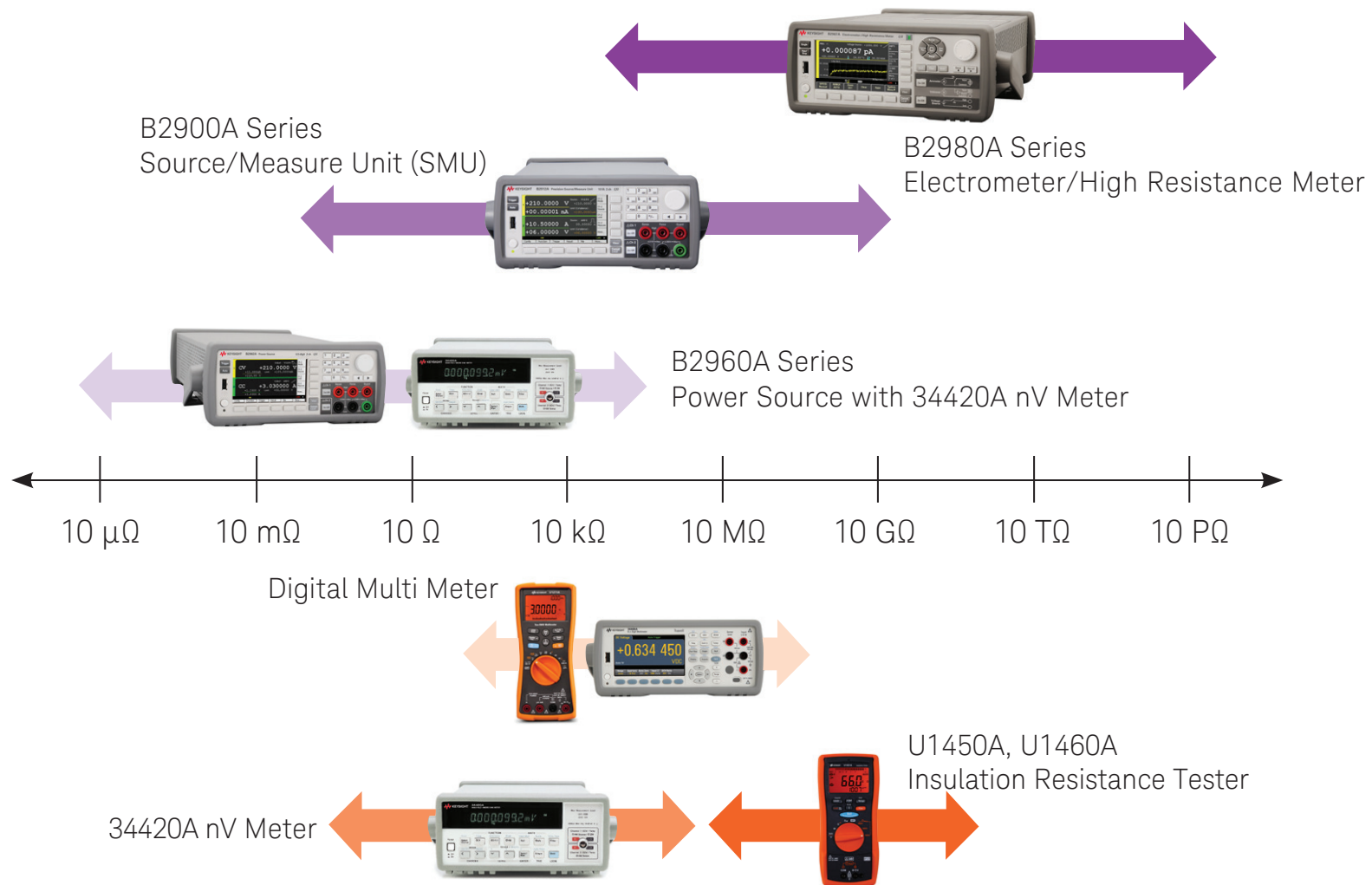


Wide Range of Resistance Measurement Solutions from $\mu\Omega$ to $P\Omega$ - Application Brief

Keysight provides you with the best choice to meet your resistance measurement needs



To learn more, please refer: <http://literature.cdn.keysight.com/litweb/pdf/5992-1212EN.pdf>

Key Functions and Features

Versatile resistance measurement solutions

Model		Auto Mode				Manual Mode	Max. Reading Rate	2 & 4-wire Ω	Auto Offset Compensation	Low Power Setting
		Digits	Range	Min. Resolution	Accuracy					
Handheld DMM	U1231A/U1232A/U1233A	3 1/2	600 Ω - 60 M Ω	100 m Ω	0.9%+3 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1241B/U1242B	4	1 k Ω - 100 M Ω	100 m Ω	0.3%+3 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1251B	4 1/2	500 Ω - 50 M Ω	10 m Ω	0.08%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1252B/U1253B	4 1/2	500 Ω - 500 M Ω	10 m Ω	0.05%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1271A	4 1/2	300 Ω - 100 M Ω	1 m Ω	0.2%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1272A/U1273A	4 1/2	30 Ω - 300 M Ω	1 m Ω	0.2%+5 ¹	N/A	N/A	2-Wire Ω only	●	N/A
	U1273AX	4 1/2	30 Ω - 300 M Ω	1 m Ω	0.2%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
Bench-top DMM	U3401A	4 1/2	500 Ω - 50 M Ω	10 m Ω	0.1%+3 ²	N/A	N/A	2-Wire Ω only	N/A	N/A
	U3402A	5 1/2	120 Ω - 120 M Ω	1 m Ω	0.05%+5 ²	N/A	N/A	●	N/A	N/A
	U3606B	5 1/2	100 Ω - 100 M Ω	1 m Ω	0.05%+0.005	N/A	26	●	N/A	N/A
	34450A	5 1/2	100 Ω - 100 M Ω	1 m Ω	0.05%+0.005 ³	N/A	190	●	N/A	N/A
	34460A	6 1/2	100 Ω - 100 M Ω	100 $\mu\Omega$	0.014%+0.001 ³	N/A	300	●	N/A	N/A
	34461A	6 1/2	100 Ω - 100 M Ω	100 $\mu\Omega$	0.010%+0.001 ³	N/A	1000	●	N/A	N/A
	34465A	6 1/2	100 Ω - 1 G Ω	100 $\mu\Omega$	0.0040% + 0.0005 ³	N/A	50000	●	N/A	●
	34470A	7 1/2	100 Ω - 1 G Ω	10 $\mu\Omega$	0.0040% + 0.0005 ³	N/A	50000	●	N/A	●
SMU	B2901A/B2902A	6 1/2	2 Ω - 200 M Ω	1 $\mu\Omega$	0.06%+0.0175 ³	●	50000	●	●	N/A ⁴
	B2911A/B2912A	6 1/2	2 Ω - 200 M Ω	1 $\mu\Omega$	0.06%+0.0175 ³	●	100000	●	●	N/A ⁴

Low resistance measurement solutions

Model		Auto Mode				Manual Mode	Max. Reading Rate	2 & 4-wire Ω	Auto Offset Compensation	Low Power Setting
		Digits	Range	Min. Resolution	Accuracy					
nV Meter	34420A	7 1/2	1 Ω - 1 M Ω	100 n Ω	0.0060%+0.0002 ³	N/A	250	●	●	●
	34420A with B2961A	7 1/2	1 Ω - 1 M Ω ⁵	100 n Ω ⁵	0.0060%+0.0002 ⁵	●	N/A	● ⁵	● ⁵	● ⁵

High resistance measurement solutions

Model		Auto Mode				Manual Mode	Max. Reading Rate	2 & 4-wire Ω	Auto Offset Compensation	Low Power Setting
		Digits	Range	Min. Resolution	Accuracy					
Insulation Resistance Tester	U1451A	3 1/2	66 G Ω	1 k Ω	1.5%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1452A	3 1/2	260 G Ω	1 k Ω	1.5%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1452AT	3 1/2	66 G Ω	1 k Ω	1.5%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1453A	3 1/2	260 G Ω	1 k Ω	1.2%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
	U1461A	3 1/2	260 G Ω	1 k Ω	1.2%+5 ¹	N/A	N/A	2-Wire Ω only	N/A	N/A
Electrometer	B2985A/B2987A	6 1/2	1 M Ω - 1 P Ω	1 Ω	0.135%+0.0001 ³	●	20000	2-Wire Ω only	● ⁶	N/A ⁷

- The accuracy is defined as \pm (% of reading + counts of Least Significant Digit)
- The accuracy is defined as \pm (% of reading + count)
- The accuracy is defined as \pm (% of reading + % of range)
- Manual mode enables you to use smaller test current

- Values when the 34420A is used as standalone
- Offset compensation function is provided as math function
- Manual mode enables you to use smaller test current