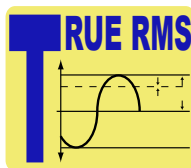


Data Sheet

Auto Ranging True RMS Tool Kit® DMM

Model 2709B



The 2709B is a full featured auto ranging true RMS DMM that combines performance, value and functionality. The 6600 count LCD has a green back light that allows the meter to be used in dimly lit environments. The 2709B can measure resistance values up to 66 M Ω and capacitance to 66 mF. With the auto power off feature you won't have to worry about accidental battery consumption. Value-packed features make this meter a must in every "Tool Kit®".

Features

- Magnetic hanger
- True RMS
- Auto/manual ranging
- DC voltage to 1000 V
- AC voltage to 750 V
- Capacitance to 66 mF
- Diode test
- One-handed operation
- Large easy-to-read LCD with backlight
- Auto power off
- Measures up to 10 A (AC & DC)
- Resistance to 66 M Ω
- Frequency counter to 66 MHz
- Continuity test

Specifications

model

2709B

DC Volts

Ranges	660 mV, 6.6 V, 66 V, 660 V, 1000 V
Resolution	0.1 mV, 1 mV, 10 mV, 100 mV, 1 V
Accuracy	$\pm(0.5 \% \text{ rdg} + 2 \text{ dgts})$
Input Impedance	660 mV: $>100 \text{ M}\Omega$; 6.6 V: $10 \text{ M}\Omega$; 66 V to 1000 V: $9.1 \text{ M}\Omega$
Overload Protection	1000 VDC or 750 VACrms

AC Volts (True RMS) (50 Hz-500 Hz)

Ranges	660 mV, 6.6 V, 66 V, 660 V, 750 V
Resolution	0.1 mV, 1 mV, 10 mV, 100 mV, 1 V
Accuracy	660 mV range at 50 Hz to 60 Hz $\pm(1.5 \% \text{ rdg} + 8 \text{ dgts})$ 6.6 V to 660 V ranges: $\pm(1.5 \% \text{ rdg} + 8 \text{ dgts})$ 750 V range: $\pm(2.0 \% \text{ rdg} + 8 \text{ dgts})$
Crest Factor	≤ 3
Input Impedance	660 mV: $>100 \text{ M}\Omega$; 6.6 V: $10 \text{ M}\Omega$; 66 V to 750 V: $9.1 \text{ M}\Omega$
Overload Protection	1000 VDC or 750 VACrms

DC Current	
Ranges	660 μ A, 6600 μ A, 66 mA, 400 mA, 10 A
Resolution	0.1 μ A, 1 μ A, 10 μ A, 100 μ A, 10 mA
Accuracy	660 μ A to 400 mA ranges: $\pm(1.5 \% \text{ rdg} + 2 \text{ dgts})$ 10 A range: $\pm(3.0 \% \text{ rdg} + 3 \text{ dgts})$
Input Protection	0.5 A/500 V & 10 A/600 V fast blow ceramic fuses
10A Input	10 A for 60 sec max. followed by a 10 minute cooling period
AC Current (True RMS) (50 Hz-500 Hz)	
Ranges	660 μ A, 6600 μ A, 66 mA, 400 mA, 10 A
Resolution	0.1 μ A, 1 μ A, 10 μ A, 100 μ A, 10 mA
Accuracy	660 μ A to 400 mA ranges: $\pm(2.0 \% \text{ rdg} + 10 \text{ dgts})$ 10 A range: $\pm(3.5 \% \text{ rdg} + 10 \text{ dgts})$
Crest Factor	≤ 3
Input Protection	0.5 A/500 V & 10 A/600 V fast blow ceramic fuses
10A Input	10 A for 60 sec max. followed by a 10 minute cooling period
Resistance	
Ranges	660 Ω , 6.6 k Ω , 66 k Ω , 660 k Ω , 6.6 M Ω , 66 M Ω
Resolution	0.1 Ω , 1.0 Ω , 10 Ω , 100 Ω , 1 k Ω , 10 k Ω
Accuracy	660 Ω to 660 k Ω ranges: $\pm(1.2 \% \text{ rdg} + 5 \text{ dgts})$ 6.6 M Ω range: $\pm(2.0 \% \text{ rdg} + 5 \text{ dgts})$ 66 M Ω range: $\pm(3.5 \% \text{ rdg} + 5 \text{ dgts})$
Open Circuit Voltage (typical)	-0.45 VDC (-1.2 VDC on 660 Ω range)
Overload Protection	500 VDC/ACrms
Capacitance	
Ranges	6.6 nF, 66 nF, 660 nF, 6.6 μ F, 66 μ F, 660 μ F, 6.6 mF, 66 mF
Resolution	1 pF, 10 pF, 100 pF, 1 nF, 10 nF, 100 nF, 1 μ F, 10 μ F
Accuracy	6.6 nF range: $\pm(3.0 \% \text{ rdg} + 30 \text{ dgts})$ 66 nF to 660 μ F ranges: $\pm(3.0 \% \text{ rdg} + 5 \text{ dgts})$ 6.6 mF to 66 mF ranges: $\pm(5.0 \% \text{ rdg} + 20 \text{ dgts})$
Overload Protection	500 VDC/ACrms
Frequency	
Ranges	660 Hz, 6.6 kHz, 66 kHz, 660 kHz, 6.6 MHz, 66 MHz
Resolution	0.1 Hz, 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz
Accuracy	$\pm(0.1 \% \text{ rdg} + 3 \text{ dgts})$
Sensitivity	10 Hz to 6.6 MHz: $>2.5 \text{ Vrms}$, 6.6 MHz to 66 MHz: $>2.5 \text{ Vrms} <5 \text{ Vrms}$
Minimum Pulse Width	$>25 \text{ ns}$
Duty Cycle Limits	$>30 \% \text{ and } <70 \%$
Overload Protection	500 VDC/AC rms
Diode Test	
Test Current	1.2 mA (typical)
Resolution	1 mV
Accuracy	$\pm(3.0 \% \text{ rdg} + 3 \text{ dgts})$
Audible Indication	$<0.03 \text{ V}$
Open Circuit Voltage	3.5 VDC (typical)
Overload Protection	500 VDC/ACrms
Continuity	
Audible Indication	Less than 30 Ω
Response Time	100 ms
Overload Protection	500 VDC/ACrms
General	
Display	3 3/4 digit, 6600 count LCD
Polarity	Automatic, positive implied, negative polarity indication
Overrange	OL or -OL is displayed
Low Battery Indication	Battery symbol will display when battery voltage drops below operating levels
Measurement Rate	2 times per second
Auto Power Off	Approximately 30 minutes
Operating Environment	0°C to 50°C at $<70 \% \text{ relative humidity}$
Storage Environment	-20°C to 60°C at 0 to 80 % relative humidity
Accuracies	Stated accuracy at 23°C $\pm 5^\circ\text{C}$ at $<75 \% \text{ relative humidity}$
Temperature Coefficient	0.1 x (specified accuracy) per $^\circ\text{C}$. ($^\circ\text{C}$ to 18°C, 28°C to 50°C)
Power	Single standard 9 volt battery, NEDA 1604, JIS 006P, IEC 6F22
Battery Life	150 hours typical
Dimensions	165 mm (H) x 78 mm (W) x 42.5 mm (D)
Weight	Approximately 10 oz. (285 g) with battery and hanger

Three-Year Warranty

Supplied Accessories: User manual, one set of test leads, one spare fuse, and 9V battery (installed)

B&K Precision's 2700 Tool Kit® Series

Models 2703C, 2704C, 2705B, 2706B, 2707B, 2708B, 2709B & 2712

These excellent meters are for most jobs that require flexibility, accuracy and speed. Value-packed features make these meters a must for everyone's "Tool Kit".

Common Features:

- DC Voltage to 1000V
- AC Voltage to 750V
- DC Current to 10A
- Continuity test
- Diode test
- Drop resistant case
- Magnetic hanging strap



Magnetic Hanging Strap

This convenient feature allows you to hang your DMM on any magnetic metallic surface freeing up your hands for troubleshooting.



Back Light / Easy-to-Read LCD

Model 2706B



Ultra-bright blue LCD back light for low ambient light measurements

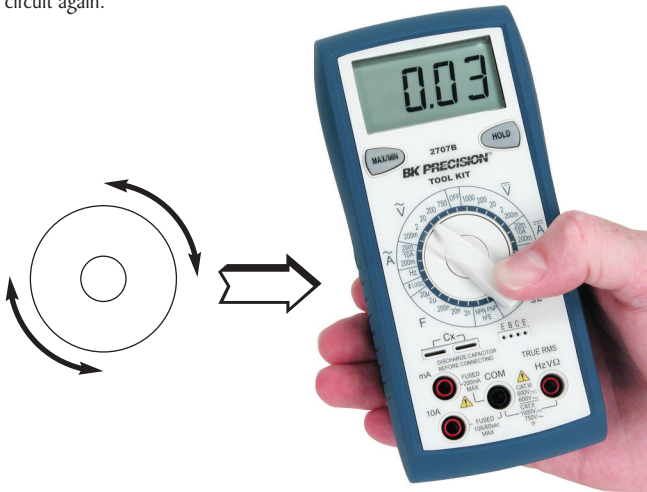
Models 2709B & 2712



Large easy-to-read LCD with green LED backlight

Single-handed operation

The ergonomic design allows both left and right handed users to rotate the knob while holding the meter in one hand. While one hand keeps the probe on the circuit, the other hand changes the meter's function. This speeds up troubleshooting because you don't have to locate the probe point in the circuit again.



Features

	models							
	2712	2709B	2708B	2707B	2706B	2705B	2704C	2703C
Ranging	Auto/Manual	Auto/Manual	Auto/Manual	Manual	Manual	Auto/Manual	Manual	Manual
True RMS	AC + DC	√	√	√	-	-	-	-
Current	10 A AC/DC	10 A AC/DC	10 A AC/DC	10 A AC/DC	200 mA AC/DC	10 A AC/DC	10 A AC/DC	10 A DC
Capacitance	to 40 uF	to 66 mF	-	to 20 uF	to 20 mF	-	to 20 uF	-
Transistor Test	-	-	-	√	-	-	√	-
Frequency Counter	to 500 kHz	to 66 MHz	-	to 20 MHz	to 40 kHz	-	to 20 MHz	-
Temperature	-	-	-	-	√	-	-	-
Logic Probe	-	-	-	√	-	-	√	-
Backlight LCD	√	√	-	-	√	-	-	-
Analog Bar Graph	√	-	√	-	-	-	-	-
Battery Test	-	-	-	-	-	-	-	√
Auto Power off	√	√	√	-	√	√	-	-