Time Electronics
Calibration, Test and Measurement

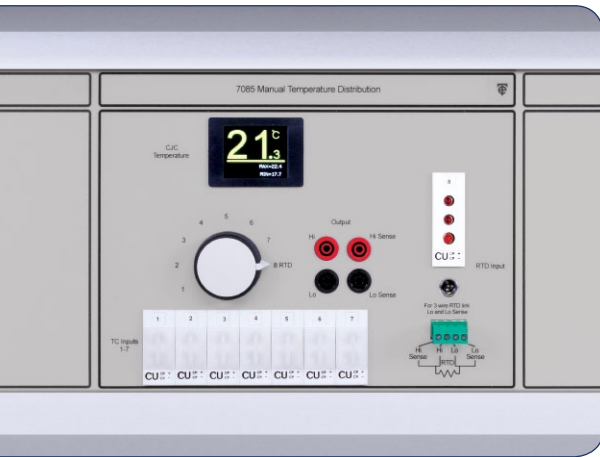# CalBench

Process Modules
Short Form

7085 Temperature Distribution Panel

A temperature distribution panel module that switches 7 thermocouple inputs and 1 RTD reference to a common output. The 7085A automatic switching version requires the 7051 with 10 channel scanner side module (9714B).

• Cold junction temperature display
• Records min/max ambient temperatures
• Integrates with 7051 and EasyCal
• Clear visual display of temperature (LCD)
• Suitable for use with dry block calibrators
• Automatic switching version available (7085A)
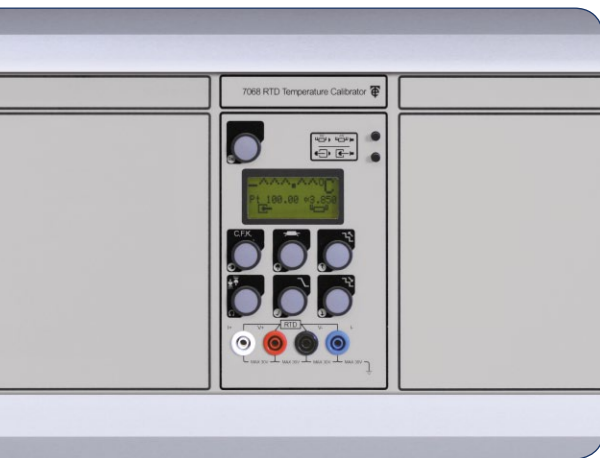
7068 Programmable RTD Temperature Calibrator

A calibrator for accurately simulating and measuring the most commonly used RTD probes. The 7068 is specifically designed to automate and to speed up the task of calibrating instrumentation used in the process control industry. It can also be used as a temperature reference for dry block and other precision temperature baths.

• Temperature – Accuracy 0.05°C (0.09°F). Resolution 0.01°C (0.02°F)
• Resistance – Accuracy 0.03Ω. Resolution 0.01Ω
• 2, 3, and 4 wire connections
• Measure and simulate °C, °F, °K, and ohms
• Ramp and step
• PT100 plus 7 other RTD types
• User programmable
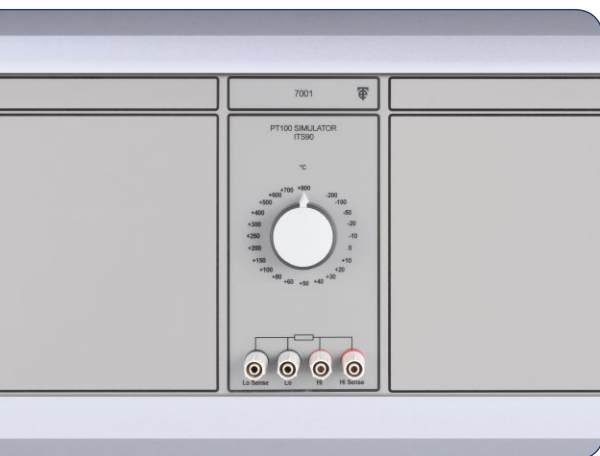
7001 Class A °C PT100 Simulator

A precision simulator for PT100 0.3850 platinum resistance elements used for accurate temperature measurement. High performance metal film resistors are used throughout to ensure a good temperature coefficient and long term stability.

• -200°C to +800°C with 23 set points
• Accuracy ± 0.3°C
• Less than 30ppm/°C temperature coefficient
• ITS-90 IEC60751
• Exceeds class A
• Passive resistance source
• °F version available (-100°F to 1000°F, ± 0.5°F accuracy)
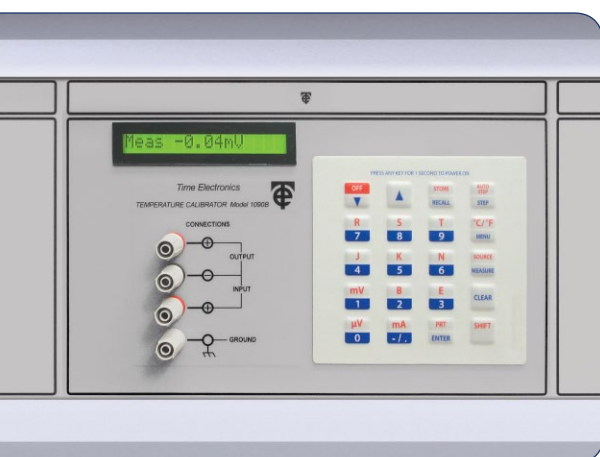
7077 Process Calibrator

A key-press operation module that combines source and measurement functions for thermocouples, RTDs, mV and mA. The 7077 features a memory storage function that holds frequently used values.

• Measures/simulates 8 thermocouple types, PT100-RTD, mV and mA
• Displays units in °C, °F, μV/mV, or mA
• Automatic or manual cold junction compensation
• 10 point memory recall feature
• Inching and step functions with time configurable steps
• Process loops 4 to 20mA and 0 to 50mA
• 24V loop drive voltage

7061 Multifunction Process Calibrator

A process calibrator that combines the essential functions of measurement and simulation of volts, millivolts, milliamps, and ohms with the direct readout simulation of thermocouples and RTDs in °C or °F units.

- Measure (3 ranges) up to 40V, 400mA, 40kΩ
- Output voltage (3 ranges) up to 10V, 1μV resolution
- Output current (3 ranges) up to 20mA, 1μA resolution
- Output resistance: 0 to 400Ω, 0.01Ω resolution
- Thermocouple measure and simulate: J, K, T, E, R, S, B, N
- RTD measure and simulate: PT100
- Ramp function
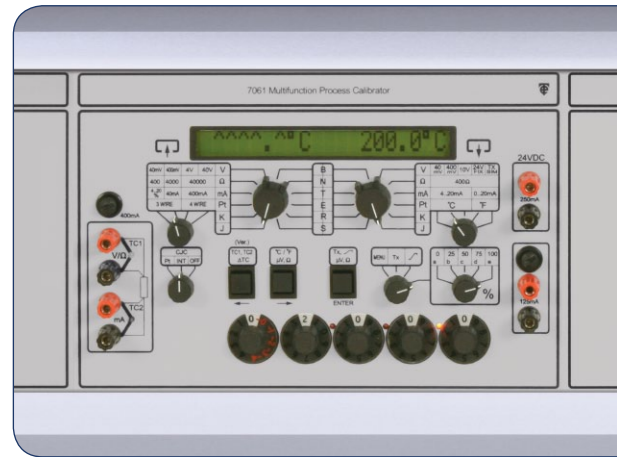
7067 Loop Calibrator

A high accuracy module for the calibration and simulation of voltage and current loops with source and measure capabilities.

- Loop current/voltage source (simulating a transmitter and the loop supply)
- Sink of loop current (simulating a transmitter)
- Measurement of loop current/voltage (simulating a loop indicator)
- Current measurement: 125mA, source 50mA. Resolution 1μA
- Voltage measurement: 25V, source 21V. Resolution 1mV
- Accuracy 0.01%
- Transmitter and square root functions
- Auto-ranging feature
- Programmable steps and ramp
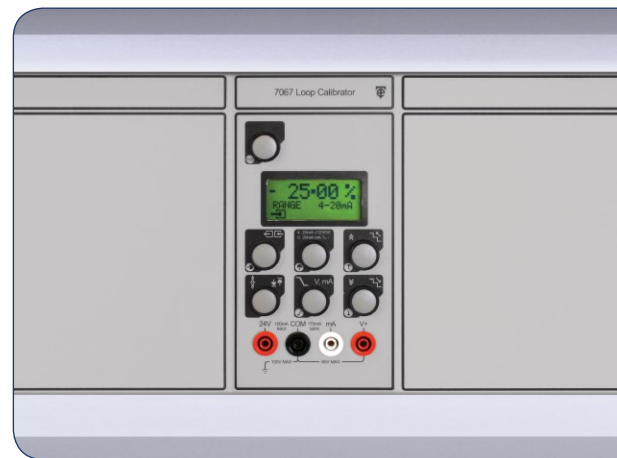
7069 Voltage/Current/Loop Calibrator

A voltage, current, and process loop calibrator for ideal for process control applications. The 7069 combines digital accuracy with simple analogue control and is well suited to plant operations such as powering control loops.

- Source/measure voltage and current
- 3 source ranges: 0 to 22mA and 0 to 22V
- 3 measure ranges: 0 to 70mA and 0 to 50V
- Accuracy 0.02%
- Transmitter simulator/sink loop control
- Output steps and ramps
- Fine adjustment (inching)
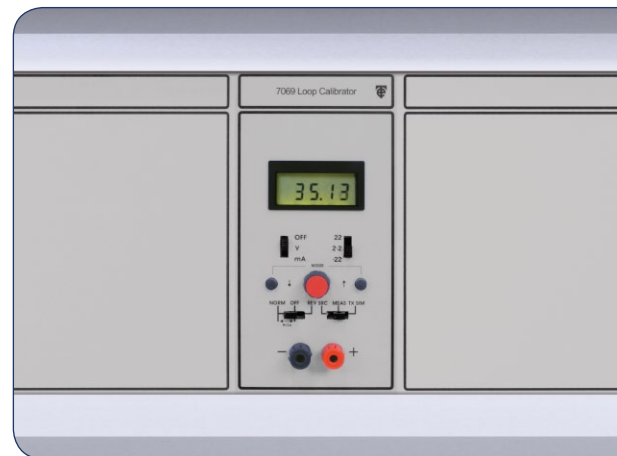
7079 Loop Ancilliaries Calibrator

A simple operation module suitable for powering process instrumentation such as pressure transmitters that require an external loop supply (4-20mA). An RS232 connection is available at the rear of the console enabling communication for data read back using EasyCal calibration software.

- Loop measure 0 to 199.99mA
- Continuity test (100Ω threshold or below - audible/visual indication is given)
- 24V output for powering 4 - 20mA loops
- 4.5 digit display
- Overload protection to loop
- Supply line protection by F250mA fuse
- RS232 connection - Allows read back with EasyCal software

Temperature and Loop Modules
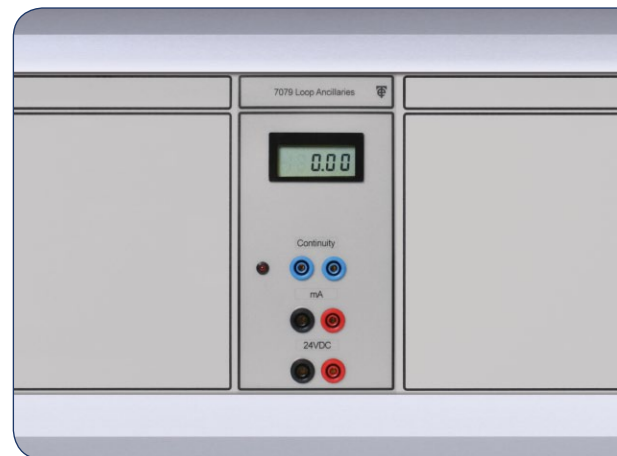
CalBench
Process Modules

Code	Description	Module Width
7001	PT100 Simulator Module	95mm
7085	Temperature Distribution Module (Thermocouple and RTD)	250mm
7085A	Auto Switching Temperature Distribution Module (requires 7051 and 9714B)	250mm
7068	RTD Temperature Calibrator Module	107mm
7077	Temperature and Process Calibrator Module	295mm
7061	Process Calibrator Module	285mm
7067	Precision Loop Calibrator Module	97mm
7069	V-I Loop Calibrator Module	97mm
7079	Loop Ancillaries Module	96mm

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