



AMETEK CAL-PAL® Electronic Pressure Calibrator

- ❑ **Accurate to $\pm 0.1\%$ of Full Scale**
- ❑ **Measures and Displays Applied Pressure Plus:**
 - mA Output Signal
 - Automatic Switch Test
- ❑ **Selectable Engineering Units**
- ❑ **Three Models for Measuring Differential Pressure**
 - 0 to 10 PSI (0 to 0.7 bar)
 - 0 to 30 PSI (0 to 2.0 bar)
 - 0 to 200 PSI (0 to 14 bar)
- ❑ **Use with AMETEK Hand-held Pressure Pumps for Convenient, Easy-to-Use Calibration System**

PRODUCT DESCRIPTION

The AMETEK CAL-PAL Electronic Pressure Calibrator is a portable, self-contained instrument designed especially for accurate, convenient calibration of electronic pressure transmitters, transducers, switches, gauges and other pressure measuring instruments. When used in combination with an AMETEK Hand-held Pressure Pump, the CAL-PAL Calibrator serves as a complete, self-contained portable pressure calibration system.

As a system, the CAL-PAL instrument measures and displays applied pressure as well as the milliamp output signal of electronic transmitters or transducers under test. The instrument's easy-to-read LCD display indicates pressure in seven, user-selectable engineering units. The display supports four digits with floating decimal point resolution. Transmitter output is displayed in milliamp or percentage of 4-20mA. The instrument features an innovative cycling circuit which indicates pressure and transducer output signals at 4-second intervals.

The CAL-PAL calibrator also lets you test pressure switches using a built-in contact closure circuit. It may also be used as a precision digital test gauge to measure pressures with an accuracy of up to $\pm 0.1\%$ of full scale plus least significant digit, including hysteresis, linearity and repeatability.

The CAL-PAL calibrator is supplied with two 9Vdc alkaline batteries to supply approximately 40-hours of operation. The batteries are easily replaced. An "auto shut-off" feature extends battery life by automatically shutting off the instrument when the pressure stays near zero, or when no switches are touched for longer than 15 minutes. A built-in battery circuit prevents incorrect readings from insufficient power.

The CAL-PAL electronic calibrator is compact and ideal for field use. It comes with carrying case and test leads.

INSTRUMENT RANGES

Model	PSI	inches/H ₂ O	inches/Hg	Bar	kPa	kg/cm ²
CP-10	10	280	20	0.7	70	0.7
CP-30	30	850	60	2.0	200	2.1
CP-200	200	5500	400	14.0	1400	14.0

FUNCTIONAL SPECIFICATIONS

Accuracy

±0.1% of full scale plus least significant digit

Current Range

0 - 50mA

Resolution

Four digits with floating point decimal

Media Compatibility

Air, Nitrogen, H₂O, Natural Gas, Hydraulic Oil, Glycol
Consult AMETEK for other non-corrosive fluids

Over Pressure Protection

Gauge is protected by a preset relief valve



Model T-730 Pneumatic Pressure Tester

The T-730 Pressure Tester features a rugged pneumatic pump capable of generating test pressures up to 30 PSIG. Ideal for pressure instrument calibration, the Model T-730 tester can be hand-operated in the field or mounted on a test stand in the instrument shop. This tester features an extended range vernier adjustment for precisely controlling pump pressure and comfortable piston grip handle.

Model T-730 Pneumatic Pressure Tester

Accuracy

±0.5% of Gauge Span when purchased with AMETEK gauge

Operating Pressure (Maximum)

30 PSIG

Wetted Parts

Aluminum, Brass, Stainless Steel, NYLON® and NYLATRON GS®

“O” Rings

Buna-N

Test Connections

0.25-inch NPT, 24-inch (60.95cm) long hose

Weight (Approximate)

3.0 lbs (1.36 kg)

PHYSICAL SPECIFICATIONS

Temperature Range

30°F to 130°F (0°C to 55°C)

Temperature Effect

+0.01% of full scale per °C from 23°C (73°F)

Connections

Input pressure connection is 0.25-inch NPT

Battery

Two 9Vdc Alkaline

Approximately 40-hours battery life

Instrument displays “LOW-BATT” when batteries are in need of replacement

Weight

3 lbs (1.36 kg)

Overall Dimensions (H x W x D)

6.875 x 3.75 x 2.625-inches

17.7 x 9.6 x 6.7cm

Model T-740 Pneumatic Pressure Tester

Similar to the Model T-730 tester, the Model T-740 has the same features, except that it is capable of generating test pressures up to 200 PSIG.

Model T-740 Pneumatic Pressure Tester

Accuracy

±0.5% of Gauge Span when purchased with AMETEK gauge

Operating Pressure (Maximum)

200 PSIG

Wetted Parts

Aluminum, Brass, Stainless Steel, NYLON® and NYLATRON GS®

“O” Rings

Buna-N

Test Connections

0.25-inch NPT, 24-inch (60.95cm) long hose

Weight (Approximate)

3.0 lbs (1.36 kg)

ORDERING INFORMATION

CAL-PAL ELECTRONIC PRESSURE CALIBRATOR

Order Number	Description
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Base Number

CP-10	CAL-PAL Electronic Pressure Calibrator, 0 - 10 PSIG, includes test leads and carrying case
CP-30	CAL-PAL Electronic Pressure Calibrator, 0 - 30 PSIG, includes test leads and carrying case
CP-200	CAL-PAL Electronic Pressure Calibrator, 0 - 200 PSIG, includes test leads and carrying case

CPS-10	CAL-PAL Digital 0 - 10 PSIG Gauge with Model T-730 Pneumatic Hand Pump, includes test leads and carrying case
CPS-30	CAL-PAL Digital 0 - 30 PSIG Gauge with Model T-730 Pneumatic Hand Pump, includes test leads and carrying case
CPS-200	CAL-PAL Digital 0 - 200PSIG Gauge with Model T-740 Pneumatic Hand Pump, includes test leads and carrying case

Options

/C	Includes NIST certification and data
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Sample Order Number

CPS-30/C	CAL-PAL Digital 0 - 30 PSIG Gauge with Model T-730 Pneumatic Hand Pump, includes test leads and carrying case with NIST certification and data
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Accessories

Order Number	Description
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E80-444	CAL-PAL Test Leads
E80-435	Membrane Keypad
T-733	Coiled Hose
T-733-10	Uncoiled Hose
E19-095	Soft Carrying Case
E80-445	Hard Case for CAL-PAL System

AMETEK

TEST AND CALIBRATION INSTRUMENTS

AMETEK is a leading global manufacturer of electrical and electromechanical products for niche markets. Listed on the New York Stock Exchange (AME) since 1930, AMETEK's annual sales are approaching \$1 billion. Operations are in North America, Europe and Asia, with about one-third of sales to markets outside the United States.

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