Measurement range: 20 Hz to 200 kHz (69 steps)
Basic accuracy: 0.05%
Measurement rate: up to 12 values per second
Automatic or manual selection of circuit type (serial, parallel)
Transformer measurement: mutual inductance and ratio
Tunable DC BIAS (voltage / current):
- internal: 0V to 5V/0 mA to 200 mA [resolution: 10 mV/1 mA]
- external: 0V to 40 V (voltage BIAS only)
RS-232/USB dual interface for remote control
Fanless design
**LCR Bridge HM8118**

All data valid at 23°C after 30 minutes warm-up.

### Conditions

- **Test signal voltage:** 1 V
- **Open and short corrections performed**
- **Measurement time:** SLOW

### Display

- **Measurement modes:** Auto, L-Q, L-R, C-D, C-R, Z-Θ, Y-Θ, R-X, G-B, N-Θ, M
- **Equivalent circuits:** Auto, series or parallel
- **Parameters displayed:** Value, deviation or % deviation
- **Averaging:** 2 to 99 measurements

### Accuracy

**Primary parameters:**

<table>
<thead>
<tr>
<th>Impedance (Ω)</th>
<th>100MΩ</th>
<th>4MΩ</th>
<th>1MΩ</th>
<th>25kΩ</th>
<th>100kΩ</th>
<th>2.5kΩ</th>
<th>0.1MΩ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2% +</td>
<td>I</td>
<td>Z</td>
<td>/1.5Ω</td>
<td></td>
<td>0.5% +</td>
<td>I</td>
<td>Z</td>
</tr>
<tr>
<td>0.05% +</td>
<td>I</td>
<td>Z</td>
<td>/20Ω</td>
<td></td>
<td>0.1% +</td>
<td>I</td>
<td>Z</td>
</tr>
<tr>
<td>0.1% +</td>
<td>l</td>
<td>Ω/</td>
<td>I</td>
<td>Z</td>
<td></td>
<td>0.2% +</td>
<td>2mΩ/</td>
</tr>
<tr>
<td>0.3% +</td>
<td>l</td>
<td>Ω/</td>
<td>I</td>
<td>Z</td>
<td></td>
<td>0.5% +</td>
<td>2mΩ/</td>
</tr>
</tbody>
</table>

**Secondary parameters:**

- **Basic accuracy:** D, Q: ±0.0001 @ f = 1 kHz
- **Phase angle:** ±0.005° @ f = 1 kHz

### Ranges

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.01mΩ to 100MΩ</td>
<td>10nS to 1,000Ω</td>
<td>0.01 μA to 100 μA</td>
</tr>
<tr>
<td></td>
<td>10 nH to 100 kHz</td>
<td>10 μA to 10 mA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.0001 to 9,999</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.1 to 9,999</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-180° to +180°</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-99.99% to 99.99%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 μH to 100H</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.95 to 500</td>
<td></td>
</tr>
</tbody>
</table>

### Other instrument functions

- **Test frequency:** 20 Hz to 200 kHz (69 steps)
- **Frequency accuracy:** ±100 ppm
- **AC test signal level:** 50 mVrms to 1.5 Vrms
- **Resolution:** 10mVrms
- **Drive level accuracy:** ±0.05% + 5mV
- **Internal bias voltage:** 0Vrms to 40Vrms (fused 0.5A)
- **Internal bias current:** 0mA to -200mA
- **Resolution:** 1mA
- **Range selection:** Auto and hold
- **Trigger:** Continuous, manual or external via interface, binning interface or trigger input
- **Trigger delay time:** 0 ms to 999 ms in 1 ms steps
- **Measurement time (f ≥ 1 kHz):**
  - FAST: 70 ms
  - MEDIUM: 125 ms
  - SLOW: 0.7 s

### Accessories supplied:

- Line cord, printed operating manual, HZ184 4-terminal kelvin test cable and HZ188 4-terminal SMD component test fixture, CD
- Recommended accessories:
  - HD118 Binning interface
  - HO880 Interface IEEE-488 (GPIB), galvanically isolated
  - HZ13 Interface cable (USB) 1.8m
  - HZ14 Interface cable (serial) 1:1
  - HZ33 Test cable 50Ω, BNC/BNC, 0.5m
  - HZ34 Test cable 50Ω, BNC/BNC, 1.0m
  - HZ42 19" rackmount kit 2RU
  - HZ72 GPIB-cable 2m
  - HZ181 4-terminal test fixture including shorting plate
  - HZ186 4-terminal transformer test cable