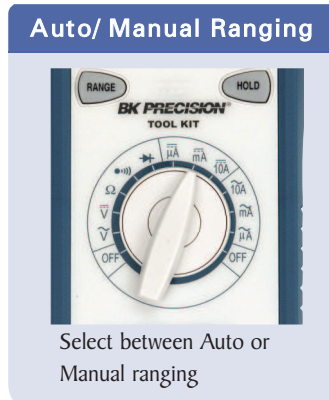
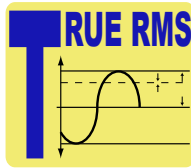


Data Sheet

True RMS AC + DC Tool Kit® DMM

Model 2712



The 2712 is a full featured auto ranging true RMS DMM that combines performance, value and functionality. The 40000 count LCD has a green back light that allows the meter to be used in dimly lit environments. The 2712 can measure resistance values up to 40 Mohm and capacitance to 40 uF. 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®".

| Specifications | | model |
|---|--|-------|
| | | 2712 |
| DC Volts | | |
| Ranges | 400 mV, 4 V, 40 V, 400 V, 1000 V | |
| Resolution | 0.01 mV, 1 mV, 10 mV, 100 mV, 1 V | |
| Accuracy | 400 mV range: $\pm(0.15\% \text{ rdg} + 10 \text{ dgts})$ 4 V to 1000 V ranges: $\pm(0.1\% \text{ rdg} + 5 \text{ dgts})$ | |
| Input Impedance | 400 mV: $>3 \text{ M}\Omega$; 4 V to 1000 V: $2.3 \text{ M}\Omega$ | |
| Overload Protection | 1000 VDC or 750 VACrms | |
| AC Volts (True RMS) (45 Hz-1 kHz) | | |
| Ranges | 400 mV, 4 V, 40 V, 400 V, 750 V | |
| Resolution | 0.01 mV, 1 mV, 10 mV, 100 mV, 1 V | |
| Accuracy | 400 mV to 400 V ranges: $\pm(1.2\% \text{ rdg} + 20 \text{ dgts})$ 45 ~ 60 Hz 4 V range: $\pm(1.5\% \text{ rdg} + 20 \text{ dgts})$ 60 ~ 500 Hz 40 V to 400 V ranges: $\pm(1.5\% \text{ rdg} + 20 \text{ dgts})$ 60 ~ 1 kHz 750 V range: $\pm(2.0\% \text{ rdg} + 20 \text{ dgts})$ 45 ~ 500 Hz | |
| AC + DC Volts (True RMS) (45 Hz-1 kHz) | | |
| Ranges | 400 mV, 4 V, 40 V, 400 V, 750 V | |
| Resolution | 0.01 mV, 1 mV, 10 mV, 100 mV, 1 V | |
| Accuracy | 400 mV to 400 V ranges: $\pm(1.5\% \text{ rdg} + 20 \text{ dgts})$ 45 ~ 60 Hz 4 V range: $\pm(2.0\% \text{ rdg} + 20 \text{ dgts})$ 60 ~ 500 Hz 40 V to 400 V ranges: $\pm(2.0\% \text{ rdg} + 20 \text{ dgts})$ 60 ~ 1 kHz 750 V range: $\pm(2.0\% \text{ rdg} + 20 \text{ dgts})$ 45 ~ 500 Hz | |
| Crest Factor | ≤ 3 | |
| AC coupled True RMS | Specified from 10% to 100% of range | |
| Input Impedance | 400 mV: $>3 \text{ M}\Omega$; 4 V to 750 V: $2.3 \text{ M}\Omega$ | |
| Overload Protection | 1000 VDC or 750 VACrms | |
| DC Current | | |
| Ranges | 40 mA, 400 mA, 10 A | |
| Resolution | 1 uA, 10 uA, 10 mA | |
| Accuracy | 40 mA to 400 mA ranges: $\pm(0.5\% \text{ rdg} + 10 \text{ dgts})$ | |

| | |
|-------------------------------------|---|
| Input Protection | 10 A range: $\pm(2.0\% \text{ rdg} + 10 \text{ dgts})$ |
| 10A Input | 0.5 A/500 V & 10 A/500 V fast blow ceramic fuses |
| Voltage Burden | 10 A for 60 sec max. followed by a 10 minute cooling period |
| AC Current (True RMS) (50 Hz-1 kHz) | 40 mA, 10 A ranges: 0.2V; 400 mA range: 1 V |
| Ranges | 40 mA, 400 mA, 10 A |
| Resolution | 1 uA, 10 uA, 10 mA |
| Accuracy | 40 mA to 400 mA ranges: $\pm(2.0\% \text{ rdg} + 30 \text{ dgts})$ 10 A range: $\pm(2.5\% \text{ rdg} + 30 \text{ dgts})$ |
| Crest Factor | ≤ 3 |
| AC coupled True RMS | Specified from 10% to 100% of range |
| Voltage Burden | 40 mA, 10 A ranges: 0.2V; 400 mA range: 1 V |
| Input Protection | 0.5 A/500 V & 10 A/500 V fast blow ceramic fuses |
| 10A Input | 10 A for 60 sec max. followed by a 10 minute cooling period |
| Resistance | |
| Ranges | 400 Ω , 4 k Ω , 40 k Ω , 400 k Ω , 4 M Ω , 40 M Ω |
| Resolution | 0.01 Ω , 0.1 Ω , 1.0 Ω , 10 Ω , 1 k Ω , 10 k Ω |
| Accuracy | 400 Ω range: $\pm(0.3\% \text{ rdg} + 15 \text{ dgts})$ 4 k Ω to 400 k Ω ranges: $\pm(0.3\% \text{ rdg} + 5 \text{ dgts})$ 4 M Ω range: $\pm(0.5\% \text{ rdg} + 10 \text{ dgts})$ 40 M Ω range: $\pm(1.5\% \text{ rdg} + 20 \text{ dgts})$ |
| Open Circuit Voltage (typical) | 1.2 Vdc (2.5 Vdc on 400 Ω range) |
| Overload Protection | 500 VDC/ACrms |
| Capacitance | |
| Ranges | 4 nF, 40 nF, 400 nF, 4 uF, 40 uF |
| Resolution | 1 pF, 10 pF, 100 pF, 1 nF, 10 nF |
| Accuracy | 4 nF range: $\pm(3.0\% \text{ rdg} + 20 \text{ dgts})$ 40 nF to 400 nF ranges: $\pm(3.0\% \text{ rdg} + 5 \text{ dgts})$ 4 uF to 20 uF $\pm(3.0\% \text{ rdg} + 5 \text{ dgts})$ 20 uF to 40 uF $\pm(5.0\% \text{ rdg} + 5 \text{ dgts})$ |
| Overload Protection | 500 VDC/ACrms |
| Frequency | |
| Ranges | 100 Hz, 1 kHz, 10 kHz, 100 kHz, 500 kHz |
| Resolution | 0.01 Hz, 0.1 Hz, 1 Hz, 10 Hz, 100 Hz |
| Accuracy | $\pm(0.1\% \text{ rdg} + 10 \text{ dgts})$ |
| Sensitivity | 5 Hz-100 kHz: $>500 \text{ mVrms}$, 100 kHz-500 kHz: $>1.5 \text{ Vrms}$ |
| Minimum Pulse Width | $>2 \text{ us}$ |
| Duty Cycle Limits | $>30\%$ and $<70\%$ |
| Overload Protection | 500 VDC/AC rms |
| Diode Test | |
| Test Current | 0.8 mA (typical) |
| Resolution | 0.1 mV |
| Accuracy | $\pm(1.5\% \text{ rdg} + 10 \text{ dgts})$ |
| Open Circuit Voltage | 3.0 VDC (typical) |
| Overload Protection | 500 VDC/ACrms |
| Continuity | |
| Audible Indication | Less than 40 Ω |
| Response Time | 500 ms |
| Overload Protection | 500 VDC/ACrms |
| General | |
| Display | 4 3/4 digit, 40000 count LCD |
| Analog Bargraph | 40 segments with measurements of 20 times per second |
| Polarity | Automatic, positive implied, negative polarity indication |
| Overrange | MSD (Most Significant Digit) Blinks |
| 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 $<70\%$ relative humidity |
| Storage Environment | -20°C to 60°C at 0 to 80% relative humidity |
| Accuracies | Stated accuracy at 23°C $\pm 5\%$ at $<75\%$ relative humidity |
| Temperature Coefficient | 0.1 x (specified accuracy) per °C. (°C to 18°C, 28°C to 50°C) |
| Power | Single standard 9 volt battery, NEDA 1604, IIS 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
- DC Current to 10A
- Diode test
- Magnetic hanging strap
- AC Voltage to 750V
- Continuity test
- Drop resistant case



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

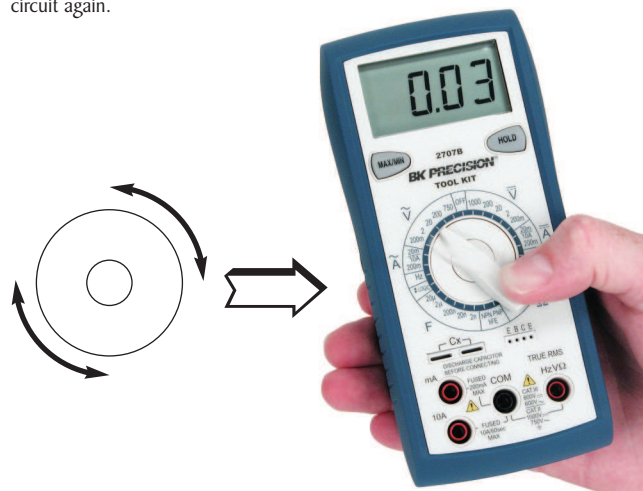
Ultra-bright blue LCD back light for low ambient light measurements

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 | √ | √ | √ | - | √ | √ | - | - |