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The Calibration Reference

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BL-12C

Portable Temperature Calibrator
200 … 1100 °C

The BL-12C temperature calibrator is a compact instrument used to calibrate thermocouples, RTD and temperature-measuring sensors in the field and in the laboratory. The possibility to generate temperature ramps makes it suitable for use in calibrating and testing thermostats. To calibrate temperature sensors by the comparison method, a version with two independent inputs are also available on request (one input for the reference probe and the second one for the probe under calibration).

Technical :

The portable thermostatic calibrator **BL-12C** has been designed to carry out laboratory and field checks of thermocouples and of Pt100; it consists of a tubular vertical well with an internal quartz pipe and an interchangeable equalising block. The equalising block, whose large size suits the external dimensions, ensures a proper heat transmission as well as optimal stability and uniformity values; its interchangeability makes it possible to test sensors of various lengths, with diameters ranging from 1 mm up to 26 mm. The block of the standard equipment has 4 holes (Ø 7, 9, 11 and 13,5 mm); on request, further versions with different kinds of holes are available.

BL-12C is equipped with a counter-current forced air cooling system, which keeps the temperature low in the upper part of the well; this system enables to check even very short probes, without heating the connecting head or the handgrip. **BL-12C** is provided with a new PID controller, whose microprocessor ensures resolution values up to 0,01 °C as well as °C, °F and K reading; it also enables to set the up/down ramps and to memorise the operative temperature of the thermostats.

The version **BL-12C-2I** is equipped with a data acquisition card and two adjustable input devices (Pt100 3/4 wires; thermocouples: J, K, N, R, S) with gold-plated contacts and automatic

Model CI-X-13-090313-01
T-BL12C-E-1113-1

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compensation of the cold junction. The first input device is for the reference sample probe; this calibration system is provided with Accredia (Italian calibration service) test certificates and it is in accordance with ISO 9000. The second input device is for the probes that are being tested; hence the instrument can display the temperature of the well, of the sensor to be tested and of the reference sample probe, at the same time.

Furthermore, **BL-12C** is provided with the serial interface RS232; once it is connected to a PC, it can operate automatically, by means of the software, which enables to carry out probe calibrations, thermostats tests and cycle life tests; test results can be stored and printed and they are easily traceable in conformity with ISO 9000 standard values.

Technical data:

Range: 200 ... 1100 °C
Material of the equalizing block: inconel 600
Holes in the equalizing block: Ø 7 - 9 – 11 – 13,5 x 155 mm
Stability: ±0,3 °C @ 1000 °C
Radial uniformity: ±0,4 °C @ 1000 °C @ 40 mm
Axial uniformity: ±0,4 °C @ 1000 °C @ 60 mm from the bottom
Mean heating rate: 18 °C/min
Mean cooling rate: 6 °C/min
Display resolution: 0,1 °C / 0,01 °C
Engineering units: °C, °F, K
Serial interface: RS232
Power supply: 115 o 230 V - 50/60 Hz – 850 VA

Dimensions: 170 x 450 x 330 mm
Weight: 12 kg
Made in Italy

Scope of delivery:

- BL-12C calibrator.
- Inconel 600 equalizing block with 4 holes: (Ø 7 - 9 – 13,5 x 185 mm).
- Top insulator with four holes.
- Block extractor.
- Power supply cable.
- Fuses kit.
- Thermostat connection cables.
- Instructions manual.
- Test report.
- Kit of clamp connections (only 2I version).
- RS232 serial interface.

Dimensions:

170 x 450 x 330 mm

Weight:

12 kg

Accessories / Options:

- Software.
- Special equalizing block available on request.
- Tc S sample probe.
- USB/RS232 converterRS232 serial cable.
- Accredia certificate (only 2I version) performed by a sample probe connected to BL-12C.

We reserve the rights to alter at any time the technical specifications without notice.

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