

High Accuracy, Wide Range LCR Meter with LCD Readout

- 0.02% Basic accuracy
- Wide measurement Ranges for Capacitors, Resistors and Inductors
- Menus and parameters are displayed on an easy to read 320x 240 Graphics LCD with backlight
- Measurement Rates to 12 times per second
- 500 Test Frequencies from 12Hz to 100KHz
- Open and short-circuit compensation for accurate zeroing
- Binning and Pass/Fail operation
- Measurement averaging from 1 to 255
- Optional GPIB and handler interface
- LCD displays measured values, Q/D, Absolute Δ and $\% \Delta$



Z9218

SPECIFICATIONS

Measured Components

L(Inductance),C(Capacitance), R(Resistance)

Measurement Circuit configurations:

Series and Parallel

Measurements

Resistance:

Measured Parameter: R+Q

Measurement Ranges:

R: 10 $\mu\Omega$ to 100M Ω
Q: 0.0001 to 9,999

Inductance:

Measured Parameter: L+Q

Measurement Range:

L: 0.01 μ H to 99,999 H
Q: 0.0001 to 9,999

Capacitance:

Measured Parameters: C+D and C+R

Measurement Range:

C: 0.00001pF to 99,999 μ F
D: 0.0001 to 9,999
R: 0.0001 Ω to 9,999K Ω

Display

Display Type: 320x 240 Graphics LCD W/Backlight

Display value: 5 digit LCR and a 4 digit Q/D measurement

Parameters Displayed: Measured values, absolute Δ and $\% \Delta$

Test Environment

Test Frequencies: 500 test frequencies from 12Hz to 100KHz

Test Voltage: 5mV to 1.275V in 5mV increments

Test Voltage Accuracy: $\pm(5\% + 5mV)$ (1 + 001 x F2)

Measurement rates:

Slow: 1 Meas/sec
Medium: 5 Meas/sec
Fast: 12 Meas/sec

Measurement Delay: from 1ms to 99,999ms

Ranging: Auto or Manual.

DC Bias: Internal: 2V, External: 0 to 60V

Triggering: Continuous or Triggered

Zeroing correction: Open and short circuit

Averaging: 1 to 255 Avgs

Measurement Accuracy

Basic accuracy: $\pm >0.02\%$ at 23°C $\pm 5^\circ\text{C}$ (73°F $\pm 9^\circ\text{F}$),
(See user manual for all accuracy conditions)

Remote Operation: GPIB and Handler (Optional)

General Specifications

AC Voltage input: 120 or 220 Volts

Frequency: 50/60 Hz

Power Consumption: 20Watts (Max)

Operating Temperature:

0 to 50°C (32 to 122°F) at $\leq 85\%$ Relative Humidity

Size: 5.5" (H) x 15" (W) x 18" (D)

Weight: 17.6 lbs

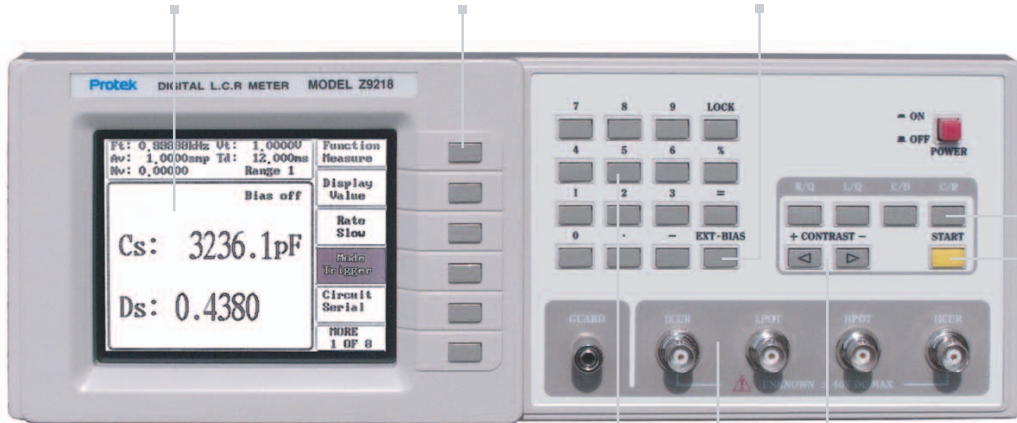
Accessories: Manual, Line Cord, Kelvin leads with bag, GPIB Handler (Optional)

320 x 240 pixel LCD for displaying the component value along with its Q or D value in a absolute, Δ or $\% \Delta$ display. Test Frequency, Test voltage, Circuit mode, Number of averages, Binning and the Soft Keys for selecting these parameters are also displayed.

The function Keys select the operating parameters displayed on the LCD. Trigger mode, Measurement rate, Component value in absolute, Δ or $\% \Delta$ are some of the functions that may be selected.

EXT Bias key when in the C+D or C+R mode allows an external bias voltage up to 60V to be applied to the capacitor under test. This is normally used to stabilize a High value Electrolytic for an accurate reading.

Selects the type of component and parameter to be measured. R&Q, L&Q, C&D, C&R or Auto may be selected.



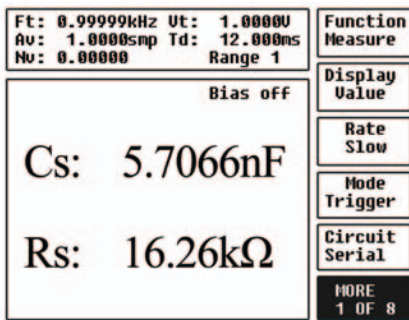
Numeric keyboard for entering Test Frequency, Voltage values, Number of averages, Cal Data Measurement delay and Nominal values.

Four wire input: 2 inputs supply the drive signal and 2 inputs are for input sensing, thereby removing errors caused by lead length.

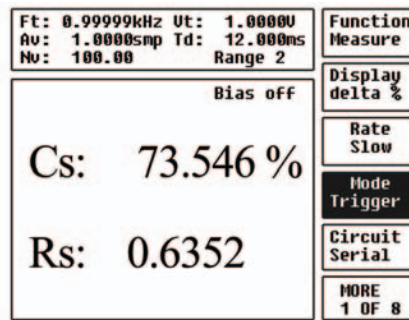
These two keys are used to adjust the contrast of the LCD display.

The start key initiates a measurement in the triggered mode.

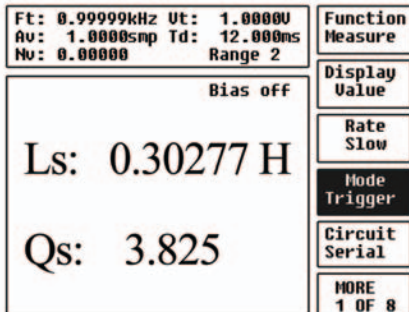
SCREENS



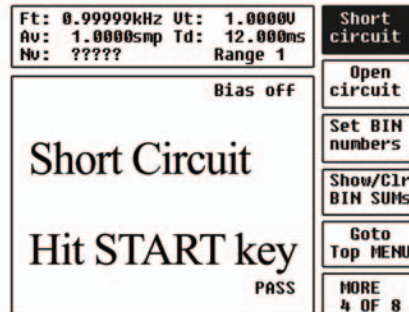
C/R MEASUREMENT SCREEN



C/R $\Delta\%$ MEASUREMENT SCREEN



L/Q MEASUREMENT SCREEN



SHORT CIRCUIT CALIBRATION SCREEN