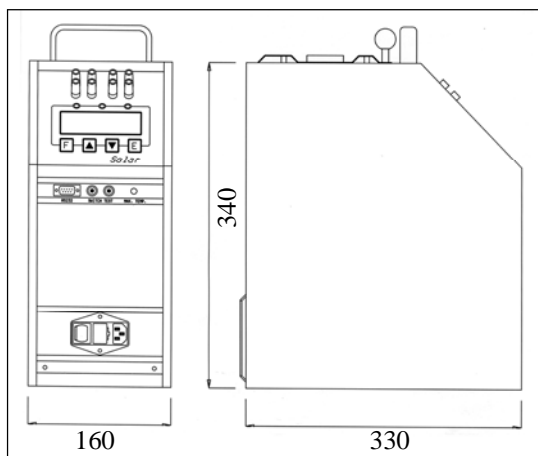# Pulsar

PORTABLE TEMPERATURE CALIBRATOR

Operating range:
Room temp. / +550 °C (+600 °C)

Applications:
- *Control calibration of temperature sensors in laboratori, in conformity with ISO 9000 standards.*
- *Control of thermostats.*
- *Automatic computer-controlled calibrations.*

GIUSSANI

Pulsar

PORTABLE TEMPERATURE CALIBRATOR

The **PULSAR** temperature calibrator is a compact instrument used to calibrate transducers, RTD and temperature-measuring sensors in the field and in the laboratory. The possibility to generate positive and negative temperature ramps makes it suitable for use in calibrating and testing thermostats.

TECHNICAL CHARACTERISTICS

The **PULSAR** oven consists of aluminium (Al) or bronze-aluminium (BrAl) block measuring 50 or 65 mm in diameter heated by a resistance which winds around the outer surface of the block.
A set of holes are made in the block into which the calibration probes are inserted and one 17 mm in diameter hole for the appropriate reduction inserts.

PULSAR is equipped with a PID microprocessor controller with a resolution up to 0,01 °C, setting of the standard of measurement in °C, °F and K, programming of ascent/descent ramps and storage of the thermostats' operative temperature.

In the **PULSAR-2I** version, the instrument is equipped with an acquisition card having two adjustable inputs (Pt100 3/4 wires; thermocouples: J, K, N, R, S) with bushes fitted with gold-plated contacts and automatic compensation of the cold junction.
The first input is provided for the reference sample probe, thus obtaining a complete calibration system which can be certified by SIT centres, in compliance with ISO 9000 regulations.
The second input is provided for probes that are being tested; hence, the instrument can display the temperatures of the furnaces, the temperature of the sensor to be checked and of the reference sample probe, at the same time.

Furthermore, **PULSAR** is equipped with the RS232 serial interface; it can operate in automatic mode connected to the PC by means of the AQ2sp software which enables to carry out probe calibrations and cyclical life tests; test results can be stored and printed, so they are easily traceable in compliance with ISO 9000 standards.

TECHNICAL DATA
(**PULSAR-00** - base version)

Operating range (mod. Al):	Room temp. ÷ +550 °C
Operating range (mod. BrAl):	Room temp. ÷ +600 °C
Stability (mod. Al):	±0,05 °C (@ 450 °C)
Stability (mod. BrAl):	±0,12 °C (@ 450 °C)
Axial uniformity (mod. Al)	±0,8 °C (@ 400 °C) (*)
Axial uniformity (mod. BrAl)	±1,2 °C (@ 400 °C) (*)
Mean heating time:	20 °C/min
Mean cooling time:	25 °C/min
Display resolution:	0,1 °C / 0,01 °C
Display accuracy (mod. Al):	±0,3 °C
Display accuracy (mod. BrAl):	±0,5 °C
Units of measurements:	°C - °F - K
Serial interface:	RS232
Insert hole size (mod. 394):	Ø 4,5 - 6,5 - 9,5 - 17 x 185 mm
Insert hole size (all other models):	Custom drilled
Power supply:	115 or 230 V - 50/60 Hz
Electric power (mod. Al):	800 VA
Electric power (mod. BrAl):	1200 VA
Calibrator size:	160 x 340 x 330 mm
Calibrator weight:	8,6 kg
Calibrator weight (ver. 65):	11,7 kg
Shipping weight with carr. case:	16,7 kg
Shipping weight with carr. case (ver. 65):	19,8 kg
Shipping size:	320 x 550 x 490 mm

(*) For 60 mm from the bottom

PULSAR-2I
Version with data acquisition card and two input devices to measure:

Type of probe	Range	Accuracy
Pt100 IEC 3/4 wires	-100 / 700 °C	± 0,3 °C
Thermocouple J	0 / 1000 °C	± 1 °C
Thermocouples K N R S	0 / 1300 °C	± 1 °C

STANDARD EQUIPMENT:
(code: PULSAR 394)
- PULSAR calibrator.
- Power supply cable.
- Fuses kit.
- Thermostats connection cables.
- Instruction manual.
- Test report.
- Tweezer for insterts removing.
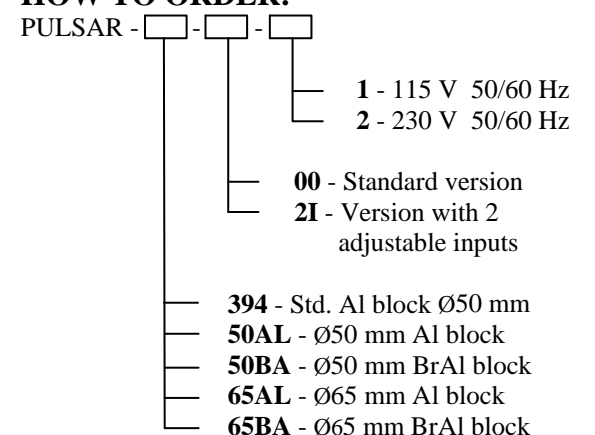- Kit of clamp connections (only 2I version).
- RS232 serial interface.

ACCESSORIES KIT:
(code: KIT-PULSAR)
- Aluminium carrying case.
- Blank insert.
- Insert with one Ø9,5 mm hole.

ACCESSORIES ON DEMAND:
- AQ2sp software.
- Inserts with special holes.
- Drawning equalization blocks.
- RS232 serial cable.
- Cordura® soft bag.

HOW TO ORDER:
PULSAR - ☐ - ☐ - ☐

- **1** - 115 V 50/60 Hz
- **2** - 230 V 50/60 Hz

- **00** - Standard version
- **2I** - Version with 2 adjustable inputs

- **394** - Std. Al block Ø50 mm
- **50AL** - Ø50 mm Al block
- **50BA** - Ø50 mm BrAl block
- **65AL** - Ø65 mm Al block
- **65BA** - Ø65 mm BrAl block

For exemple:
Pulsar50BA-00-2 KIT is equal to Pulsar calibrator with Ø50 BrAl block with customer special holes, 230 V power supply and accessories kit.

340

160   330

**ISO 9001
CERT. N°9115**

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CERTIFICATION:
All instruments are supplied with final testing, stability and accuracy certification traceable to S.I.T. standards.

A QUESTION OF CALIBRATION

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