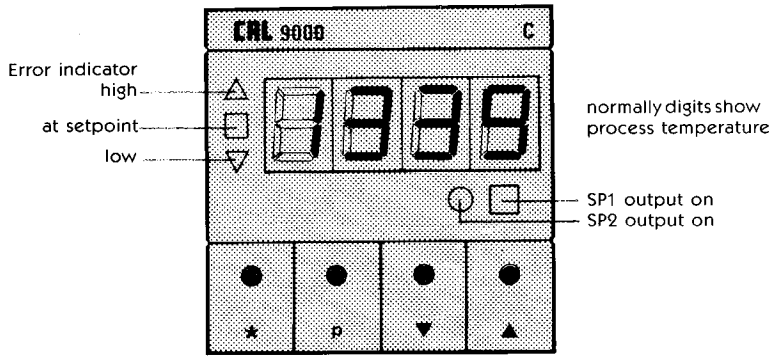
## Operation

For additional details see Manual B1.




| | |
|---|---|
| ★ | Press to view setpoint |
| ★ ▼ | Press together to decrease setpoint |
| ★ ▲ | Press together to increase setpoint |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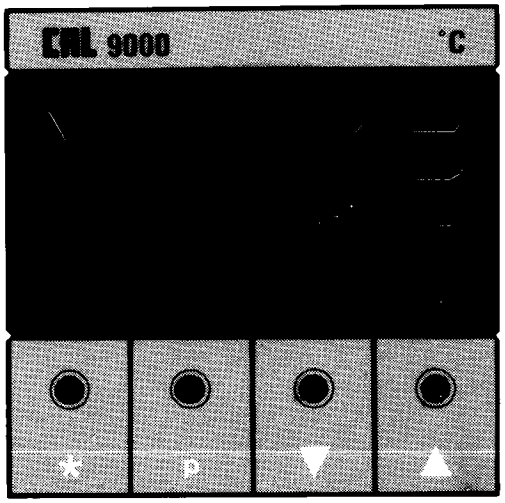
# CAL 9000

# TEMPERATURE CONTROLLER




## INSTRUCTIONS FOR INSTALLATION AND BASIC SETTING UP .....

'MR. INSTALLER'

## Installation

**1.** Check carton contents: 9000 controller
mounting clip
9000 socket

Accessories bag continaing:
2 jacking screws for mounting clip
Faston '250' receptacles:-
11 single — fully insulated
1 'piggy-back' insulated

**2.** Install the controller in 1/16 DIN (45 x 45 mm 1.77" x 1.77") panel cut out.

**3.** Fit the mounting clip pressing it firmly against the panel. If necessary the mounting can be further tightened using the jacking screws.
(To remove the mounting clip push the legs in opposite directions to release the ratchet. See diagram, Fig 1)

**4.** Plug the socket onto the controller.
(To remove the socket press the lock buttons in when unplugging).

Fig 1

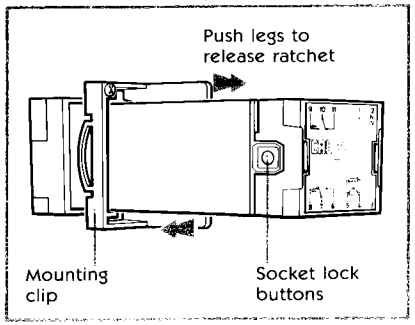
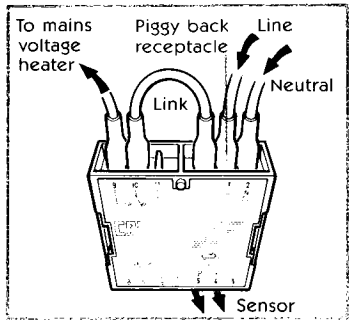



Fig 2




## Electrical Connections

**1.** Check the controller side label to ensure the supply voltage is correct.

**2.** The connection diagram is on the rear of the socket. For typical wiring diagrams see Operating Manual A2. A3. A4.

**3.** Make the connections using the fully insulated Faston 250 receptacles provided.

**4.** For mains voltage, directly switched loads, (heaters) a link may be required between line and the output relay contacts. Connect the line supply to terminal 1 using the piggy back receptacle provided, fit link 1 to 10 as shown (See diagram, Fig 2).

**5.** When using a 2 wire PT100 RTD link 3 to 5

## Setting up

For the majority of applications it is only necessary to key in the sensor type, the CAL 9000 will then operate with factory (Default) settings.:
— PID control mode (for values see Manual B3)
— Single set point, slow cycle, proportional output.
Should the Default settings be unsuitable, or if other facilities are required see Manual B and C.

| STEP | ACTION | DISPLAY |
|---|---|---|

**1.** Apply power. (All segments on briefly during self check).
**Awaiting sensor selection.**
Note: digits shown green are flashing.

**2.** Sensor selection
*Ensure full scale temperature is compatible with safety*
To change range — See Manual B6

| Option | Sensor type | Full scale °C | Full scale °F | Option | Sensor type | Full scale °C | Full scale °F |
|---|---|---|---|---|---|---|---|
| 1 | J | 400 | 800 | 6 | T | 250 | 500 |
| 2 | K | 400 | 800 | 7 | E | 500 | 1000 |
| 3 | N | 400 | 800 | 8 | Fe-CuNi | 400 | 800 |
| 4 | R | 1600 | 1999 | 9 | PT100 (RTD) | 200 | 400 |
| 5 | S | 1600 | 1999 | | | | |

**Key in Option No. for sensor.** **Press ▲ twice**
eg Option 2 = Type K

**3.** **To enter sensor type into memory.** **Press p once**
Display now reads process (sensor) temperature, ie. 18°C