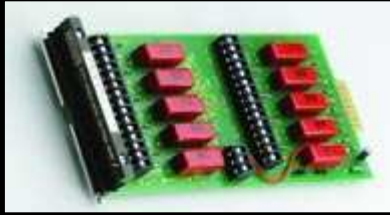


7154



- 1100 volts peak
- 2-pole switching
- High and low fused

Ordering Information

7154 High Voltage Scanner Card

7158



- Sub-picoamp offset current
- Maintains current path for unselected channel
- BNC connectors

Ordering Information

7158 Low Current Scanner Card

Accessories Supplied

4801 Low Noise Male to Male BNC Input Cable

High Voltage Scanner Card 10-Channel

The Model 7154 switches voltages to 1100V peak or currents to 0.5A. The current carry capacity of each relay contact is 1A. Two-pole relays switch both circuit High and Low for full floating measurements and each input line is fuse protected against current overload. A Guard input common to all channels is provided for shielding or as a Guard driven from a single instrument. Guards may be isolated by removing jumpers installed at each input. Multiple switched guard circuits can be achieved by removing the jumper and connecting circuit Guard to the Low input terminal.

CHANNELS PER CARD: 10.

CONTACT CONFIGURATION: 2-pole Form A with user-selectable shield or driven Guard. Each pole is fused using #38AWG magnet wire.

CONNECTOR TYPE: Screw terminals, #16AWG maximum wire size.

RELAY DRIVE CURRENT: 57mA per relay typical.

MAXIMUM SIGNAL LEVEL: 1100V peak, 0.5A DC or rms switched, 1A DC or rms carry, 10W.

CONTACT LIFE: $>10^8$ closures (cold switching); $>5 \times 10^6$ closures (at maximum signal level).

CONTACT RESISTANCE: $<200\text{m}\Omega$ initial, 2Ω to rated life.

CONTACT POTENTIAL: $<35\mu\text{V}$ per contact pair with copper leads.

ACTUATION TIME: $<2\text{ms}$ exclusive of mainframe.

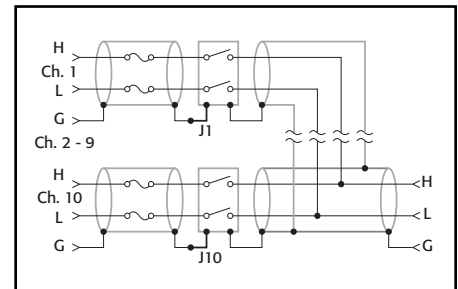
CHANNEL ISOLATION: $10^{10}\Omega$, $<10\text{pF}$

INPUT ISOLATION: Differential: $>10^9\Omega$, $<10\text{pF}$.

Common Mode: $>10^9\Omega$, $<150\text{pF}$.

COMMON MODE VOLTAGE: 1100V peak.

ENVIRONMENT: Operating: 0° to 50° up to 35°C at 70% R.H.
Storage: -5° to $+65^\circ\text{C}$.



Low Current Scanner Card 10-Channel

The Model 7158 provides quality low-current switching at an affordable price. The offset current error generated is specified $<1\text{pA}$, with typical performance at $<30\text{fA}$. When used with a voltage source and electrometer or picoammeter, this card can easily automate insulation resistance tests, reverse leakage tests on semiconductor junctions, or gate leakage tests on FETs.

The Model 7158 is designed to maintain the current path even when the channel is de-selected. Input connectors are BNC for shielding of the sensitive measurements and for compatibility with low noise coaxial cables such as Keithley accessory cables Models 4801 and 4803. Two outputs are provided to allow for chaining several scanner cards to one measurement instrument, and an isolation relay in the output HI minimizes interaction between cards.

CHANNELS PER CARD: 10.

CONTACT CONFIGURATION: Single pole, simultaneous break and 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: BNC.

RELAY DRIVE CURRENT: 100mA per card typical (regardless of channel closures selected).

MAXIMUM SIGNAL LEVEL: 30V, 100mA peak (resistive load).

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

CONTACT RESISTANCE: $<1\Omega$.

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

OFFSET CURRENT: $<1\text{pA}$ ($<30\text{fA}$ typical).

3dB BANDWIDTH: 1MHz typical.

ACTUATION TIME: $<1\text{ms}$, exclusive of mainframe.

CHANNEL ISOLATION: $>10^{14}\Omega$.

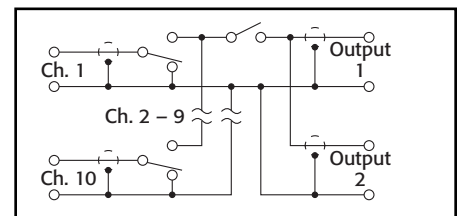
INPUT ISOLATION: Differential: $>10^9\Omega$, $<50\text{pF}$.

Common Mode: $>10^9\Omega$, $<150\text{pF}$.

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

ACCESSORIES AVAILABLE

4801	Low Noise Male to Male BNC Input Cable
4802-10	Low Noise BNC to Unterminated Cable, 10 ft.
4803	Low Noise BNC Cable Kit for 7158



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