












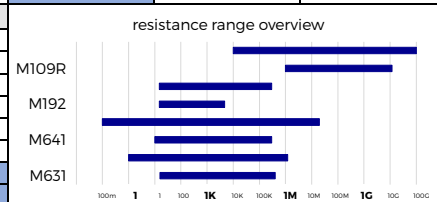


Calibrators	Multifunction			Process	Power & Energy	Current	Impedance
							
Product	9010+	9010	M143	M160	M133C	M151	M550
Basic dc V accuracy	10 ppm	30 ppm	60 ppm	15 ppm	150 ppm	n/a	n/a
Multimeters							
3.5 digits	X	X	X		volt. & curr. only		
4.5 digits	X	X	X				
5.5 digits	X	X					
6.5 digits	X						
Power/Energy							
Wattmeters	X	X			X		
Energy meters	X	X			X		
Phase angle meters	X	X			X		
Harmonic analyzers	X	X			X		
Flicker meters					X		
Power distortion analyzers	X	X			X		
Secondary energy standards	X	X			X		
Power recorders	X	X			X		
Other							
Oscilloscopes 400 MHz	opt. SCO	opt. SCO					
Oscilloscopes 1100 MHz	opt. SCI						
Frequency counters	opt. SCO	opt. SCO					
High current shunts					90 A	120 A	
Clamp meters DC/AC	1.5 kA	1 kA	1 kA		2.25 kA	3 kA	
Ohm meters	X	X	X	opt. M160			X
LCR meters	2W only	2W only					X
Insulation testers	opt. HVR	opt. HVR					
Transducers	opt. MER	opt. MER			X	current only	
Non sine waveforms	X	X	X				
High burden meters				DC only	X		
Chart recorders	X	X	X	X	X		
Process control							
Data acquisition systems	X	X	X	X			
Process meters	X	X	X	X			
Process calibrators	opt. MER	opt. MER	meas. only	meas. only			
Sensor simulation							
Thermocouples	X	X	X	X			
0-10V output sensors	X	X	X	X			
4-20mA output sensors	X	X	X	X			
Resistive sensors							
RTD sensors	X	X	opt. RTD	opt. M160			
Strain gauges (force, pressure, torque)	X	X		opt. M160			
Potentiometric sensors (position, level)	X	X		opt. M160			
Mass air flow sensors	X	X		opt. M160			
Capacitive sensors							
Level sensors	X	X					
Angle sensors	X	X					
Frequency-output sensors							
Tachometers	X	X	X	X			
Proximity sensors	X	X	X	X			

Decade Boxes	Resistance		Capacitance	High power resistance	High voltage resistance	
						
Product	M63x	M64x	M525	M192(A)	M109R	M194
Basic accuracy	0.002%	0.02%	0.3%	0.1%	0.1%	0.1%
Maximum load	0.25 W	5 W	n/a	3000 W	n/a	n/a
Maximum voltage	200 Vpk	200 Vpk	50 Vpk	250 Vrms	5 kVdc	6 kVdc
Calibrates						
Ohm meters	X	X				
Handheld LCR meters	resistance only	resistance only	capacitance only			
Insulation testers					X	X
Megohm meters					X	X
Hipot testers					DC only	DC only
Tests						
Power supplies		X	X	X		
Power inverters		X		X		
Batteries		X		X		
Simulates						
Resistive sensors						
RTD sensors	X	X				
Strain gauges (force, pressure, torque)	X	X				
Potentiometric sensors (position, level)	X	X				
Mass air flow sensors		X				
Capacitive sensors						
Level sensors			X			
Angle sensors			X			

resistance range overview



The chart displays the resistance ranges for four models: M109R, M192, M641, and M631. The x-axis is a logarithmic scale from 100m to 1000. M109R ranges from approximately 100m to 100. M192 ranges from approximately 1 to 100. M641 ranges from approximately 1 to 100. M631 ranges from approximately 1 to 100.