

LCR Meter

Protek 9216A

Protek 9216A is a useful tool measuring a device characteristics with various functions. It has more than 13 orders of magnitude, basic accuracy of 0.05% and 5 test frequencies.



Features

- Basic accuracy of 0.05%
- 5 Test frequencies
- Store up to 9 setups in the memory
- Remote over RS -232C

Standard Accessories

- Radial Fixture
- DB25 male connector

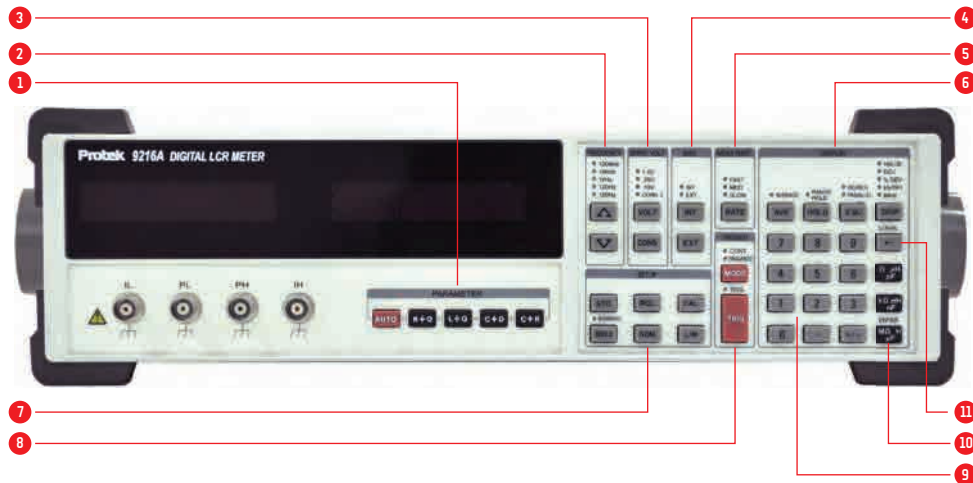
Optional Accessories

- Kelvin Clips
- SMD Tweezers



Specification

1	Measurement Modes	Auto, R+Q, L+Q, C+D, C+R
	Equivalent Circuit	Serial or Parallel
2	Parameters Displayed	Value, Deviation, % Deviation or Bin Number. Deviation and % deviation are calculated from a stored relative value.
3	Averaging	2 ~ 10 Measurement
4	Measurement Range	R+Q R 0.0001Ω ~ 2000Ω Q 0.00001 ~ 50 L+Q L 0.0001μH ~ 99999H Q 0.00001 ~ 50 C+D C 0.0001pF ~ 99999μF D 0.00001 ~ 10 C+R C 0.0001pF ~ 99999μf R 0.00001 ~ 99999KΩ
5	Test Frequency	100Hz, 120Hz, 1KHz, 10KHz, 100KHz
6	Frequency Accuracy	±100ppm
7	Drive Voltage	0.1V, 0.25V, 1Vrms
8	Drive Level Accuracy	±2%
9	Measurement Rate	Slow, Medium, Fast: 2, 10 or 20 measurements per second at test frequencies of 1KHz and above and about 0.6, 2.4 or 6 measurements per second at 100Hz and 120Hz.
10	Ranging	Auto or Manual
11	Triggering	Through External Trigger, Continuous, Manual or Remote over RS232 interface
12	Bias Voltage	Internal ==> 2.0VDC ±2% External ==> 0 to +40VDC (fused@0.25A)
13	Conditions	At least 30 minute warm up, 23°C±5°C
14	Basic Accuracy	0.05%



1 PARAMETER

AUTO : This switch causes the most appropriate parameter to be selected and measured automatically.

R+Q : $|Q| < +0.125$

L+Q : $Q > +0.125$

C+Q : $Q < -0.125$ at Serial mode

C+D : $Q < -0.125$ at parallel mode

(R+Q = Resistance + Quality Factor

L+Q = Inductance + Quality Factor

C+D = Capacitance + 1/Q

C+R = Capacitance + Resistance

2 FREQUENCY

$\Delta \nabla$: The output frequency is one of five fixed frequencies (100Hz, 120Hz, 1KHz, 10KHz, 100KHz) and is accurate to 100ppm (0.01%)

3 DRIVE VOLT

VOT: The VOLT key cycles through the three preset output drive voltage options.

CONS: This button can set the meter in the constant voltage mode.

4 BIAS

This bias mode is used only for capacitance measurements. If you press these buttons incorrectly, the error message 'bias for c' is displayed.

INT: Internal button selects a 2.0VDC Internal bias

EXT: It can select an external bias mode(0V~40V)

5 MEAS RATE

RATE: Selects slow, medium, or fast measurement rates (2, 10, or 20 Measurements per second at measurement frequency 1kHz or higher).

6 DISPLAY

AVR: User can choose to average from 2 to 10 measurements with this button.

HOLD: This button holds the meter in its current measurement range.

EQU: This button toggles equivalent circuit between a series or parallel.

DISP: This button selects the parameter on the display. you can select following display types.

VALUE: Display the value of the measurement.

DEV: The deviation of the value from an entered value.

%DEV: The percent deviation from the nominal.

ENTRY: for entering parameter values.

BINS: Selects the bin number when binning is enabled.

7 SETUP

STO, RCL: These buttons can store and recall up to 9 setups in the memory.

CAL: This button acts as a calibrate mode and special configurable parameter.

BIN#, NOM, LIM: These buttons are used to enter binning parameters.

8 TRIGGER

MODE: This button selects between continuous (CONT) or triggered (TRIGGERED) measurement.

TRIG: Under the Trigger mode, when it presses, it measures one at a time.

9 [0],...[9]

These numeric buttons enter parameters and are only active when the meter is in the 'ENTRY' mode.

10 ENTER

These three buttons are used when entering numeric parameters in the entry mode, & acts as a general purpose ENTER button.

11 ←

Correcting mistakes when entering numeric data, and also serves as the 'LOCAL' function.