



D.MARCHIORI

DMPT-12 Thermal Sensor Test Set



THERMAL SENSOR TESTER

The Temperature Sensor Test Set DMPT-12 is designed to perform accurate functional test of several temperature sensors installed on a wide range of helicopters and aircraft.

The Test Set includes an internal 700°C test oven, and a set of cylinder adaptors to allow the control of various parts like switches, thermo bulbs, temperature and fire detectors. A serial link (RS232 / RS485) to an external PC provides test control and monitoring.

The oven temperature is digitally controlled with resolution of 0.1 °C and stability of 0.3 °C.

The oven environment is carefully controlled by two precision A-class thermocouples connected to the host PC via a high resolution digital interface. The thermocouples are strategically positioned in the test chamber for optimum accuracy. Temperature gradient is automatically calculated by system software.

The adapters provided for each type of sensor allow an accuracy of 0.5°C for temperatures below 700°C.

FEATURES

- **Range: from 50° to 700°C**
- **Total accuracy: 0.5°C**
- **User friendly MS-Windows software**
- **Automatic control of thermo switches and thermo-resistors up to 625 ohm with accuracy of 0.1 ohm**
- **Stability better than $\pm 0.25^\circ\text{C}$**
- **Wide range of test profiles**
- **Universal power supply: 110 to 240 VAC**

SAFETY

Operation of the test set is intrinsically safe for protection of Unit Under Test (UUT). Each UUT is linked to a unique test profile so that thermo limits can not be exceeded.

DETAILS

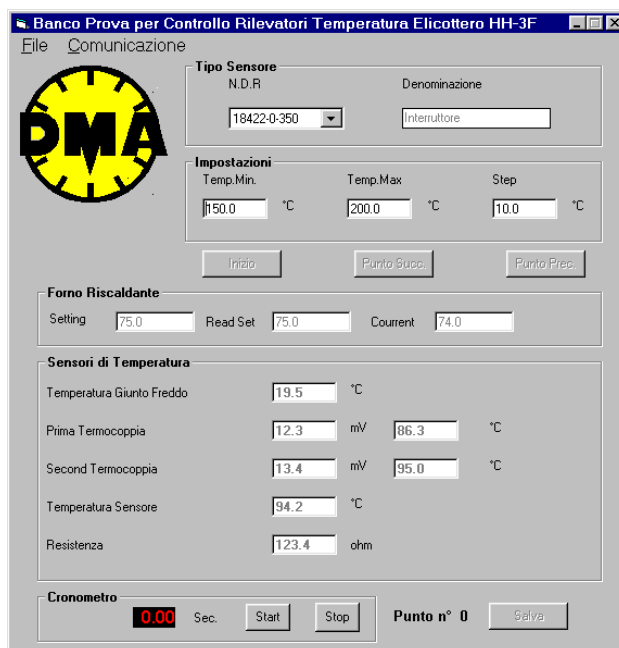
Every adapter is tested with a traceable thermocouple. Test parameters are stored in non-volatile memory for future reference.

Thermo-switch mode testing is automatic; no operator intervention is required. The test set commands all temperature variations and monitors for change of switch status

Thermo-resistor mode testing is auto-controlled. The system controller programs temperature step environments and the recorded test values are stored .



PC SCREEN



Banco Prova per Controllo Rilevatori Temperatura Elicottero HH-3F

File Comunicazione

Tipo Sensore
N.D.R. Denominazione
18422-0-350 Interruttore

Impostazioni
Temp.Min. Temp.Max Step
150.0 °C 200.0 °C 10.0 °C

Inizio Punto Succ. Punto Prec.

Forno Riscaldante
Setting 75.0 Read Set 75.0 Current 74.0

Sensori di Temperatura
Temperatura Giunto Freddo 19.5 °C
Prima Termocoppia 12.3 mV 86.3 °C
Second Termocoppia 13.4 mV 95.0 °C
Temperatura Sensore 94.2 °C
Resistenza 123.4 ohm

Cronometro
0.00 Sec. Start Stop Punto n° 0 Salva

STANDARD SPECIFICATIONS

PERFORMANCES

Oven:

Max temp: 700 °C

Min temp (*): 20 °C over ambient temp

Resolution: 1 °C

(*) Can be reduced with cooling

PC system:

Accuracy

Temperature: ± 0.5 °C

Resistors: ± 0.1 Ohm

Resolution

Temperature: 0.5 °C

Resistors: 1 milliohm

Range

Resistors: 625 Ohm

Stability (complete system):

better than: ± 0.25 °C

CONTROLS

Temperature

Time

Input readings of units under test

Save test results

SETTINGS

Limits

Step

Type of U.U.T.

CALIBRATION:

Performed using software (*)

(*) needs a calibrated K thermocouple

PHYSICAL SPECIFICATIONS

Weight: 7 kg (33 lb.)

Dimensions: 15" x 5" x 10"

POWER SUPPLY

220 VAC

Note: --- Specifications subject to change ---



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