

M194

High Resistance Decade



- 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 feature
- Timing function
- RS232 (optionally USB, IEEE488, Ethernet)

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, megohmmeters 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.

Accuracy & limits

Resistance range	Accuracy* %	Maximum DC test voltage** V	Test voltage accuracy
10.00 kΩ - 99.99 kΩ	0.1	65	0.5 % + 2 V
100.0 kΩ - 999.9 kΩ	0.1	315	0.5 % + 2 V
1.00 MΩ - 1.99 MΩ	0.1	1 250	0.5 % + 10 V
2.00 MΩ - 9.999MΩ	0.1	2 500	0.5 % + 10 V
10.00MΩ - 99.99MΩ	0.1	6 000	0.5 % + 10 V
100.0MΩ - 499.9MΩ	0.2	6 000	0.5 % + 10 V
500.0MΩ - 999.9MΩ	0.2	6 000	0.5 % + 10 V
1.000GΩ - 9.999GΩ	0.5	6 000	0.5 % + 10 V
10.00GΩ - 19.99GΩ	1.0	6 000	0.5 % + 10 V
20.00GΩ - 100.0GΩ***	1.0	6 000	0.5 % + 10 V

* Accuracy is valid within reference temperature range $23 \pm 2^\circ\text{C}$ with RH < 50%.

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

*** Full accuracy is reached 1 minute after the test voltage is applied.

Temperature dependency:

Add:

0.1 x specified accuracy / $^\circ\text{C}$ at reference temperature for temperature outside of reference temperature $23 \pm 2^\circ\text{C}$, from $+13^\circ\text{C}$ to $+33^\circ\text{C}$

Humidity dependency:	Add: 0.02 x specified accuracy / % RH for range 100.0 MΩ to 9.99 GΩ 0.05 x specified accuracy / % RH for range 10.00 GΩ to 100.0 GΩ for ambient humidity in range 50 to 70 % RH
Test voltage indication:	3 digit voltmeter
Short current range:	0.000 – 10.000 mADC
Input resistance:	100 Ω ± 10%
Short test current accuracy:	0.2% + 25 uA

General specification

Terminals:	Gold plated terminals 4mm
Remote control:	RS232 interface (optionally USB, LAN, IEEE488)
Power supply:	115/230 Vac, 50/60 Hz
Reference condition:	Ambient temperature 23 ± 2 °C Relative humidity < 50%
Working temperatures:	+5 °C ... +40 °C
Storage temperatures:	-10 °C ... +50 °C
Dimensions:	W 390 mm, H 128 mm, D 310 mm
Weight:	4.5 kg

Content of delivery

M194 High Resistance Decade
Power line cable
Test lead 2 pcs
Cable RS 232

User's manual
Calibration certificate

Ordering information – options

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

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

Resistance

Timings

Calibration

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