

## 9819 & 9820 Technical Specifications

<u>RESISTANCE SPECIFICATION – 9819</u>	<u>RESISTANCE SPECIFICATION – 9820</u>
<b>Resistance Range:</b> 0.01 ohm to 10K ohm	<b>Resistance Range:</b> 0.1 ohm to 100K ohm
<b>Resistance Output:</b> Output is on 6 pairs of rear panel 4 mm terminals which divide the resistance into 6 independent decades	<b>Resistance Output:</b> Output is on 6 pairs of rear panel 4 mm terminals which divide the resistance into 6 independent decades
<b>Accuracy:</b>	<b>Accuracy:</b>
0.01 ohm ± 10%	0.1 ohm ± 5%
0.1 ohm ± 5%	1 ohm ± 0.5%
1 ohm ± 0.5%	10 ohm ± 0.05%
10 ohm ± 0.05%	100 ohm ± 0.01%
100 ohm ± 0.01%	1K ohm ± 0.01%
1K ohm ± 0.01%	10K ohms ± 0.01%

### General Specification

<b>Residual Resistance:</b> < 10 milliohm / decade	<b>Relay Contacts:</b> Special attention has been given to the problem of reliability. Double pole gold contacts have been used.
<b>Temp. Coefficient:</b> less than 50 ppm/°C	<b>Remote Interface:</b> GPIB (IEEE488) or RS232
<b>Power Rating:</b> 1 watt max per decade	<b>Device Address:</b> Rear panel switch 0 – 31
<b>Maximum Current:</b> 1 Amp (1 watt max)	<b>Bus Connection:</b> Standard 24 pin GPIB connector and standard serial 9 pin DIN.
<b>Maximum Voltage:</b> 100 Volts	<b>Power:</b> 110V/120V/220V/240V AC 50/60 Hz
<b>Operation Time:</b> 50 ms	<b>Operating Temperature:</b> 0 – 40 °C
<b>Operating Life:</b> 30 million operations	
<b>Thermal Emfs:</b> <2uV. The internally generated emfs have been kept to a minimum using special techniques.	
<b>Dimensions:</b>	480 x 374 x 154 mm Rack Mount Version 520 x 170 x 315 mm Bench Version
<b>Weight:</b>	6 kg Rack Mount Version 11 kg Bench Version
<b>Optional Extras:</b>	Bench Case N.P.L. Traceable Calibration Certificate UKAS Calibration Certificate

### Ordering Information

Code	Description
9819	Low Ohm Resistance 0.01 ohm to 10K ohm
9820	Low Ohm Resistance 0.1 ohm to 100K ohm
9047	Bench Case
9163	N.P.L. Traceable Calibration Certificate
9120	UKAS Calibration Certificate

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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