



## Description

The 7085P is the benchtop version of the 7085A module. It is a temperature distribution unit that allows users to quickly create multi-channel measurement applications. It can switch 8 thermocouple inputs and 1 RTD reference to a common output. The instrument interfaces with EasyCal software and the 10 channel scanner in the multimeter section of the 7051+, 8060+ or 5065B modules. It supports multifunction measurements including resistance, AC/DC voltage and current, thermocouple and RTD. For temperature measurements the cold junction compensation is equipped to improve accuracy, and is shown via an LCD display on the front panel. The CJC is also read back and factored by EasyCal software via internal communication during applications.

The 7085P provides a convenient method of temperature UUT connection and calibration. To automate the process, EasyCal software controls the dry block calibrator (see TE range) and captures readback via the CalBench control centre (with integral multimeter) for automated testing. This method means that a typically time consuming temperature calibration application can be performed without relying on the user to manually step through the temperature ranges. The multiple input connections aid the workload further by allowing up to 8 thermocouples to be tested at one time. The 7085P is an excellent solution that saves both time and resources by automation and batch testing capabilities.

## Specifications

- Requirements** ..... Interfaces with 7051+, 8060+, AVM65 option & 5065B modules.  
For automation EasyCal software is required on a control centre module or separate PC.
- Thermocouple input connections** ..... 8 x inputs, connections via standard & miniature TC type, or 4mm shrouded sockets.
- Reference RTD input connection** ..... 1 x RTD input, connections via 3 wire RTD type, bare wire screw terminals, or 4 pin multiway connector.
- Reference thermocouple** ..... A reference thermocouple can be used by connecting to input #8 on the unit.
- Interfaces** ..... RS-232 connection to CalBench control centre.  
Scanner connection output - 15 way D type connector
- Maximum AC voltage** ..... 125 V rms or 175 V peak, 100 kHz,  
1 A switched, 62.5 VA (resistive load).

## Features

- Switches 8 thermocouple inputs & 1 RTD reference to a common output
- Records min/max ambient temperatures
- Cold junction temperature display
- Communicates with 7051+, 8060+, 5065B
- Clear visual display of temperature (LCD)
- Suitable for use with dry block calibrators
- Automatic calibration with EasyCal Software

**Maximum DC voltage** ..... 110 V, 1 A switched,  
30 VA (resistive load).

**Actuation time** ..... 5 ms maximum on/off.

**Contact potential** ..... < ±500nV typical per contact,  
1 µV max / < ±500 nV typical  
per contact pair, 1 µV max.

**Isolation between any two terminals** ..... > 10 GΩ, < 75 pF.

**EasyCal compatible Dry Block calibrators** ..... For full automation a TE dry block calibrator can be driven by EasyCal software.  
Models supported: 8070, 8071, 8072, 8073,  
7861, 7870, 7871, 7872, 7880, 7882.

*See separate data sheets for information and specifications*

**Dimensions** ..... L 265 x W 255 x H 175 mm

**Weight** ..... 2.8 kg / 6.17 lbs

## Ordering Information

**7085P** ..... Benchtop Temperature Distribution and Scanner

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.