FEATURES

- Basic accuracy: DCV ± 0.5%
- Resolution of 0.001 V, 0.1 V, 0.01 V, 0.1 µA.
- Single function and range control.
- Five voltage ranges: 200 mV to 1000 V.
- Five ac voltage ranges: 200 mV to 750 V.
- Five capacitance ranges: 2 nF to 20 µF.
- Four current ranges: 200 µA to 200 mA and 10 A.
- Three ac current ranges: 20 mA, 200 mA, and 10 A.
- Six resistance ranges: 200 Ω to 20 MΩ.

SPECIFICATIONS

**DC VOLTS Manual ranging, average responding, rms reading**

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
<th>Overvoltage Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 mV</td>
<td>100 µV</td>
<td>±0.5%</td>
<td>DC 500 V AC 150 V</td>
</tr>
<tr>
<td>200 mV</td>
<td>10 µV</td>
<td>±0.5%</td>
<td>DC 500 V AC 150 V</td>
</tr>
<tr>
<td>1000 V</td>
<td>1 V</td>
<td>±0.5%</td>
<td>DC 500 V AC 150 V</td>
</tr>
</tbody>
</table>

Input impedance: 10 MΩ
Full range step response (to rated accuracy): 1 second max.
Common mode rejection: Greater than 100 dB (50/60 Hz)

**AC VOLTS Manual ranging, average responding, rms reading**

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
<th>Overvoltage Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 mV</td>
<td>100 µV</td>
<td>±(0.25% rdg + 4 dB 40 Hz - 1 kHz)</td>
<td>DC 500 V AC 150 V</td>
</tr>
<tr>
<td>200 mV</td>
<td>10 µV</td>
<td>±(0.25% rdg + 4 dB 40 Hz - 1 kHz)</td>
<td>DC 500 V AC 150 V</td>
</tr>
<tr>
<td>1000 V</td>
<td>1 V</td>
<td>±(0.25% rdg + 4 dB 40 Hz - 1 kHz)</td>
<td>DC 1200 V AC 850 V</td>
</tr>
</tbody>
</table>

Input impedance: 10 MΩ, less than 100 µpF
Full range step response (to rated accuracy): 8 seconds max.

**DC CURRENT Manual ranging**

<table>
<thead>
<tr>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
<th>Burden Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 µA</td>
<td>0.1 µA</td>
<td>±(0.1% rdg + 1 dg)</td>
<td>900 mV Max.</td>
</tr>
<tr>
<td>20 mA</td>
<td>10 mA</td>
<td>±(0.2% rdg + 2 dg)</td>
<td>900 mV Max.</td>
</tr>
<tr>
<td>200 mA</td>
<td>100 mA</td>
<td>±(0.2% rdg + 3 dg)</td>
<td>900 mV Max.</td>
</tr>
<tr>
<td>10 A</td>
<td>100 mA</td>
<td>±(1.2% rdg + 4 dg)</td>
<td>900 mV Max.</td>
</tr>
</tbody>
</table>

Overload protection: 250 mA (250 V) fast blow fuse, plus hi-energy fuse: 10 A Not fused.
Full range step response (to rated accuracy): 8 seconds max.

**RESISTANCE Manual ranging**

- 200Ω through 2MΩ range: 5 seconds max.
- 20 MΩ: 15 seconds max.

**CAPACITANCE Manual ranging**

- 2 µF: 200 µF Max.
- 10 µF: 100 µF Max.
- 200 µF: 200 µF Max.
- 100 µF: 100 µF Max.
- 20 µF: 20 µF Max.

**WARRANTY INFORMATION**

DYNASCAN CORPORATION warrants the original purchaser that this B & K-Precision product and the component parts thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase.

DYNASCAN will, without charge, repair or replace, at its option, defective product or component parts upon delivery to an authorized B & K-Precision service contractor or the factory service department, accompanied by proof of the purchase date in the form of a sales receipt.

To obtain warranty coverage in the U.S.A., this product must be registered by completing and mailing the enclosed warranty registration card to DYNASCAN, B & K-Precision, 4646 West Cortland Street, Chicago, Illinois 60635 within fifteen (15) days from the date of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. It is void if the serial number is altered, deleted or removed.

DYNASCAN shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may also have other rights which vary from state to state.

For your convenience we suggest you contact your B & K-Precision service contractor or the factory service department, accompanied by proof of the purchase date of this B & K-Precision product which it sells.

SYMBOLS

- See instruction manual for further precautionary information.
- Value at high voltage terminal.
- Connect to earth ground or point not more than 300 volts from earth ground.
- Maximum input rating of 200 μA or 100 mV full scale.
- Continuity buzzer.
An electrical shock causing 10 milliamps of current to pass through the heart will stop most human heartbeats. Voltage as low as 30 volts dc or ac rms should be considered dangerous and hazardous since it can produce a fatal current under certain conditions. Higher voltages are even more dangerous. Observe the following safety precautions.

1. Do not exceed the following input ratings. Personal injury or damage to the instrument may result.

   **DC VOLTS**
   - 3000 V (dc: 3 ac peak)
   - 250 V rms
   - 200 mA (use fuse protection)

   **AC VOLTS**
   - 750 V rms
   - 250 V rms
   - 200 mA (use fuse protection)

   **COMS**
   - 0 to 10 V
   - Do not exceed 3000 V from earth ground.

2. Never use the multimeter unless the battery compartment is closed.
3. Remove test leads before replacing batteries or fuses, and before performing any servicing on the multimeter.
4. Use only the safety type test leads supplied with the meter.
5. Turn off equipment while making test connections in high-voltage circuits. Disconnect high-voltage capacitors after removing power.
6. For voltage or current measurements in high voltage equipment, do not touch equipment, meter, or test leads while power is applied.
7. Never apply an external voltage to the Cs or HFE sockets of the multimeter.

### RANGE SELECTION

1. If quantity to be measured is unknown start with highest range.
2. When an overrange is indicated (most significant digit "9" on and all other digits blank) switch to the next highest range.

### VOLTAGE MEASUREMENTS

1. To measure dc voltage, set function switch to the desired DCA range.
2. To measure ac voltage, set function switch to the desired ACV range.
3. Connect red test lead to VΩ and black test lead to COM jack.
4. Connect test leads to points of measurement.
5. For dc, an (−) sign is displayed for negative polarity; (+) polarity is implied.

### RESISTANCE MEASUREMENTS

1. Set function switch to the desired resistance range.
2. Remove power from equipment under test.
3. Connect red test lead to VΩ and black test lead to COM jack.
4. Connect test leads to points of measurement.

### CONTINUITY MEASUREMENTS

1. Set function switch to "Ω" position.
2. Perform "Resistance Measurements" procedure, steps 2 through 4.
3. buzzer sounds when resistance is less than approximately 200 ohms.

### DIODE TEST

1. Set function switch to "Ω" position.
2. Connect red test lead to VΩ and black test lead to COM jack.
3. Red lead is (+) polarity.

### OPERATING INSTRUCTIONS

1. Display: 3 ½ digit display (9999 maximum) with automatic decimal point and (–) sign. Indicates measured value. Overrange indicated by displaying most significant digit "1" and all other digits blank. Also indicates low battery.
2. POWER Switch. Turns instrument ON and OFF.
3. Function/Range Switch. Selects function and range. DCA (200 mV, 2V, 20V, 200V, or 1000V), ACV (200mV, 2V, 20V, 200V, or 750V), Cs (12f, 20f, 200f, or 2µf), or (±) A, HFE. (Ω) (continuity buzzer), or (Ω) (200 µA, 20mA, or 20mA). DCA (200µA, 20mA, or 20mA), or (±) A, HFE. (Ω) (continuity buzzer), or (Ω) (200 µA, 20mA, or 20mA).
4. VΩ Jack. Input for dc and ac voltage, resistance, continuity, or diode test.
5. COM Jack. Input for common or reference test lead for all measurements except HF and Cs. Connect to earth ground or reference point not more than 500 V MAX (dc + ac) from earth ground.
6. mA Jack. Input for dc or ac current up to 200 mA.
7. 50A Jack. Input for 10A dc or ac current range. For measurements greater than 2 A, high current test leads are recommended.
8. HF Sockets. Input jack for diode test, Left jack is for NPN transistors, Right jack is for PNP transistors, E, B, and C identify emitter, base, and collector pins.
9. Cs Socket (Capacitance Test Socket). Allows for measurement of small axial-lead or PC-lead capacitors. Polarized for testing polarized capacitors.
10. Tilt Stand (not shown). On rear. Converts to hanger strap if removed and reattached to holes at top rear of case.

### MAINTENANCE

- **WARNING**

   Remove test leads before changing batteries or fuse or performing any servicing. Never operate instrument unless battery compartment cover is closed.

### BATTERY REPLACEMENT

1. The LO BAT indication first appears when the battery is about 90% depleted. The meter may be operated a few more hours but the battery shall be replaced soon thereafter. Open the battery compartment and replace with a fresh 9 volt "transistor" battery. Use alkaline batteries for longer life. To prolong battery life, set POWER switch to OFF when not making measurements.

### FUSE REPLACEMENT

1. If no current measurements are possible, check for blown over- fused protection fuse F1. This fuse is located in the battery compartment. Replace only with original type 250mA, 250V, 5x20mm fast acting fuse (B & K Part No. 184-049-001). Under normal operation, this device should not require replacement for the life of the instrument. If you suspect a blown fuse, always check F1 first.

### TEST LEADS

1. Use only safety type leads, like those supplied. Periodically examine the test leads to ensure that the conductors are not intermittent or broken. Also make sure that good contact pressure exists at the test lead receptacles and fasten the leads, and keep these areas free from dirt and corrosion.