7168

Nanovolt Scanner Card

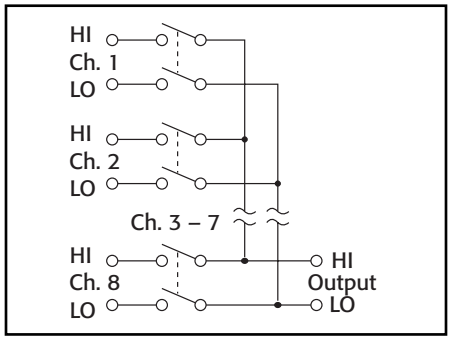
8-Channel, 2-Pole

- **<30nV contact potential**
- **Bare copper terminal connections**

Ordering Information

7168 **8-Channel Nanovolt Scanner Card**

The Model 7168 is an 8-channel, 2-pole card with <30nV of thermal offset. It will switch any one of eight signals to one output in less than 3ms. Channel offset leakage current is <50pA at 23°C. Keithley also offers the Model 78B, which includes the 7168 Nanovolt Scanner Card, Model 7001 80-Channel Scanner mainframe, and Model 2182 Nanovoltmeter. When the 7168 is used with the Model 2182, the noise and drift performance of the 2182 is not degraded.



CHANNELS PER CARD: 8.

CONFIGURATION: Two poles per channel, input HI and LO.

CONNECTOR TYPE: Screw terminal to bare copper printed circuit pad.

MAX. SIGNAL LEVEL: 10V, 50mA peak (resistive load only).

CONTACT RESISTANCE: <12Ω.

CONTACT POTENTIAL (HI to LO) BETWEEN CHANNELS: <30nV when properly zeroed with supplied leads (see manual for recommended procedure). Typically <60nV without zeroing.

CONTACT TYPE: Solid state JFET switch.

ACTUATION TIME: <3ms, exclusive of mainframe.

INPUT LEAKAGE: <50pA per channel at 23°C.

INPUT ISOLATION: >10^9Ω, <40pF between any input terminals or between any input terminal and earth.

COMMON MODE VOLTAGE: 30V peak.

MAXIMUM VOLTAGE BETWEEN ANY TWO TERMINALS: 10V.

WARM-UP: 2 hours in mainframe for thermal stability.

OPERATING ENVIRONMENT: 0°–40°C; up to 35°C at 70% RH.

STORAGE ENVIRONMENT: –25° to 60°C.

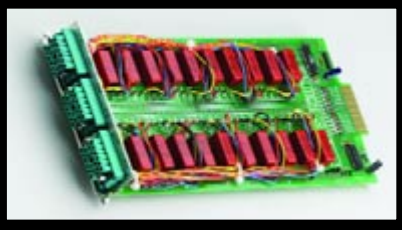
ACCESSORIES SUPPLIED

2107-4	Low Thermal Input Cable for 2182 (1 supplied)
7168-316	Low Thermal Input Cables for 7166 (8 supplied)

7169A

Form C Switch Card

20-Channel

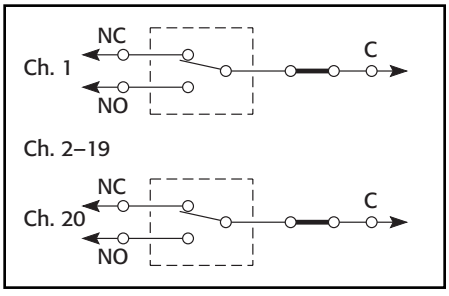


- **20 independent Form C relays**
- **500V peak**
- **Mass termination connectors**

Ordering Information

7169A **20-Channel Form C Switch Card**

Each channel of the Model 7169A is a single-pole, double-throw isolated switch. There are two undedicated buses on the card that can be jumpered to interconnect channels or change the card configuration from switch to multiplex. Factory installed jumpers in series with the Common terminal can be removed if a limiting resistor is required. All poles are available at the three 20-pin mass terminators, which provide quick termination and disconnect when using Model 7169-MTC-3 Mass Terminated Cables or Model 7169-KIT connectors. Use only in Model 7002 mainframe (relays are position sensitive).



CHANNELS PER CARD: 20 independent Form C. All poles available at connectors. Replacement of factory installed jumper allows current limit resistor in series with common of each channel. On-card bus allows for addition of jumper to change configuration from switch to multiplex. Bus also allows channel interconnection.

CONNECTOR TYPE: 3×20 pin mass termination.

RELAY DRIVE CURRENT: 30mA per relay typical.

MAXIMUM SIGNAL LEVEL: 500V peak, 0.5A rms switched, 1A rms carry, 10W (resistive load only).

CONTACT TYPE: Form C.

CONTACT LIFE: >10^8 closures cold switching; >10^7 closures at maximum signal levels.

CONTACT RESISTANCE: <2Ω to rated life.

CONTACT POTENTIAL: <35μV C to NO or NC.

ACTUATION TIME: <3ms, exclusive of mainframe.

CHANNEL ISOLATION: >10^9Ω, <50pF.

INPUT ISOLATION: >10^9Ω, <50pF.

COMMON MODE VOLTAGE: 500V peak.

EMC: Conforms to European Union Directive 89/336/EEC.

SAFETY: Conforms to European Union Directive 73/23/EEC (meets EN61010-1/IEC 1010).

OPERATING ENVIRONMENT: 0° to 55°C, up to 35°C at 70% RH.

STORAGE ENVIRONMENT: –25°C to 65°C.

ACCESSORIES AVAILABLE

CABLES

7169-MTC-3	Mass Terminated Cable Assembly, 3m (10 ft.)

CONNECTORS

7169-KIT	20-Pin Mass Terminated Connector Kit
7169-MTR	Mass Terminated Bulkhead Mount Receptacle

TOOLS FOR CONNECTOR ASSEMBLY

7078-CIT	Extraction Tool for 7169-KIT and 7169-MTR
7078-HCT	Hand Crimp Tool for 7169-KIT and 7169-MTR