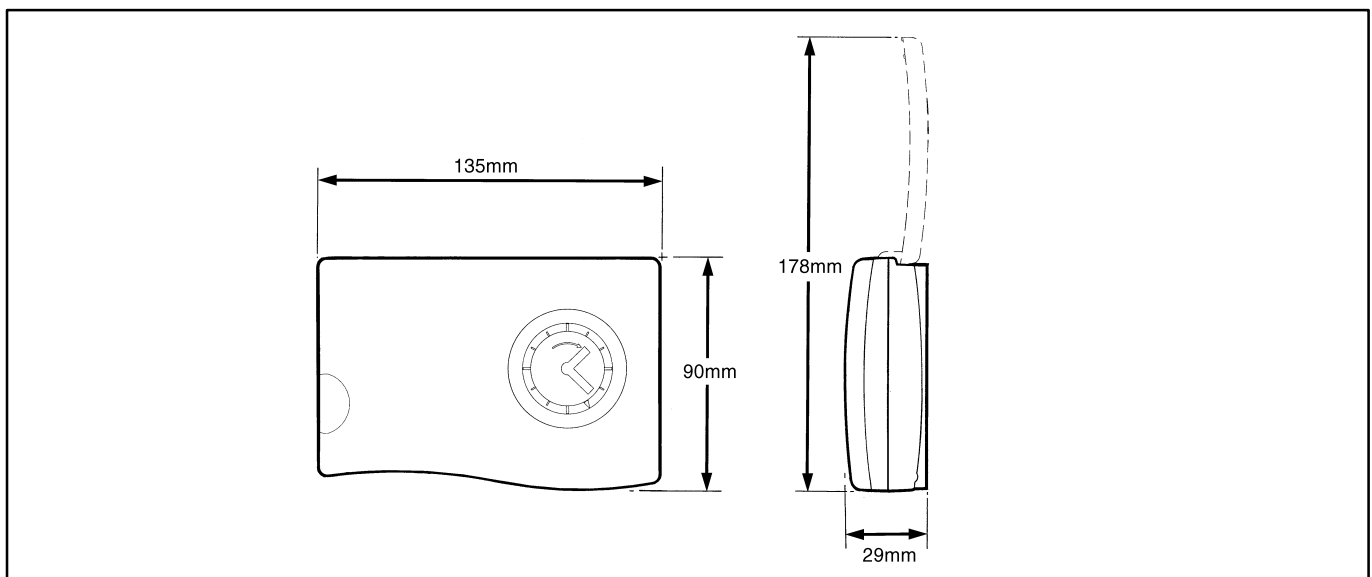
Product	: CM31 is a 24-hour analogue clock thermostat CM37 is a 7-day analogue clock thermostat	Temperature control	: P-I electronic control, with fixed cycle rate of 6 cycles/hour (nominal)
Power supply	: 2 x 1.5 V IEC LR6 (AA) Alkaline batteries	Control form	: ON/OFF
Battery life	: 12 months minimum	Control differential	: $\pm 0.5\text{ }^{\circ}\text{C}$ @ $3\text{ }^{\circ}\text{C}$ /hour, at $20\text{ }^{\circ}\text{C}$ , 50% load, 8 A
Switch type	: SPDT (potential free) latching relay	Comfort setpoint accuracy	: $\pm 1.0\text{ }^{\circ}\text{C}$
Switch rating	: 24...230 V~, 50...60 Hz, 8 A resistive; 3 A inductive @ 0.6 pf 100,000 operations	Minimum ON/OFF period	: 2 minutes
Time switch	: Quartz crystal clock 12 hour clock face 24-hour programme for CM31 7-day programme for CM37 Clockwise setting only	Wiring	: up to 2 x 0.75 to 2.5 mm <sup>2</sup> wiring connections
Clock accuracy	: 1 minute 30 seconds per year clock drift $\pm 1$ second /day @ $25\text{ }^{\circ}\text{C}$	Dimensions	: 135 x 90 x 29 mm (w x h x d) 135 x 178 x 29 mm (w x h x d) (flap open)
Programme	: CM31 has 96 tappets (15 minute intervals) Minimum programme interval 15 minutes (1 tappet) : CM37 has 168 tappets (1 hour intervals) Minimum programme interval 2 hours (2 tappets)	Environmental	: Operating temperature range 0 to $40\text{ }^{\circ}\text{C}$ Shipping and storage temperature range $-20$ to $55\text{ }^{\circ}\text{C}$ Humidity range 0 to 90% rh, non-condensing
Operating modes	: Automatic Manual (Comfort/Economy) setting by slider	Protection class	: IP30
Temperature setting	: Comfort setpoint 10 to $30\text{ }^{\circ}\text{C}$ Economy setpoint 5 to $25\text{ }^{\circ}\text{C}$ setting by rotary knob	Approvals	: Meets the requirements of CE. Relevant standards EN60730-1 (1995), EN55014-1 (1997), EN55014-2 (1996).

## ORDERING SPECIFICATION

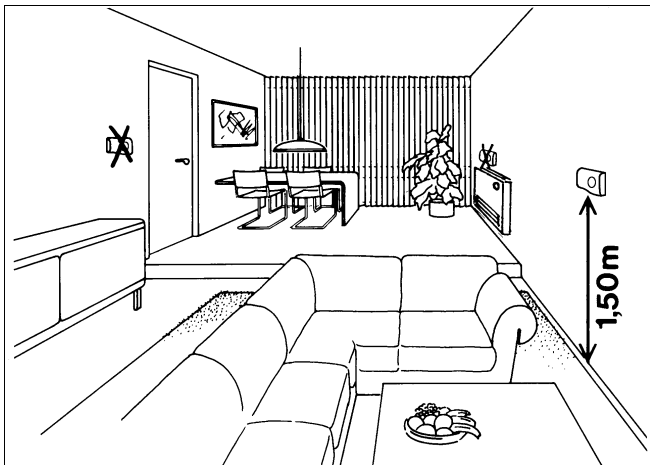
T6631B1005 - CM31 with 24 hour clock programme

T6637B1009 - CM37 with 7 day clock programme

## DIMENSIONS



## INSTALLATION



### LOCATION

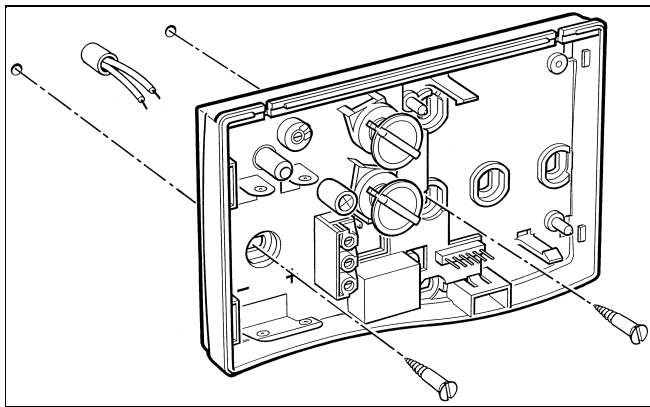
The CM31 or CM37 Chronotherm is the temperature control element in the heating system and **MUST** be located in a position with good air circulation at average room temperature on an inside wall 1.5 metres above the floor level. Do not position the Chronotherm near sources of heat (radiators, hot air vents, TV or lights), near doors or windows, or in direct sunlight.

### MOUNTING

CM31 and CM37 can be mounted directly on the wall surface or on an electrical wallbox. Mounting screws are supplied for both alternatives.

### WIRING

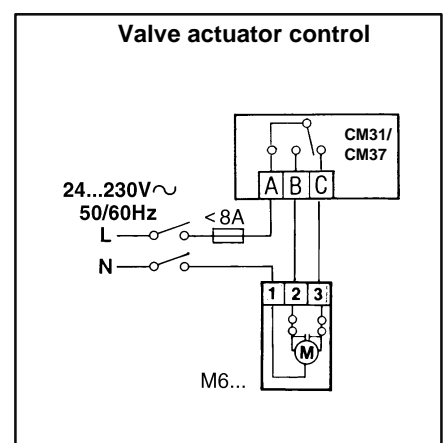
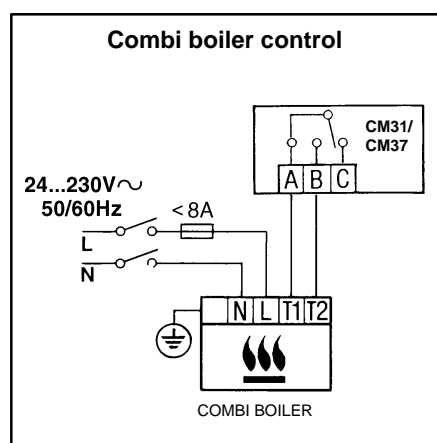
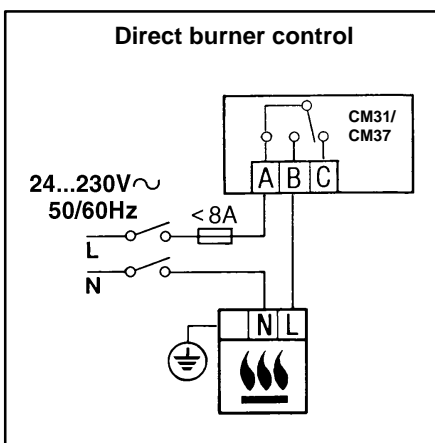
CM31 and CM37 are designed for fixed wiring only and must be installed in accordance with latest I.E.E. regulations. Ensure the wiring connections to the supply are via a fuse rated at 8 amps (max) and a Class "A" switch (having contact separation of at least 3 mm in all poles).

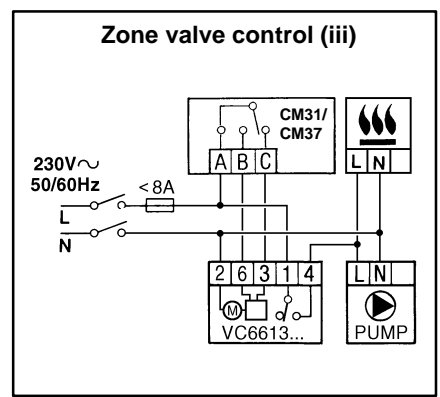
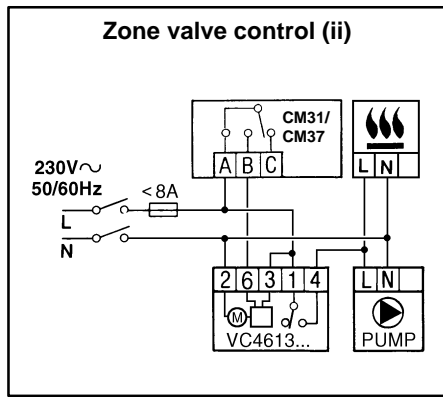
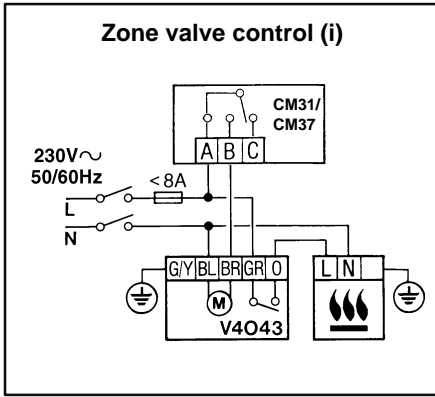


### IMPORTANT

1. The installer must be a trained service engineer
2. Disconnect the power supply before beginning installation

## WIRING





### Electric Heating Systems

Systems rated above 8 A resistive (1.75 kW) should be controlled via a contactor.

Systems rated below 8 A can be switched directly by the CM31 or CM37 relay.

It is recommended that a voltage dependent resistor rated at 275 V r.m.s., 23 joules, 775 V clamping voltage (e.g. Philips V275LA2) is installed across the contactor coil to suppress interference from voltage spikes.

