

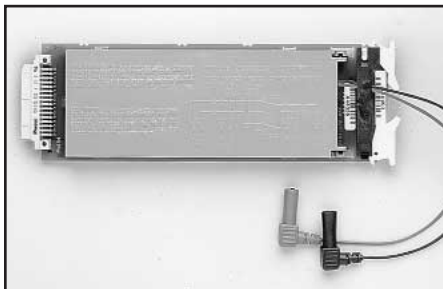
# Function and Scanning Options

## FUNCTIONS AND SCANNING OPTIONS SELECTOR GUIDE

MODEL	NAME	USE WITH:
2000-SCAN	10-Channel Scanner Card	2000, 2001, 2002, 2010*
2001-SCAN	10-Channel Scanner Card	2000, 2001, 2002, 2010*
2001-TCSCAN	9-Channel Scanner Card	2000, 2001, 2002, 2010
2000-SCAN-20**	20-Channel Scanner Card	2000-20
6521	10-Channel Scanner Card	6517A
6522	10-Channel Scanner Card	6517A

\* NOTE: The 2000-SCAN will operate in all four models as a 10-channel scanner, but does not have the two high-speed solid state channels required by the 2001 and 2002 Ratio and Delta modes. The 2001-SCAN will operate as a 10-channel scanner in all four models, but the 2000 and 2010 cannot utilize the two high-speed solid state channels.

\*\* Replacement card for 2000-20 DMM/Scanner combination. See page 46 for specifications.



**Model 2000-SCAN:** A 10-channel scanner that installs into the option slot on any 2000 Series DMM. Multiplex one of ten 2-pole or one of five 4-pole signals into the Model 2000 or 2010 and/or any combination of 2- or 4-pole signals. Contact potential is typically less than 500nV per contact pair (1μV maximum) for high measurement integrity. For complete specifications, see Model 2000-SCAN, page 56.

*For use with:* 2000, 2001, 2002, 2010

**INPUTS:**

**DC Signals:** 110V DC, 1A switched, 30VA maximum (resistive load).

**AC Signals:** 125V AC rms or 175V AC peak, 100kHz maximum, 1A switched, 62.5VA maximum (resistive load).

**CONTACT RESISTANCE:** <1Ω at end of contact life.

**CONTACT POTENTIAL:**

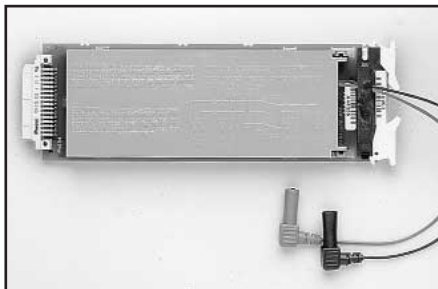
<±500nV typical per contact, 1μV max.

<±500nV typical per contact pair, 1μV max.

**CONNECTOR TYPE:** Screw terminal, #22 AWG wire size.

**DIMENSIONS, WEIGHT:** 21mm high × 72mm wide × 221mm deep (0.83 in × 2.83 in × 8.7 in). Adds 0.4kg (10 oz).

**ACCESSORY SUPPLIED:** Model C109 Test Lead Set for output connections (two red, two black).



**Model 2001-SCAN:** A 10-channel scanner containing eight relay inputs and two solid state inputs. Multiplex one of ten 2-pole or one of five 4-pole signals into the Model 2000, 2001, 2002, or 2010 DMM and/or any combination of 2- or 4-pole signals. Two solid state channels offer high-speed multiplexing on the Model 2001 and 2002. For complete specifications, see Model 2001-SCAN, page 56.

*For use with:* 2000, 2001, 2002, 2010

**RELAY INPUTS:** 110V DC/175V peak AC, 1A switched resistive load, 2.5ms max. actuation time.

**Contact Resistance:** <1Ω at end of contact life.

**SOLID STATE INPUTS:** 110V DC/175V peak AC, 150μs max. actuation time.

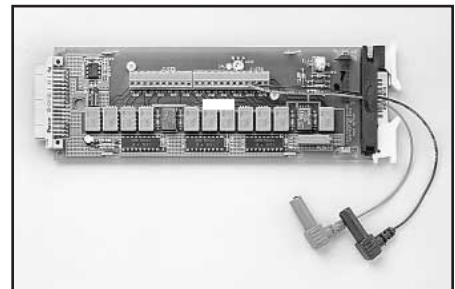
**CONTACT RESISTANCE:** <275Ω.

**CONTACT POTENTIAL:** <500nV typical per contact pair, 1μV maximum.

**CONNECTOR TYPE:** Screw terminal, #22 AWG wire.

**DIMENSIONS, WEIGHT:** 21mm high × 72mm wide × 221mm deep (0.83 in × 2.83 in × 8.7 in). Adds 0.4kg (10 oz).

**ACCESSORY SUPPLIED:** C109 Test Lead Set for output connections (two red, two black).



**Model 2001-TCSCAN:** Provides nine channels of cold-junction compensated temperature measurements and/or voltage, resistance, and frequency measurements when installed in a 2000, 2001, 2002, or 2010 DMM. (See specific instrument for TC types linearized.) Also can measure temperature directly using 2- or 4-wire RTDs (except with Model 2000). For complete specifications, see page 56.

*For use with:* 2000, 2001, 2002, 2010

**INPUTS:**

**DC:** 110V DC, <1A switched, 30VA maximum (resistive load).

**AC:** 125V AC rms or 175V AC peak, 1A switched, 62.5VA maximum (resistive load).

**CONTACT RESISTANCE:** <1Ω at end of contact life.

**CONTACT POTENTIAL:** <±500nV typical per contact, 1μV max.

**CONNECTOR TYPE:** Screw terminal, #22 AWG wire size (0.062 O.D.).

**DIMENSIONS, WEIGHT:** 21mm high × 72mm wide × 221mm deep (0.83 in × 2.83 in × 8.7 in). Net weight 283g (10 oz).

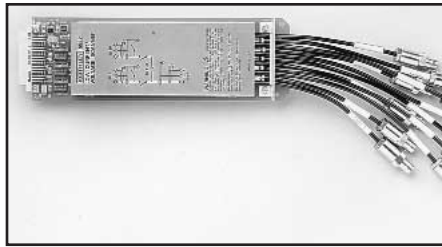
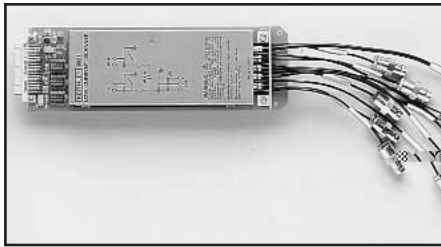
**ACCESSORY SUPPLIED:** C109 Test Lead Set for output connections (two red, two black).

QUESTIONS?

1-800-552-1115 (U.S. only)

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# Function and Scanning Options



**Model 6521 Low Current Scanner Card:** A 10-channel multiplexer, designed for switching low currents in multipoint testing applications or when the test configuration must be changed. Offset current on each channel is  $<1\text{pA}$  and high isolation is maintained between each channel ( $>10^{15}\Omega$ ). The 6521 maintains the current path even when the channel is deselected, making it a true current switch. BNC input connectors help provide shielding for sensitive measurements and make the card compatible with low noise coaxial cables.

*For use with:* 6517A Electrometer

**CONTACT CONFIGURATION:** Single pole, "break-before-make" for signal HI input. Signal LO is common for all 10 channels and output. When a channel is off, signal HI is connected to signal LO.

**CONNECTOR TYPE:** Inputs BNC, Outputs Triaxial.

**SIGNAL LEVEL:** 30V, 500mA, 10VA (resistive load).

**CONTACT LIFE:**  $>10^6$  closures at maximum signal level;  $>10^7$  closures at low signal levels.

**CONTACT RESISTANCE:**  $<1\Omega$ .

**CONTACT POTENTIAL:**  $<200\mu\text{V}$ .

**OFFSET CURRENT:**  $<1\text{pA}$  ( $<30\text{fA}$  typical at  $23^\circ\text{C}$ ,  $<60\%$  RH).

**ACTUATION TIME:** 2ms.

**COMMON MODE VOLTAGE:**  $<30\text{V}$  peak.

**Model 6522 Voltage/Low Current Scanner Card:** Provides up to ten channels of low-level current, high-impedance voltage, high-resistance, or charge signal switching. Although it is similar to the 6521, the 6522's input connectors are 3-lug triax. The card can be software configured for high-impedance voltage switching of up to 200V. Triax connectors make it possible to float the card 500V above ground and drive guard to 200V.

*For use with:* 6517A Electrometer

**CONTACT CONFIGURATION:** Single pole, "break-before-make" for signal HI input. Signal LO is common for all 10 channels and output. When a channel is off, signal HI is connected to signal LO. 6517A can also configure channels as voltage switches.

**CONNECTOR TYPE:** Inputs: Triaxial. Outputs: Triaxial.

**SIGNAL LEVEL:** 200V, 500mA, 10VA (resistive load).

**CONTACT LIFE:**  $>10^6$  closures at maximum signal level;  $>10^7$  closures at low signal levels.

**CONTACT RESISTANCE:**  $<1\Omega$ .

**CONTACT POTENTIAL:**  $<200\mu\text{V}$ .

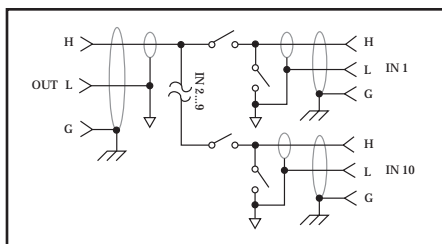
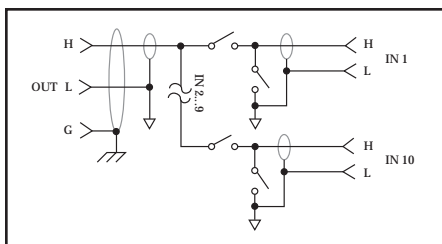
**OFFSET CURRENT:**  $<1\text{pA}$  ( $<30\text{fA}$  typical at  $23^\circ\text{C}$ ,  $<60\%$  RH).

**CHANNEL ISOLATION:**  $>10^{13}\Omega$ ,  $<0.3\text{pF}$

**INPUT ISOLATION:**  $>10^{10}\Omega$ ,  $<125\text{pF}$  (Input HI to Input LO).

**ACTUATION TIME:** 2ms.

**COMMON MODE VOLTAGE:**  $<300\text{V}$  peak.



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