

# LCR Meter SM5118



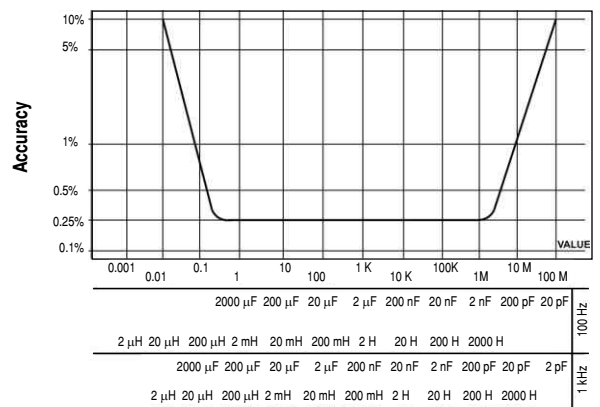
## Technical Specifications (Reference Temperature 23 °C ± 5 °C)

<b>Measurement Modes</b>	: Auto/ Manual L, C, R, Z, Q, D, $\theta$
<b>Equivalent Circuit</b>	: Series or Parallel
<b>Measurement Ranges</b>	: Auto or Manual
<b>L</b>	: 0.1 $\mu$ H to 9999 H, Resolution 0.1 $\mu$ H
<b>C</b>	: 0.1 pF to 9999 $\mu$ F, Resolution 0.1 pF
<b>R</b>	: 0.001 $\Omega$ to 100 M $\Omega$ , Resolution 0.001 $\Omega$
<b>Z</b>	: 0.001 $\Omega$ to 100 M $\Omega$ , Resolution 0.001 $\Omega$
<b>Q</b>	: 0 to 99
<b>D</b>	: 0 to 10
<b><math>\theta</math></b>	: -180° to +180°
<b>Test Conditions</b>	
<b>Test Frequency</b>	: 100 Hz/ 1 kHz
<b>Test voltage</b>	: 0.3 Vrms
<b>Measurement Speed</b>	: 2 Meas/ sec
<b>Measurement Accuracy</b>	: $\pm 0.25\% \pm 1$ digit, accuracy varies with range & frequency selected, (after 30 min. warm up period)
<b>Accuracy of Test Frequency</b>	: 0.025%
<b>Condition For Basic Accuracy</b>	
<b>L</b>	: 2 mH to 2000 H, Q > 10, at 100 Hz : 200 $\mu$ H to 200 H, Q > 10, at 1 kHz
<b>C</b>	: 2 nF to 2000 $\mu$ F, D < 0.1, at 100 Hz : 200 pF to 200 $\mu$ F, D < 0.1, at 1 kHz
<b>R</b>	: 1 $\Omega$ to 2 M $\Omega$ , Q < 0.1, at 100 Hz : 1 $\Omega$ to 2 M $\Omega$ , Q < 0.1, at 1 kHz
<b>Connection</b>	: 4-wire Kelvin on BNC guarded connector for probes & fixtures connections
<b>Recommended Circuit Mode</b>	
<b>L</b>	: 0.1 $\mu$ H to 9999 H, series mode
<b>C</b>	: > 1 $\mu$ F (elect), series mode : Any non elect ( $\leq 1$ $\mu$ F elect), Parallel Mode
<b>R</b>	: $\leq 10$ k $\Omega$ , series mode : $\geq 10$ k $\Omega$ , Parallel Mode

- Comprehensive range of functions, L, C, R, Z, Q, D,  $\theta$
- Measurement accuracy 0.25%
- Test frequency standard 100 Hz / 1 kHz
- Series or parallel mode
- Auto ranging & Auto computing
- Low accuracy prompt
- 4 point measurement technique
- Front panel zero compensation
- Compact & low cost

- Zero Compensation** : Auto calibration on each frequency,  
**Open or Closed:** limits compensation  
**Closed:** R < 14  $\Omega$ , |Z| < 14  $\Omega$   
**Open:** |Z| > 1 M $\Omega$
- Low Accuracy Prompt** : Range indicating LED flashing for value which can be displayed but cannot be measured to basic accuracy
- Hold** : Disable auto range to measure large quantity of components within particular range
- DC Bias** : Internal 2 VDC or external 50 VDC for electrolytic capacitor.
- General Information**
- Display** : 4 digits 12.5 mm, 7 segment LED display & units' LEDs
- Operating Conditions** : 0-45 °C, RH 95%
- Supply** : 230 V  $\pm$  10%, 50 Hz
- Power Consumption** :  $\leq 6$  VA
- Dimensions** : W 205, H 95, D 292 mm
- Weight** : 1.82 kg (approx.)
- Accessories**
- Standard** : Operating manual, BNC to Kelvin probe, detachable mains cord, spare fuse (Subject to change)

Basic Accuracy Graph



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