

# EUROLEC INSTRUMENTATION LTD

## CS173 - TEMPERATURE CALIBRATION SOURCE

### OPERATING INSTRUCTIONS

\*\*\*\*\*

The CS173 provides a positive temperature (+ 30 to + 200°C) calibration source for both contact and non-contact (infra red) thermometers.

The CS173 operates from a mains supply of 220 - 240V AC (110V operation is optional) and requires one 5A /250V fuse. Replace only with the same type and rating, by removing the fuse compartment of the mains socket at the back of the instrument. There is a mains lead supplied with each instrument.

The indicated temperature on the CS173 is for controlling the temperature of the source and should not be used as a temperature reference. For calibrations, a precision thermometers, such as the RT162, RT163 & PC Temp RT2 supplied by EUROLEC, should be used as the reference.

The temperature controller used in the CS173 is a PID controller from BrainChild and an operating manual for this controller is included. This controller has been pre-set for optimum operation over the full temperature range.

**WARNING:** The surface at the top of the case can get hot, depending on the set temperature. **Take care** touching this surface when the instrument is in operation.

#### Operation:

Switch the instrument on, by the On/Off switch at the front of the instrument.

The operating temperature of the CS173 is set by pressing the scroll button  (the button on the left hand side) on the temperature controller, until the display shows SP1 then pressing the up▲ or the down▼ arrow buttons to increase or decrease the temperature set point.

**Note:** The temperature set point should not exceed 200°C. Allow 30 minutes for the temperature of the calibration chamber to stabilise at the set point, before taking any readings.

If the temperature stability needs to be improved, then press the scroll button until **A – t** appears on the screen. Press and hold the scroll button for at least 3 seconds and the display will begin to flash. This is the

controller's auto-tuning procedure and when the display stops flashing then the procedure is complete.

To **reset** the instrument and to revert the display to showing the temperature, press the up ▲ and down ▼ buttons together.

For non-contact thermometers, place the reference probe, if applicable, into the hole provided in the top of the chamber. Point the infra red thermometer into the cavity at the front of the calibration chamber and take reading.

For contact thermometers place probes under test, and the reference probe, if applicable, into the holes provided at the back of the calibration chamber.

### Precision Accuracy Check (PAC)

The CS173 has a facility to check the calibration of the temperature controller. Use the key provided to check it at 0 and 85°C.

**CAUTION:** The key position should be at the SOURCE position for normal operation, so always switch back to this position after a calibration check. Remove the key from the key lock to avoid any accidental change of this position.

### Warranty

This instrument has been carefully assembled and tested, and is warranted against faulty workmanship and materials for 12 months from the date of purchase.

During the warranty period any defective instrument will be repaired or replaced at the discretion of the manufacturer. This warranty does not cover, damage or failure resulting from misuse or accident.

Modification, adjustment or any alteration with the internal arrangement of the instrument shall absolve the manufacturer from any liability in respect of the instrument.

Any instrument to be repaired should be forwarded to the manufacturer, carriage paid and at the owner's risk. A brief description of the fault should be included.

\*\*\*\*\*

Eurolec Instrumentation Ltd.

Technology House, Cluan Enda, Dundalk, Co. Louth, Ireland.

Tel: +353 (0) 42 9333423, Fax: +353 (0) 42 9331758

E-mail: [eurolec@esatclear.ie](mailto:eurolec@esatclear.ie)

Please see other Pressure & Temperature instruments on the Eurolec web site  
[www.eurolec-instruments.com](http://www.eurolec-instruments.com)