

# PM6306 PROGRAMMABLE AUTOMATIC RCL METER

DC - 1MHz

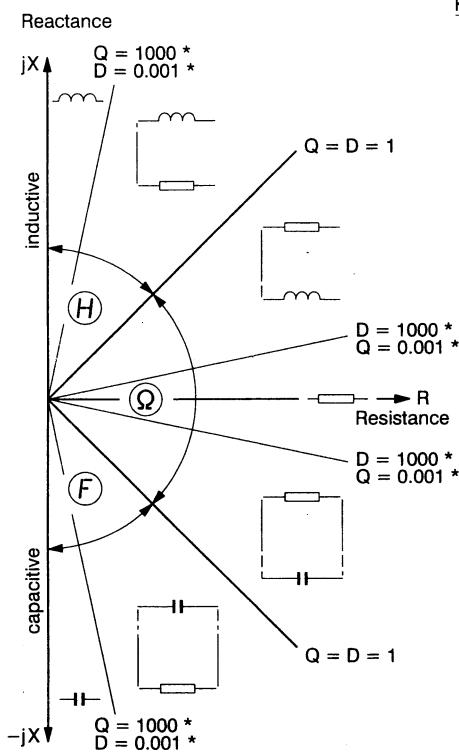
**Operating Card**

4822 872 10144  
960508

Measured value of dominant parameter	Measurement unit	Measurement mode	Rotary knob to set	Continuous or single (triggered) measurement
Indication that component under test is outside the basic accuracy range of the instrument	<ul style="list-style-type: none"> <li>▪ MS, kΩ, Ω</li> <li>▪ Percent</li> <li>▪ pF, nF, μF, mF</li> <li>▪ μH, mH, H, kH</li> <li>▪ Degrees</li> <li>▪ Volts</li> <li>▪ Amperes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Automatic</li> <li>▪ Series parameter</li> <li>▪ Parallel parameter</li> </ul>	<ul style="list-style-type: none"> <li>▪ Test signal voltage</li> <li>▪ Test signal frequency</li> <li>▪ DC bias internal</li> <li>▪ Storage registers</li> <li>▪ IEEE/RS-232 settings</li> <li>▪ Averaging factor</li> <li>▪ Fixture set</li> <li>▪ Reference value</li> </ul>	<ul style="list-style-type: none"> <li>▪ Open-circuit impedance</li> <li>▪ Short-circuit impedance</li> </ul>
Automatic mode	Store and recall of 9 instrument settings	Averaging factor	Checks reliability of four-wire connection	
				DC - 1 MHz
Power switch	Equivalent circuit symbols	Measured value of secondary or selected parameter	Test voltage and frequency	Setting for test fixtures in use
IEEE-488 device address/RS-232 configuration			DC: 50 mV to 2 V (option) AC: 50 mV to 2 V 50 Hz to 1 MHz	
Return from remote control to keyboard operation	Selected parameter	Selection of displayed parameter	DC bias	Connectors for
	<ul style="list-style-type: none"> <li>Φ Phase angle</li> <li>Z Impedance</li> <li>D Dissipation factor</li> <li>Q Quality factor</li> </ul>	<ul style="list-style-type: none"> <li>Φ Phase angle</li> <li>Z Impedance</li> <li>D Dissipation factor</li> <li>V<sub>X</sub> Measured voltage</li> <li>I<sub>X</sub> Measured current</li> </ul>	<ul style="list-style-type: none"> <li>▪ 0 to 10 V int.</li> <li>▪ Max. 40 V ext.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Front panel test posts</li> <li>▪ PM 9541A Kelvin Clips</li> <li>▪ PM 9542A RCL Adapter</li> <li>▪ PM 9540/TWE SMD Tweezers</li> <li>▪ PM 9540/BAN Banana Plugs</li> </ul>

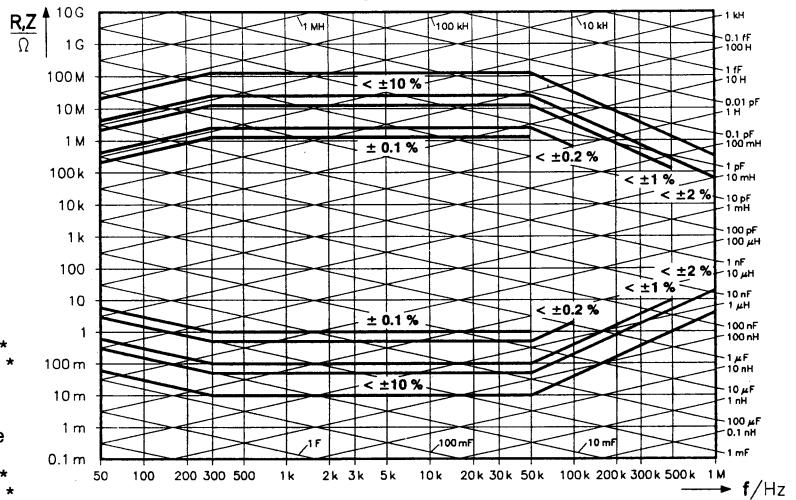
**FLUKE**®

### Auto Mode Decision Diagram



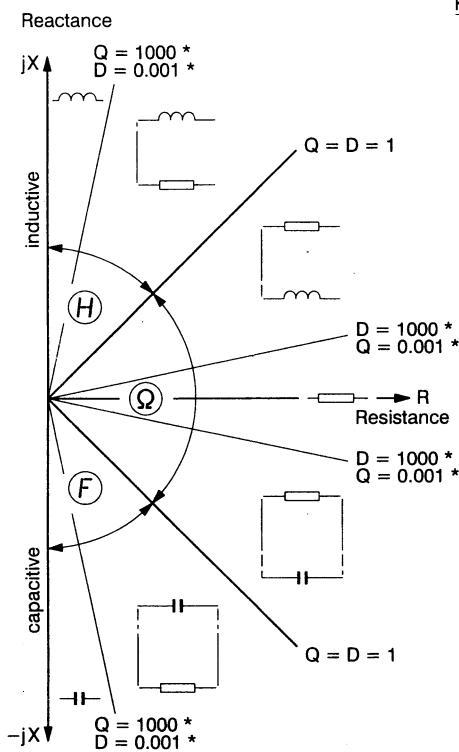
\* For test signal voltages  $\leq 0.25$  V, the decision criterion is  $Q = 200$ ,  $D = 0.05$ , or  $Q = 0.05$ ,  $D = 200$

### Measurement Ranges and Accuracy, Level 1 V



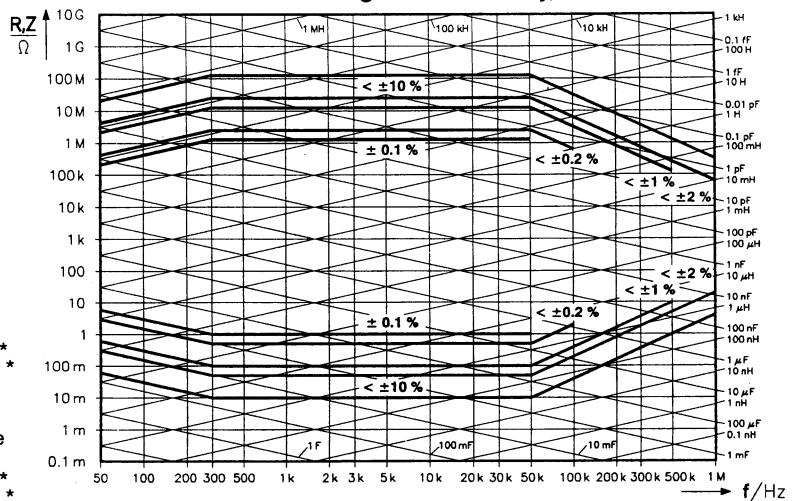
- Test signal frequency 50 Hz to 1 MHz or DC (option).
- For SMD components use the PM 9542SMD, SMD ADAPTER or the PM 9540/TWE, SMD TWEEZERS.
- For larger components use the PM 9542A, RCL Adapter.
- For in-circuit measurement of components use the PM 9541A 4-WIRE TEST CABLE (Kelvin Clips) or the PM 9540/TWE, SMD TWEEZERS.
- Discharge capacitors before connecting.
- The middle segments of the upper digits light up when the component exceeds the measurement range:  
 $R > 200 \text{ M}\Omega$  at AC,  $R > 50 \text{ M}\Omega$  at DC  
 $L > 637 \text{ kH}$  at 50 Hz,  $> 31.8 \text{ H}$  at 1 MHz  
 $C > 32 \text{ F}$  at 50 Hz,  $> 160 \mu\text{F}$  at 1 MHz.
- Asterisk lights up if the component is outside the basic accuracy of the instrument. Select appropriate test signal frequency.
- **ZERO TRIM** compensates:
  - Contact and line resistors (up to  $10 \Omega$  in short-circuit).
  - Stray capacitances in open-circuit.

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