MULTIFUNCTION CALIBRATOR
PORTABLE, HIGH ACCURACY

OMEGA®

PCL1200 Series

1 YEAR WARRANTY

PCL1200, shown smaller than actual size.

Three sets of leads included!

- Measures and Sources T/C (13 Types), RTDs (13 Types), Ohms, Current, Voltage, Frequency
- Sources Pulse Trains
- Isolated mA/V Readback Circuit for Complete Transmitter Calibration
- Pressure Module Communication Port Compatible with OMEGA Pressure Modules
- Built-In 24V Supply Can Drive 4 to 20 mA Loops Up to 1000 Ω
- Direct Entry of Custom RTD Coefficients (R0, A, B, C)
- All Source Modes Can be Programmed with Dedicated Setpoints to Speed Calibration and Linearity Tests
- Highest Accuracy in Class—to 0.015% of Reading
- Meets CE Requirements and is Designed to IEC 1010 Safety Standards
- Supplied with Full Rubber Boot

The PCL1200 multifunction calibrator has a feature set unmatched by other high-accuracy handheld calibrators in its price range. It is portable, provides the functions and accuracy of a laboratory-grade instrument, and has everything needed for virtually any calibration task. It can also measure and source thermocouples, RTDs, current, voltage, and frequency, and it can source pulse trains. It has a communications port for pressure modules and an isolated mA/V readback circuit. Arrow keys, direct numeric keypad entry, and 3 software-driven function buttons combine with a large, backlit, menu-driven graphics display to provide a highly intuitive yet powerful interface. A built-in 250 Ω resistor for Hart compatibility, compatibility with smart transmitters and PLCs, full fuseless protection, and a serial communications port for control using ASCII commands are additional features that make the PCL1200 indispensable for calibration tasks. It comes with a tough rubber boot; an optional carrying case is available.

Measuring Pressure with the PCL1200

With a PCL-PMA pressure module adaptor, the PCL1200 will work with all OMEGA PCL-PM pressure modules. See Specifications and "To Order" chart.

Specifications

(23 ±5°C unless otherwise noted)

Operating Temperature: -10 to 50°C (14 to 122°F)

Storage Temperature: -20 to 70°C (-4 to 158°F)

Stability: ±0.005% rdg/°C outside of 23 ±5°C (73 ±9°F)

Cold Junction Compensation (Thermocouple) Error: ±0.2°C (0.4°F)

Power Requirements: 6 Vdc

Batteries: 4 "AA", alkaline (included)

Dimensions: 221 H x 107 W x 58 mm D (8.7 x 4.2 x 2.3")

Weight: 863 g (30.5 oz)

MULTIFUNCTION CALIBRATOR

TYPE	RANGE		ACCURACY	
VOLTAGE				
Source	0.000 to 20.000 Vdc		±0.015% rdg + 2 mV	
Read, Isolated	0.000 to 30.000 Vdc		±0.015% rdg + 2 mV	
Read, Non-Isolated	0.000 to 20.000 Vdc		±0.015% rdg + 2 mV	
THERMOCOUPLE mV				
Read/Source	-10.000 to 75.000 mV		±0.02% rdg + 10 µV	
CURRENT				
Read	0.000 to 24.000 mA		±0.015% rdg + 2 µA	
FREQUENCY (1 TO 20V SELECTABLE AMPLITUDE)				
CPM, Read	2.0 to 600.0 CPM		±0.05% rdg (+1 LSD read)	
Hz, Read	1.0 to 1000.0 Hz		±0.05% rdg (+1 LSD read)	
kHz, Read	1.00 to 10.00 kHz		±0.05% rdg +1 LSD	
kHz, Source	1.00 to 10.00 kHz		±0.250% rdg	
RESISTANCE (Ω)				
Read	0.00 to 4000.0 Ω		400Ω range: ±0.025% rdg + 0.05Ω 4000Ω range: ±0.025% rdg + 0.5Ω	
Source	5.0 to 4000 Ω			
THERMOCOUPLE				
J	-200.0 to 1200.0°C	-328.0 to 2192.0°F	0.2°C	0.4°F
K	-200.0 to 1370.0°C	-328.0 to 2498.0°F	0.3°C	0.5°F
T	-200.0 to 400.0°C	-328.0 to 752.0°F	0.2°C	0.4°F
E	-200 to 950°C	-328.0 to 1742.0°F	0.2°C	0.4°F
R	0.0 to 1750.0°C	32.0 to 3182.0°F	1.2°C	2.2°F
S	0.0 to 1750.0°C	32.0 to 3182.0°F	1.2°C	2.2°F
B	600.0 to 1800.0°C	1112.0 to 3272.0°F	1.2°C	2.2°F
C	0.0 to 2316.0°C	32.0 to 4200.0°F	0.6°C	1.1°F
XK	-200.0 to 800.0°C	-328.0 to 1472.0°F	0.2°C	0.4°F
BP	0.0 to 2500.0°C	32.0 to 4532.0°F	0.9°C	1.6°F
L	-200.0 to 900.0°C	-328.0 to 1652.0°F	0.2°C	0.4°F
U	-200.0 to 400.0°C	-328.0 to 752.0°F	0.25°C	0.45°F
N	-200.0 to 1300.0°C	-328.0 to 2372.0°F	0.4°C	0.7°F
RTD/THERMISTOR				
Ni120 (672)	-80.0 to 260.0°C	-112.0 to 500.0°F	0.2°C	0.4°F
Pt100 (385)	-200.0 to 800.0°C	-328.0 to 1472.0°F	0.2°C	0.4°F
Pt100 (3926)	-200.0 to 630.0°C	-328.0 to 1166.0°F	0.2°C	0.4°F
Pt100 (3916)	-200.0 to 630.0°C	-328.0 to 1166.0°F	0.2°C	0.4°F
Pt200 (385)	-200.0 to 630.0°C	-328.0 to 1166.0°F	0.8°C	1.4°F
Pt500 (385)	-200.0 to 630.0°C	-328.0 to 1166.0°F	0.4°C	0.7°F
Pt1000 (385)	-200.0 to 630.0°C	-328.0 to 1166.0°F	0.2°C	0.4°F
Cu10	-100.0 to 260.0°C	-148.0 to 500.0°F	1.4°C	2.5°F
Cu50	-180.0 to 200.0°C	-292.0 to 392.0°F	0.4°C	0.7°F
Cu100	-180.0 to 200.0°C	-292.0 to 392.0°F	0.3°C	0.5°F
Pt385-10	-200.0 to 800.0°C	-328.0 to 1472.0°F	1.4°C	2.5°F
Pt385-50	-200.0 to 800.0°C	-328.0 to 1472.0°F	0.4°C	0.7°C
400 Series Thermistor	15.00 to 50.00°C	15.00 to122.00°F	0.1°C	0.2°C

READBACK DISPLAY

The top half of the display is dedicated to readback from the device under test, or a pressure module.

MAIN DISPLAY

The lower half of the display is for all input and output combinations.

FUNCTION KEYS

Three software-controlled function keys; functions displayed over each button at bottom of display.

POWER ON/OFF

Turns power on/off. Auto shut-off button.

HOME KEY

HOME key displays main operating screen.

CLEAR ENTRY KEY

Allows clearing of entry.

NUMERIC KEYPAD

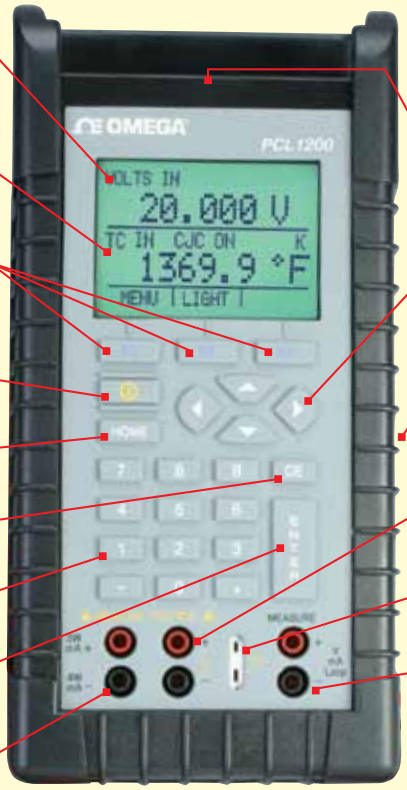
Rapid numeric entry of data values.

ENTER KEY

Accepts entries into memory and updates outputs.

CURRENT (mA)

Input/output for current.



PRESSURE MODULE COMMUNICATIONS PORT

Pressure modules connector; compatible with pressure modules (not shown). Pressure measurements from 1 inH_2O to 10,000 psi, module dependent.

ARROW KEYS

Arrow keys allow rapid movement of cursor and setting of output values.

COMPUTER COMMUNICATION CONNECTION

Mini-jack (stereo) serial communications connection. Allows full remote control.

VOLTAGE/Ω/Hz

Input/output for voltage/Ω/Hz.

THERMOCOUPLE

Input/output for thermocouple.

ISOLATED READBACK JACKS

Volts, mA, and mA with loop power.

To Order

MODEL NO.	DESCRIPTION
PCL1200	High-accuracy multifunction calibrator

MODULES – MOST POPULAR RANGES*

MODEL NO.	PARAMETER RANGE GAUGE psig	ACCURACY	OVERPRESSURE
PCL-PM030G	0 to 30 (0 to 2 bar)	±0.025%	300%
PCL-PM050G	0 to 50 (0 to 3.5 bar)	±0.03%	300%
PCL-PM100G	0 to 100 (0 to 7 bar)	±0.025%	300%
PCL-PM300G	0 to 300 (0 to 20 bar)	±0.025%	200%
PCL-PM1KG	0 to 1000 (0 to 70 bar)	±0.05%	200%
PCL-PM3KG	0 to 3000 (0 to 200 bar)	±0.1%	200%
PCL-PM5KG	0 to 5000 (0 to 340 bar)	±0.1%	200%
PCL-PM015VAC	0 to -15 (0 to -1 mbar)	±0.025%, ±0.0025 psi	300%
PCL-PM015A	0 to 15 (0 to 1 bar) absolute	±0.025%, ±0.0025 psi	300%
PCL-PM030A	0 to 30 (0 to 2 bar) absolute	±0.025%	300%
PCL-PM015C	-15 to 15 (-1 to 1 bar)	±0.025%, ±0.0025 psi	300%
PCL-PM030C	-15 to 30 (-1 to 2 bar)	±0.025%, ±0.0025 psi	300%
PCL-PM030D	0 to 30 (0 to 2 bar) differential	±0.025%	300%

** For all ranges consult sales.*

One PCL-PMA adaptor required for use of pressure modules.

***Note:** Gauge, absolute and compound types are isolated and accept any media compatible with 316 SS. Vacuum and differential types are compatible with pressure media that are clean, dry, non-corrosive air or gas.*

Comes complete with test leads, protective rubber boot, 1 Type K thermocouple with cable, 4 "AA" alkaline batteries, calibration certificate and operator's manual.

***Ordering Example: PCL1200,** high-accuracy multifunction calibrator. For pressure applications, order one **PCL-PMA** (required) plus the modules required. **Example: PCL-PMA,** pressure module adaptor, **PCL-PM030G,** 0 to 30 psig pressure module.*

***PCL-ACA-EU,** 230 vac 50 Hz European adaptor/charger.*

***PCL-ACA-J,** 120 vac 60 Hz Japan adaptor/charger*

***PCL-ACA-UK,** 230 vac 50 Hz UK adaptor/charger*

ACCESSORIES

MODEL NO.	DESCRIPTION
PCL-PMA	Pressure module adaptor (one required for pressure)
PCL-ACA	120 Vac adaptor