

## MC-1000

## High Accuracy Multi-Function Calibrator

### Description

The MC-1000 Multi-Function Calibrator provides the combination of a high accuracy calibrator and common DMM functions. This single instrument will calibrate virtually any process device — read and source thermocouples, RTDs, Ohms, Voltage, current, frequency, pressure — and test continuity as well. The MC-1000 is compatible with both Fluke 700 Series and BETA pressure modules with the addition of a simple connector/adaptor. The MC-1000 features a simple user interface, large display, and an RS232 interface.

### Features

- $\pm 0.4$  °C thermocouple/ $\pm 0.3$  °C RTD accuracy
- $\pm 0.015\%$  of reading electrical accuracy
- Ten (10) T/C types and eight (8) RTD types, plus YSI 400
- Read and source modes
- Full function 4 to 20 mA read, source, simulate, and read/power modes with  $\pm 0.015\%$  of reading accuracy
- Source or read 0 to 20 Volts ( $\pm 0.015\%$  of reading accuracy)
- Measure 0 to 250 VDC or VAC
- Direct keyboard entry enables quick output changes
- Store up to nine (9) setpoints for each output function
- RTD function compatible with all pulsed transmitters
- RS232 interface
- Supplied in full rubber boot



## MC-1000 Specifications (23 °C ±5 °C unless otherwise noted)

<b>Pressure Ranges</b>	
Various ranges in 29 different pressure modules – see separate Pressure Module data sheet	
<b>T/C Ranges</b>	J, K, T, E, R, S, N, B, L, U, including – 10 to 75 mV
<b>RTD Ranges</b>	Pt 385 (100, 200, 500, 1000 Ohms) Pt 392, JIS, Ni120, Cu10, YSI400
<b>Ohms Ranges</b>	0 to 400.00 and 400 to 3,200
<b>mA Range</b>	0 to 24.000 mA
<b>Voltage</b>	
(Low) Read	0-20.000 VDC
Source	0-20.000 VDC
(High) Read only	0-250 VDC or VAC
<b>Frequency</b>	
CPM	0.000 to 24.000 mA
Source	2.0 - 1,000.0
Measure	0.0 - 1,000.0
Hz	
Source	0 - 1,000
Measure	0.0 - 1,000.0
kHz	
Source	1.0 -10.0
Measure	0.00 -10.00
<b>Continuity</b>	
0 to 400.0 Ohms; audible tone when under 10 Ohms	
<b>Accuracy</b>	
[±x.x °C total error]	
T/C Type J	±0.3 °C ±10 µV; [±0.4 °C]
RTD Pt 100	±0.1 °C ±0.075 Ω ; [±0.3 °C]
Ohms (400)	±0.1 Ω
Ohms (3,200)	±1.0 Ω
<b>mA Compliance</b>	
Up to 1,000 Ω load	
<b>Voltage Drive Capability</b>	
1 mA	
<b>RTD IEX-Range</b>	
0.01 mA to 3 mA	
<b>RTD Frequency Response</b>	
10 ms – works with all pulsed transmitters	
<b>Environmental</b>	
Operating Temperature	-10 °C to +50 °C
Storage Temperature	-20 °C to 70 °C
<b>Power Requirements</b>	
6 VDC	
Batteries	4 AA alkaline batteries, 25 hours typical operating time
<b>Mechanical</b>	
Dimensions	8.7" H x 4.2" W x 2.3" D (220.9 x 106.6 x 58.4 mm)
Weight	30.5 ounces (863 gms)
<b>Accessories Included</b>	
Test leads, 4 AA alkaline batteries, NIST Certificate, and instruction manual	
<b>Optional Accessories</b>	
Carrying Case; Model CC572	

## Need more performance and features in the field?

### Try the MC-1200 Multi-Function Calibrator

Measure and source 13 T/C types, 13 RTD types, Ohms, current, voltage, frequency, and source pulse trains. Calibrate transmitters with the isolated mA/V read-back circuit. Measure pressure with BETA pressure modules. Drive 4-20 mA loops up to 1000 Ohms with the built-in 24 V supply. Directly enter custom RTD coefficients. Program dedicated setpoints in all source modes. Calibrate almost anything with the highest accuracy in its class — ±0.015% of reading!



## Measuring Pressure with the MC-1000

The MC-1000 is compatible with both Fluke 700 Series and BETA pressure modules, with the use of an adapter kit.\* Please refer to the separate Pressure Modules data sheet for module ranges and model numbers, as well as information about the adapter kit.

\*BetaPort Pressure Adapter, Model BPPA-100.

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