Martel Beta Process Calibrators

Multi-Function

MC–1200

- Measure and source T/Cs, RTDs, Ohms, current, voltage, frequency; source pulse trains
- Isolated mA/V read-back for complete transmitter calibration
- Pressure module communication port
- Built-in 24 V supply drives 4–20mA loops
- Direct entry of custom RTD coefficients
- All source modes can be programmed with setpoints to speed linearity tests
- Highest accuracy in class (to 0.015% rdg.)

SPECIFICATIONS

Read and Source	Voltage	Current (mA)
Source	0.000 to 20.000 VDC	0.000 to 24.000 mA
Read Isolated	0.000 to 30.000 VDC	0.000 to 24.000 mA
Read Non-isolated	0.000 to 20.000 VDC	0.000 to 24.000 mA
Accuracy	±0.015% of rdg ±2 µV	±0.015% of rdg ±2 µA

Frequency (1-20 V amplitude)	
CPM Source & Read	2.0 to 600.0 CPM
Hz Source & Read	1.0 to 1000.0 Hz
kHz Source & Read	1.0 to 10.00 kHz
Pulse Source (1-20 V amplitude)	
Pulses	1 to 30,000.0
Rate	2 CPM to 10 kHz

Read and Source	Range (Accuracy) °C
J	-200.0 to +1200.0 (0.2)
K	-200.0 to +1370.0 (0.3)
T	-200.0 to +400.0 (0.2)
E	-200.0 to +950.0 (0.2)
R	-20.0 to +1750.0 (1.2)
S	-20.0 to +1750.0 (1.2)
B	+600.0 to +1800.0 (1.2)
C	0 to +2316.0 (0.6)
XK	-200.0 to +800.0 (0.2)
BP	0 to +2500.0 (0.9)
L	-200.0 to +900.0 (0.2)
U	-200.0 to +400.0 (0.25)
N	-200.0 to +1300.0 (0.4)

Thermocouple mV	
Read & Source	-10.000 to +75.000 mV
Accuracy	±0.02% of rdg, ±10 µV
Ohms	
Source	5.0 to 4000Ω
Read	0.00 to 4000.0Ω

Read and Source	Range (Accuracy) °C
Ni120 (672)	-80.0 to +260.0 (0.2)
Pt100 (385)	-200.0 to +800.0 (0.2)
Pt100 (3926)	-200.0 to +630.0 (0.2)
Pt100 (3916)	-200.0 to +630.0 (0.2)
Pt200 (385)	-200.0 to +630.0 (0.8)
Pt500 (385)	-200.0 to +630.0 (0.4)
Pt1000 (385)	-200.0 to +630.0 (0.2)
Cu10	-100.0 to +260.0 (1.4)
YSI400	+15.00 to +50.00 (0.1)
Cu50	-180 to +200 (0.4)
Cu100	-180 to +200 (0.3)
Pt385-10	-200 to +800.0 (1.4)
Pt385-50	-200 to +800.0 (0.4)

Operating Temperature:	-10 °C to +50 °C
Stability:	±0.005% of reading/ °C outside 18-28 °C
Dimensions	8.7" x 4.2" x 2.3"

Universal Temperature

- Calibrate thermocouples and RTDs with one unit
- Works with smart (pulsed) transmitters
- Direct keyboard entry or scroll control
- 9 user-defined setpoints for each type
- Rugged NEMA 4X case
- High accuracy ±0.4°C J T/C, ±0.3°C 4w RTD
- Auto step function

PTC–8001

SPECIFICATIONS

Read & Source	Range
J	-200.0 to 1200.0
K	-200.0 to 1370.0
T	-200.0 to 400.0
E	-200.0 to 950.0
R	-20.0 to 1750.0
S	-20.0 to 1750.0
B	600.0 to1800.0
L	-200.0 to 900.0
U	-200.0 to 400.0
N	-200.0 to 1300.0
mV	-10.0 to 75.00

NI120 (672)	-80.0 to 260.0
Pt 100 (385)	-200.0 to 800.0
Pt 100 (3926)	-200.0 to 630.0
Pt 100 (3916)	-200.0 to 630.0
Pt 200 (385)	-200.0 to 630.0
Pt 500 (385)	-200.0 to 630.0
Pt 1000 (385)	-200.0 to 680.0
Cu10	-100.0 to 250.0
YSI400	15.0 to 50.0
Ohms	0.0 to 400.0, 400 to 3200
plus Pt 392, JIS, Ni120	

Connectors:	Standard mini-plug for T/C, banana jack for RTDs
Operating Temp.:	-10 to +50 °C
Dimensions:	8.7" H x 4.2" W x 2.3" D

ORDERING INFORMATION

MA/MC-1200	Multi-Function Calibrator with test leads, 4 AA batteries, NIST certificate
MA/PTC8001	Universal Temperature Calibrator with test leads, 4 AA batteries, NIST certificate
MA/IVC-222	HP11 Voltage/Current Calibrator with test leads, carrying case, 9V battery, NIST certificate
MA/TC-100	Thermocouple Calibrator with 9V battery, NIST certificate
MA/LC-100	Loop Calibrator with test leads, 9V battery, NIST certificate
MA/CC572	Carrying Case for PTC8001, MC-1200

A variety of temperature probes are available.

Loop Calibrator

- Simulates, powers & measures two-wire transmitters
- Five preset outputs (4, 8, 12, 16, 20 mA)
- 0.001 mA resolution
- Adjustment level knob
- % Error function eliminates manual calculation
- Measures loop power & Hart devices

LC-100

SPECIFICATIONS

Current Source & Measure	
Range:	0.000 to 24.000 mA, -25 to +125 %
Voltage (Reading):	0 to 28 VDC
Input Protection:	Fuseless, up to 250 VAC
Drive Capability:	1200Ω without Hart, 950Ω with Hart
Loop Supply:	24 VDC
Range Select:	Decade Incremental to 0.001 mA steps
Resolution:	1 µA
Accuracy:	±0.015% of reading ± 2 µA
Operating Temp.:	-10 to +55 °C
Dimensions:	5.7" x 3.15" x 1.43"

Thermocouple Calibrator

- 10 T/C types plus mV
- ±0.3°C accuracy (type J)
- Accepts T/C mini-plug & bare T/C wires
- 3 setpoints for each T/C type
- MIN/MAX recall in measure mode
- Input protection to 240 VAC

TC-100

SPECIFICATIONS

Voltage Source & Measure	
Range:	-10 to +75.000 mV
Resolution:	1 µV
Accuracy:	±0.007% of reading, ±10 µV
Output Impedance:	≤1 Ω
Input Impedance:	>1 MΩ
Thermocouple Source/Measure	
Types:	J, K, T, E, R, S, B, L, U, C
Resolution:	0.1°C or °F source
	0.01°C or °F measure
Operating Temp:	-10 °C to +55 °C
Dimensions:	5.7" x 3.15" x 1.43"

Voltage/Current Calibrator

- 0.015% of reading accuracy
- 200 mV, 2 V, 20 V and 24 mA ranges
- 24 V supply can drive 4-20 mA loops
- 2 stored setpoint values
- Intuitive, easy-to-use controls

IVC-222HPII

SPECIFICATIONS

Resolution	
Voltage:	0.01 mV, 0.0001 V, 0.001V
Current:	0.001 mA
Accuracy:	±0.015% of reading, ±2 count; 18 °C to 28 °C
Temp. Stability:	±0.005% FS/°C
Load Capability	
Voltage:	±1 mA for rated accuracy
Current:	1kΩ
Output Protection:	Current limited internal RESET
Operating Temp:	-10 °C to +55 °C
Dimensions:	1.43" x 3.15" x 5.7"