Model DP6

Thermocouple Calibrator/Simulator

Use the portable DP6 to electrically simulate thermocouples and to measure thermocouple outputs. Simply program the desired thermocouple type and desired temperature and the DP6 will provide the equivalent voltage signal for a thermocouple at that temperature.

Flexible reference junction operation allows for automatic cold junction compensation, manual value entry or it may be switched off when an ice point reference is used. DP6 supports ten major thermocouple types and can be switched for operation in °C, °F, K or mV. For convenient portable operation the DP6 has an internal rechargeable battery giving a typical continual use of 15 hours.

A transport case is included and has room for the charger and a copper transition adapter that allows easy connection to miniature thermocouple connectors.

The instrument has a high contrast LCD display and a second two line alphanumeric LCD display for programming and display of configuration data independent of the main measurement display. In addition to English the language for the set up can be set to Spanish, French, Italian or German. Choose the calibration between IPTS68 and ITS-90.

Save time by storing commonly used values in the 130 store memory.

The DP6 brings precision, high integrity performance for the industrial user, see the tables for the one year accuracy figures.

This product is made for Isotech by Cropico who over a 52-year period have gained a reputation of being one of the world's leading manufacturers of electrical instruments and resistance sources.

Working Temperature
0 to 40°C

Storage Temperature
-20 to +50°C

Battery
6 Volt 1.2 Ah sealed lead acid, replaceable

Operating Time
15 Hours typical continual use

Charger Type
External charger operating from main supply

Case
Shockproof thermoplastic with polycarbonate sealed membrane keyboard
Soft carrying case available as an accessory

Size
150mm Wide, 130mm Deep, 60mm High
350 x 260 x 65mm in transport case

Weight
1.4kg

Key Features

- **Linearised for 10 Thermocouple Types**
- **Measures and Sources**
- **Calibrated in °C, °F, K and mV.**
- **1µV Resolution**
- **Reference Junction Compensation**
- **Rechargeable Battery**
- **Memory with 130 stores**
- **Digital Calibration**

How to Order DP6
Please specify if UKAS calibration is required.

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Thermocouple Type		Range	Accuracy
Code	Material	Degrees C	Measure & Source
B	PtRh30-PtRh6	+500 to +1820 +200 to +500 +60 to +200	±0.5°C ±1.5°C ±6.0°C
E	NiCr-CuNi	-200 to +1000 -250 to -200 -270 to -250	±0.2°C ±0.6°C ±6.0°C
J	Fe-CuNi	+800 to +1200 +200 to +800 0 to +200 -210 to 0	±0.3°C ±0.2°C ±0.1°C ±0.3°C
K	NiCr-NiAl	+1000 to +1370 +100 to +1000 -50 to +100 -150 to -50 -225 to -150 -270 to -225	±0.4°C ±0.3°C ±0.1°C ±0.2°C ±0.5°C ±3.0°C
L	Fe-CuNi	+300 to +900 -100 to +300 -200 to -100	±0.2°C ±0.1°C ±0.15°C

Thermocouple Type		Range	Accuracy
Code	Material	Degrees C	Measure & Source
N	NiCrSi-NiSi	+1100 to +1300 +400 to +1100 +150 to +400 0 to +150	±0.4°C ±0.3°C ±0.15°C ±0.1°C
R	PtRh13-Pt	+1200 to +1760 +100 to +1200 0 to +100 -50 to 0	±0.8°C ±0.4°C ±0.5°C ±0.8°C
S	PtRh10-Pt	+1400 to +1760 +1200 to +1400 +50 to +1200 -50 to +50	±0.95°C ±0.5°C ±0.4°C ±0.6°C
T	Cu-CuNi	-100 to +400 -230 to -100 -250 to -230 -270 to -250	±0.2°C ±0.5°C ±1.0°C ±2.5°C
U	Cu-CuNi	+300 to +400 0 to +300 -150 to 0 -200 to -150	±0.2°C ±0.1°C ±0.15°C ±0.2°C

Resolution on all types of thermocouple 0.1°C, 0.1°F, 0.1K. Limits of error apply for 1 year at 20°C ±1°C.

Range	Maximum Display	Uncertainty	Resolution
10mV	±15.000mV	±0.02% or reading ±0.015% FS	1µV
100mV	±150.000mV	±0.01% of reading ±0.015% FS	10µV
1V	±1.5V	±0.01% of reading ±0.015% FS	100µV

Temperature coefficient: typically 17 ppm / °C +0.2µV / °C

Reference Junction Specification

Reference Junction
Referenced to 0°C and with three operating modes. Automatic with internal sensor, Off (=to 0°C) and Manual entry via keyboard.

Accuracy
Better than ±0.1°C at +20°C

Deviation
0.01°C / °C over the range 0 to +50°C

Manual Input Range
The reference junction reference value may also be set via the keyboard over the range 0 to +100°C.