

# Quik-touch™ 1118

## PRESSURE CALIBRATOR

- **Fast, Accurate Results**
- **Selectable Engineering Units**
- **Pressure Switch Testing Built-In**
- **Full Scale Accuracy of 0.05%+ 1 Digit**
- **Five Digit Resolution**
- **100 Hour Battery Life with Automatic Shut-off**
- **Easy to Carry, Easy to Use**



The Altek Quik-touch 1118 Pressure Calibrator is a precision electronic instrument to accurately measure and display pressure in all popular engineering units. In addition, the hand-held unit tests and calibrates pressure switches.

Top-mounted NPT fittings allow simple installation to all common process connections. Easily replaceable AA alkaline batteries provide extended service life. Selectable engineering units replace a variety of gauges. Four front panel keys allow fast, simple operation. The full-function five-digit liquid crystal display automatically indicates the measured pressure mode, pressure units, and error conditions.

*Do not discard these instructions.*

*The information provided in this document is essential to safe, proper equipment operation and maintenance.*

### Ranges/Resolution

Pressure Range psi	Full Scale Pressure kPa	Full Scale Pressure mBAR	Full Scale Pressure BAR	Full Scale Pressure Kgf	Full Scale Pressure Inches Hg	Full Scale Pressure mm Hg	Full Scale Pressure Inches H <sub>2</sub> O	Full Scale Pressure mm H <sub>2</sub> O
10.000*	70.00	700.0	NA	NA	20.000	500.0	270.00	7000
30.000*	200.00	2000.0	2.0000	2.0000	60.00	1500.0	830.0	20,000
100.00*	700.0	7000	7.000	7.000	200.00	5000	2700.0	NA
300.00	2000.0	20,000	20.000	20.000	600.0	15,000	8300	NA
1000.0	7000	NA	70.0	70.0	2000.0	NA	NA	NA
2000.0	14,000	NA	140.00	140.00	4000.0	NA	NA	NA

\*Non-isolated sensors

ALTEK INDUSTRIES CORP  
A TRANSMATION COMPANY

35 Vantage Point Drive Rochester, New York 14624 U.S.A.  
(716) 349-3500 • Fax (716) 349-3510

E-Mail: [alteksales@altekcalibrators.com](mailto:alteksales@altekcalibrators.com) • <http://www.altekcalibrators.com>

# OPERATING INSTRUCTIONS

## Safety Considerations

- It is imperative that all system pressure is relieved prior to making any connections or disconnections. Failure to relieve system pressure could result in serious personal injury and/or equipment damage.
- Always exercise standard physical protection practices (i.e., eye protection, gloves, protective clothing, etc.) when working around pressure devices.

## Connections

Connect the Quik-touch 1118 to the line or device under test via the pressure input port(s) at the top of the case. External air supply fittings must be installed in the pressure input port(s) bulkhead fitting. For 10-100 psi range units, this is a 1/8"-27 NPT female thread. For 300-2000 psi range units, this is a 1/4"-18 NPT female thread.

To install the fitting:

- 1) Wrap the supply fitting threads with two turns of Teflon tape.
- 2) Securely tighten the supply fitting. Use a 5/8" open-end wrench on the differential input port or a 7/8" open-end wrench on the isolated port to prevent it from rotating while the supply fitting is being tightened.

## Operating Modes

The Quik-touch 1118 features two operating modes:

- **Pressure Measurement mode:** In this mode, pressure is measured and displayed. This is the default mode when the calibrator is turned on unless another mode is specified.

- **Setup mode:** This mode is enabled by pressing and holding the **Reset** key while turning on the calibrator. Release the **Reset** key when AUTO appears on the display. To exit the Setup mode and return to the Pressure Measurement mode, press the **Reset** key.

This mode permits the Battery Save and Zero Key Enable features to be turned on or off (the factory default is ON for both). When the Setup mode is enabled, AUTO and the current state of the Battery Save feature (ON or OFF) will be displayed. Press the **Units** key to toggle the Battery Save feature on or off. Press the **Reset** key to save the displayed Battery Save state and return to the Pressure Measurement mode. Alternately, press the **Zero** key to save the displayed Battery Save state and display the current state of the Zero Key Enable feature (ON or OFF). Press the **Zero** key to toggle the Zero Key Enable feature on or off. Press the **Reset** key to save the displayed Zero Key Enable state and return to the Pressure Measurement mode.

## Function Keys

The Quik-touch 1118 keypad contains four function keys

- **Power key:** This key turns the calibrator on or off. When the calibrator is turned on, the measured pressure will be displayed. The engineering units that were in use when the calibrator was turned off will be indicated.

If the Battery Save feature is enabled via the Setup mode, the calibrator will turn itself off approximately 15 minutes after the last key is pressed.

- **Zero key:** If this key is pressed while the Pressure Measurement mode is enabled, the current pressure is stored as the "zero" value. This value is then subtracted from all subsequent display readings. This value is retained even when calibrator power is turned off.

If this key is pressed immediately after pressing the **Reset** key, the Factory "zero" value is recalled.

In Setup mode, pressing this key will toggle the Zero Key Enable feature on and off.

- **Units key:** This key scrolls through the list of available engineering units. The display will update to indicate the selected units and the displayed pressure value will be converted to the selected engineering units. If the selected engineering units are not appropriate for the calibrator's range (i.e., mm H<sub>2</sub>O on a 0-2000 psi calibrator), five dashes ("----") will appear on the display. The selected engineering unit will remain in use until a new one is selected, even when calibrator power is turned off.

If this key is pressed while the Setup mode is enabled, the Battery Save feature will toggle on and off.

- **Reset key:** When the switch test input changes state, the display will "freeze" to lock in the pressure reading. Pressing this key resumes normal calibrator operation.

If this key is pressed immediately before pressing the **Zero** key, the Factory "zero" value is recalled.

# OPERATING INSTRUCTIONS

## Display

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The five-digit liquid crystal display indicates the pressure value, various operating legends, and error messages. In Pressure Measurement mode, the measured pressure value and the selected engineering units will be displayed. When in Setup mode, SETUP will be displayed.

When an error condition is detected, a fault legend will be displayed. BATTERY will be displayed if the battery voltage is low. OVR will appear on the display instead of the engineering units if the input pressure is outside the range of the calibrator. ERROR will be displayed if the input pressure is too large to be displayed. If the selected engineering units are inappropriate for the calibrator's range (i.e., mm H<sub>2</sub>O on a 0-2000 psi calibrator), five dashes ("-----") will be displayed.

## Switch Testing

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The switch test feature is a "dry circuit" test. No external power should be connected to the switch being tested. To use the switch test feature:

- 1) Connect the electrical contacts of the switch being tested to the jacks on the front of the Quik-touch 1118.
- 2) Connect the pressure input of the switch being tested to the pressure input port on the Quik-touch 1118 and to a source of pressure.
- 3) Slowly change the pressure.
- 4) The display will continuously indicate the pressure until the switch opens or closes. When the switch changes state, the display will freeze, indicating the pressure just as the switch changed state. The display will indicate OPN if the switch is open or CLS if the switch is closed.
- 5) Press the Reset key to return the Quik-touch 1118 to normal operation.

## Replacing the Batteries

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The Quik-touch 1118 is powered by four AA batteries. When battery voltage is low, BATTERY will be indicated on the display. To replace the batteries:

- 1) Remove the two screws from the lower rear of the calibrator.
- 2) Remove the rear cover.
- 3) Remove the batteries from the battery clips.
- 4) Install fresh AA batteries, with the proper polarity, in the battery clips. (Alkaline batteries provide the longest service life.)
- 5) Install the rear cover.
- 6) Replace the two screws on the rear of the calibrator.

## SPECIFICATIONS

(Unless otherwise indicated, specifications are referred to an ambient temperature of 23°C ±1°C (72°F ±2°F))

Pressure Ranges/Resolution:	See Table on page 1
Sensor Types:	
10-100 psi ranges:	Differential, non-isolated
300-2000 psi ranges:	Isolated
Calibrated Accuracy:	±0.05% of full scale ± 1 LSD
Switch Test (dry circuit only):	Display will freeze when switch test input changes state; normal operation is resumed when Reset key is pressed
Maximum Indicated Pressure:	At least 105% of full scale
Overload Safe:	200% of full scale on pressure input; 250 VAC on switch test input
Operating Temperature:	-9°C to 50°C (15°F to 122°F)
Storage Temperature:	-28°C to 85°C (-20°F to 185°F)
Media Compatibility:	
10-100 psi ranges:	Any gas or liquid compatible with glass, ceramic, silicon, RTV, and nickel
300-2000 psi ranges:	Any gas or liquid compatible with 316 stainless steel
Pressure Connection:	
10-100 psi ranges:	1/8"-27 NPT female bulkhead fitting
300-2000 psi ranges:	1/4"-18 NPT female bulkhead fitting
Engineering Units:	psi, KPa, Bar, mBar, kgF/cm <sup>2</sup> , mm Hg, inches Hg, mm H <sub>2</sub> O*, inches H <sub>2</sub> O* (*Reference temperature = 20°C [68°F])
Zero Adjustment:	Via front panel pushbutton, ±10% of full scale
Display:	5-digit LCD with status indicators
Power:	Four AA alkaline batteries
Battery Life (typical):	100 powered hours; automatic shutoff after 15 minutes (user defeatable)
Size (HWD):	170 mm x 82 mm x 44 mm (6.75" x 3.25" x 1.75")
Weight:	0.43 kg (15 oz.)

## ADDITIONAL INFORMATION

### Three Year Warranty

Our equipment is guaranteed against defective material and workmanship when pressure and pressure media limits have been observed (excluding batteries) for a period of one year from date of shipment. Claims under guarantee can be made by returning the equipment prepaid to our factory. The equipment will be replaced, repaired or adjusted at our option. The liability of Altek is restricted to that given under our guarantee. No responsibility is accepted for damage, loss or other expense incurred through sale or use of our equipment. Under no condition shall Altek be held liable for any special, incidental or consequential damage.

No calibrator will be accepted for service unless all process materials have been completely removed from all components by the customer. Contaminated calibrators will be returned to the customer for proper cleaning.

### Other Products

Altek designs and manufactures fast, accurate instruments for measurement, generation and simulation of virtually every process control signal. Consult our factory directly or contact your local stocking representative to order precise, low cost Milliamp Calibrators, Voltage Sources, Thermocouple Sources, RTD Simulators, Frequency Calibrators and Pressure Pumps, Indicators & Calibrators. Altek also produces calibrators for custom ranges and unique applications. New models are frequently added to the Altek family to meet all of your critical calibration requirements. Altek products are made in the USA.

### Ordering Information

	Part No.
<b>Pressure Calibrator 10 psi</b>	<b>1118-10</b>
<b>Pressure Calibrator 30 psi</b>	<b>1118-30</b>
<b>Pressure Calibrator 100 psi</b>	<b>1118-100</b>
<b>Pressure Calibrator 300 psi</b>	<b>1118-300</b>
<b>Pressure Calibrator 1000 psi</b>	<b>1118-1000</b>
<b>Pressure Calibrator 2000 psi</b>	<b>1118-2000</b>

Included with each Quik-touch 1118 are:

- 1 Set of test leads with alligator clips
- Carrying Case
- Data Sheet
- NIST Traceable Certificate and One Year Warranty

### Available From