

HIGH-ACCURACY PRESSURE CALIBRATORS

SINGLE AND DUAL RANGE MODELS

PCL341 Series

Starts at
\$1495



PCL342-30 pressure calibrator complete with 4 "AA" batteries, test leads, soft case, and NIST calibration certificate, \$1895.



¼ FNPT ports for pressure use.

See page A-32 for available pressure modules.

- ✓ Triple Display: Pressure, Temperature, Process Voltage and Current
- ✓ Isolated, Stainless Steel Pressure Sensors with 0.025% FS Accuracy
- ✓ Temperature Compensation Ensures Accuracy in Field Applications
- ✓ External Connection Supports All OMEGA® PCL-PM Series Pressure Modules (25 Ranges) for Greater Measurement Capability
- ✓ Pt100 RTD Input for Temperature Measurement—Accurate to 0.1°C (0.2°F)
- ✓ Measures 4 to 20 mA Input
- ✓ Internal 24 V Loop Power Supply Can Power a Transmitter Under Test
- ✓ Measures Up to 30 Vdc
- ✓ Large, Graphic-Style LCD with Backlight

- ✓ Can Display Up to 3 Inputs Simultaneously (e.g., Pressure 1, Pressure 2, and RTD)
- ✓ Ideal for Gas Flow Calibration (Custody Transfer) Applications
- ✓ Switch Test on Pressure 1, Pressure 2, or External Pressure Module
- ✓ Operating-Mode Layers Support Both

- Simple and Complex Applications
- ✓ Up to 5-Setups Can be Stored; Last Setup Automatically Recalled on Power-Up
- ✓ % Error and Damping Functions
- ✓ Small, Rugged, Compact Design
- ✓ Operates on 4 Standard "AA" Batteries (Included)

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PRESSURE INSTRUMENTS

HIGH-ACCURACY PRESSURE CALIBRATORS

PCL340-030, \$1099,
see page A-27 for
more information.



See page A-32
for available
pressure
modules.

OMEGA's PCL341 and PCL342 set a new standard for handheld pressure calibrators. Both models have internal, isolated, stainless steel pressure sensors with 0.025% FS accuracy. For greater measurement capability, an external connection supports all OMEGA PCL-PM Series pressure modules. A Pt100 RTD input allows temperature readings accurate to 0.1°C (0.2°F) (One Pt100 RTD probe comes with the "-KIT" models). The PCL341 and PCL342 measure 4 to 20 mA loop current and up to 30 Vdc. An internal 24V loop power supply can power a transmitter under test.

The PCL342 can display up to 3 measurements simultaneously—for example, 3 pressure measurements. The ability to display 2 pressure readings along with an RTD temp makes the PCL342 ideal for gas flow calibration (custody transfer) applications.

The PCL341 is available in 9 ranges from 5 to 10,000 psig. The PCL342 comes in 2 standard ranges—15/1500 psi or 30/3000 psi—or the user can select 2 ranges from 5, 15, 100, 300, 500, 1000, 3000, 5000, or 10,000 psig. It also comes in a kit, which includes the PCL342 pressure calibrator, Pt100 RTD probe, 4 "AA" batteries, operator's manual, NIST-traceable certificate, test leads, and hard-sided carrying case.

SPECIFICATIONS

(18 to 28°C Unless Otherwise Noted)

General

Can store up to 5 setups; recalls last used on power-up

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

Storage Temperature: -20 to 60°C (-4 to 140°F)

Power Requirement: 6 Vdc

Batteries: 4 standard "AA" cells (included)

Battery Life: >35 hours, typical usage

Dimensions: 211 H x 99 W x 46 mm D
(8.3 x 3.9 x 1.8")

Weight: 0.57 kg (1.25 lb)

Connectors/Ports: Pressure one (PCL341) or two (PCL342), 1/8 NPT OMEGA-P pressure module and RTD

Ranges

Available Pressure (Select Any Two):

5, 15, 30, 100, 300, 500, 1000, 3000, 5000, 10,000 psi

mA: 0 to 24 mA

V: 0 to 30 Vdc

RTD: -40 to 105°C (-40 to 220°F)

Engineering Units (Keypad Selectable):

psi, bar, mbar, kPa, kg/cm², cmH₂O @ 4 or 20°C, mH₂O @ 4 or 20°C, inH₂O @ 4 or 20°C, inH₂O @ 60°F, mmHg, inHg, ftH₂O @ 4 or 20°C, or 60°F

Accuracy

Pressure: 15 to 3000 psi ±0.025% FS; for all ranges 5, 5000, 10,000 psi ±0.035% FS

mA: ±0.015% of rdg ±0.002 mA

V: ±0.015% of rdg ±0.002 V

RTD: ±0.015% of rdg ±0.02 Ω or ±0.1°C @ 0°C for Pt100

Temperature Effect: No effect on accuracy from 15 to 35°C. Add ±0.002% FS/°C for temps falling outside the 15 to 35°C range.

INTERNAL PRESSURE MODULE RANGES

psig	5.0000	15.000	30.000	100.00	300.00	500.00	1000.00	3000.0	5000.0	10,000.0
bar	0.7000	1.0342	2.0684	6.8947	20.684	34.474	68.9475	206.84	344.74	689.475
kPa	70.000	103.42	206.84	689.48	2068.4	3447.4	6894.75	20684	34474	68947.6



MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

MODEL NO.	PRICE	DESCRIPTION		
SINGLE PRESSURE SENSOR MODELS				
PCL341-005	\$1495	Pressure calibrator with one 5 psi sensor		
PCL341-015	1495	Pressure calibrator with one 15 psi sensor		
PCL341-030	1495	Pressure calibrator with one 30 psi sensor		
PCL341-100	1495	Pressure calibrator with one 100 psi sensor		
PCL341-300	1495	Pressure calibrator with one 300 psi sensor		
PCL341-500	1495	Pressure calibrator with one 500 psi sensor		
PCL341-1K	1495	Pressure calibrator with one 1000 psi sensor		
PCL341-3K	1495	Pressure calibrator with one 3000 psi sensor		
PCL341-5K	1495	Pressure calibrator with one 5000 psi sensor		
PCL341-10K	1495	Pressure calibrator with one 10,000 psi sensor		
DUAL PRESSURE SENSOR MODELS				
PCL342-15	\$1895	Pressure calibrator with 15 and 1500 psig sensor		
PCL342-30	1895	Pressure calibrator with 30 and 3000 psig sensor		
PCL342-[xxx/yyyy]*	1995	Pressure calibrator with user-specified pressure modules		
CALIBRATOR KITS				
PCL342-15-KIT	\$2195	Pressure calibrator kit with 15 and 1500 psig sensors		
PCL342-30-KIT	2195	Pressure calibrator kit with 30 and 3000 psig sensors		
PCL342-[xxx/yyyy]-KIT*	2295	Pressure calibrator kit with user-specified pressure modules		
EXTERNAL PRESSURE MODULES—MOST POPULAR RANGES**				
MODEL NO.	PRICE	PARAMETER RANGE GAGE (psig)	ACCURACY	OVERPRESSURE
PCL-PMA	\$310	Pressure module adaptor (one required)		
PCL-PM030G	795	0 to 30 (0 to 2 bar)	±0.025%	300%
PCL-PM050G	795	0 to 50 (0 to 3.5 bar)	±0.03%	300%
PCL-PM100G	795	0 to 100 (0 to 7 bar)	±0.025%	300%
PCL-PM300G	795	0 to 300 (0 to 20 bar)	±0.025%	200%
PCL-PM1KG	795	0 to 1000 (0 to 70 bar)	±0.05%	200%
PCL-PM3KG	795	0 to 3000 (0 to 200 bar)	±0.1%	200%
PCL-PM5KG	795	0 to 5000 (0 to 340 bar)	±0.1%	200%
PCL-PM015VAC	795	0 to -15 (0 to -1 mbar)	±0.025%, ±0.0025 psi	300%
PCL-PM015A	795	0 to 15 (0 to 1 bar) absolute	±0.025%, ±0.0025 psi	300%
PCL-PM030A	795	0 to 30 (0 to 2 bar) absolute	±0.025%	300%
PCL-PM015C	795	-15 to 15 (-1 to 1 bar)	±0.025%, ±0.0025 psi	300%
PCL-PM030C	795	-15 to 30 (-1 to 2 bar)	±0.025%, ±0.0025 psi	300%
PCL-PM030D	795	0 to 30 (0 to 2 bar) differential	±0.025%	300%



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PRESSURE INSTRUMENTS

* For PCL342-[xxx/yyyy], specify “-xxx” for low pressure and “-yyy” for high pressure.

** See page A-32 for all ranges.

Comes complete with soft case, batteries, manual, NIST-traceable certificate and test leads. Pressure calibrator kits include calibrator, RTD Pt100 probe, 4 “AA” batteries, operator’s manual, NIST-traceable certificate, test leads and hard-sided carrying case.

Note: Gage, 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.

Ordering Examples: PCL341-030, single sensor pressure calibrator, 30 psig sensor, \$1495.

PCL342-15, dual sensor pressure calibrator, 15 and 1500 psig internal sensors, \$1895.

PCL342-30-KIT, pressure calibrator kit with 30 and 3000 psi sensors, \$2195. For external pressure modules, specify 1 PCL-PMA adaptor and modules. **Example:** PCL-PMA, PCL-PM015A, 15 psi absolute pressure module, and PCL-PM030C, vacuum to 30 psig module, \$310 + 795 + 795 = \$1900.

Recommended Reference Book: The Industrial Electronics Handbook, EE-2454, \$190
See Section Y For Additional Books





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• Temperature

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• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters