

# M 194

# High Resistance Decade



## HIGHLIGHTS

- Resistance range 10.00 kΩ - 100.0 GΩ
- Resistance accuracy 0.1 to 1 %
- Operating voltage to 6 kVDC
- Short current mA - meter
- Hot switching
- Timing function
- RS232 (optionally USB, IEEE488, Ethernet)

## DESCRIPTION

M194 High Resistance Decade is based on M6xx Series Real-Resistance Programmable Decades, providing cutting-edge performance, user-friendly calibration of resistance ranges as well as test meter ranges, timer and short current testing of UUTs. Main feature of M194 is adjustable high resistance decade in continuous range from 10 kΩ to 100 GΩ with 4 digit resolution. Designed for maximum operating voltages of up to 6 kVDC this decade is great for calibration of meggers, megaohmmeters and insulation testers. Accuracy from 0.1%.

Full remote control and automated calibration support is a standard for all Meatest instruments. On top of that, M194 comes with 4 interfaces (RS232, USB, LAN and GPIB) to match your system more easily.

## MAIN DISPLAY

Resistance		Recalibration	
<b>RESISTANCE</b>	16:41:55	<b>CALIBRATION</b>	Previous
▼ GND OFF	Function	Resistance 35 / 60	Next
<b>10.00 GΩ</b>		Nominal resistance 35.8 kΩ	Save
Accuracy 0.50 %		Requested accuracy 5 Ω	Close
Max Voltage 6.00 kV	Menu	Maximum voltage 60 V	
Test Voltage +1.974 kV		Last calibrated 08-12-2015	
		<b>35.7956 kΩ</b>	

# SPECIFICATION

## Accuracy & limits

Resistance range	Accuracy*	Maximum DC test voltage**	Test voltage accuracy
10.00 k $\Omega$ –99.99 k $\Omega$	0.1 %	65 V	0.5 % + 2 V
100.0 k $\Omega$ –999.9 k $\Omega$	0.1 %	315 V	0.5 % + 2 V
1.00 M $\Omega$ –1.99 M $\Omega$	0.1 %	1 250 V	0.5 % + 10 V
2.00 M $\Omega$ –9.999 M $\Omega$	0.1 %	2 500 V	0.5 % + 10 V
10.00 M $\Omega$ –99.99 M $\Omega$	0.1 %	6 000 V	0.5 % + 10 V
100.0 M $\Omega$ –999.9 M $\Omega$	0.2 %	6 000 V	0.5 % + 10 V
1.000 G $\Omega$ –9.999 G $\Omega$	0.5 %	6 000 V	0.5 % + 10 V
10.00 G $\Omega$ –100.0 G $\Omega$ ***	1.0 %	6 000 V	0.5 % + 10 V

\* Accuracy is valid within reference temperature range  $23 \pm 2$  °C with RH < 50%.

\*\* Maximum measured DC test voltage is 5% over the specified range.

\*\*\* 1 minute settling time for full accuracy.

## SHORT function (short current testing)

Current range: 0.00–10.00 mA DC  
Input resistance: 100  $\Omega$  nom.  
Current meter accuracy: 0.2 % + 25  $\mu$ A

## GENERAL DATA

Reference temperature: 21...25 °C  
Operating temperature: 5...40 °C  
Storage temperatures: -10 °C...50 °C  
Temperature coefficient: 10 % of specification per °C outside the reference temp. range  
Reference humidity: < 70 % RH, < 50 % RH above 10 G $\Omega$   
Humidity coefficient: 2 % of specification per % RH, 5 % above 10 G $\Omega$   
Terminals: Gold plated terminals 4 mm  
Remote control: RS232 interface (optionally USB, LAN, IEEE488)  
Dimensions: 390 x 128 x 425 mm (W, H, D), 4.5 kg  
Power supply: 115/230 V, 50/60 Hz

## Ordering codes

Bus  
M194-V1xxx – RS232  
M194-V2xxx – RS232, USB, LAN, GPIB

Housing  
M194-Vxx0x – table version  
M194-Vxx1x – module 19", 3HE