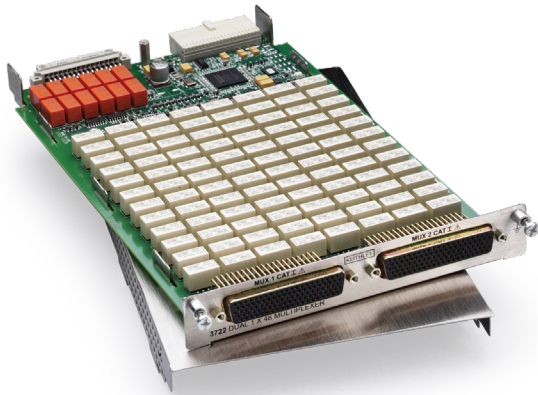


## 3722 Dual 1×48, High Density, Multiplexer Card

96 differential channels, 300 Volts/1 Amp

### DATASHEET

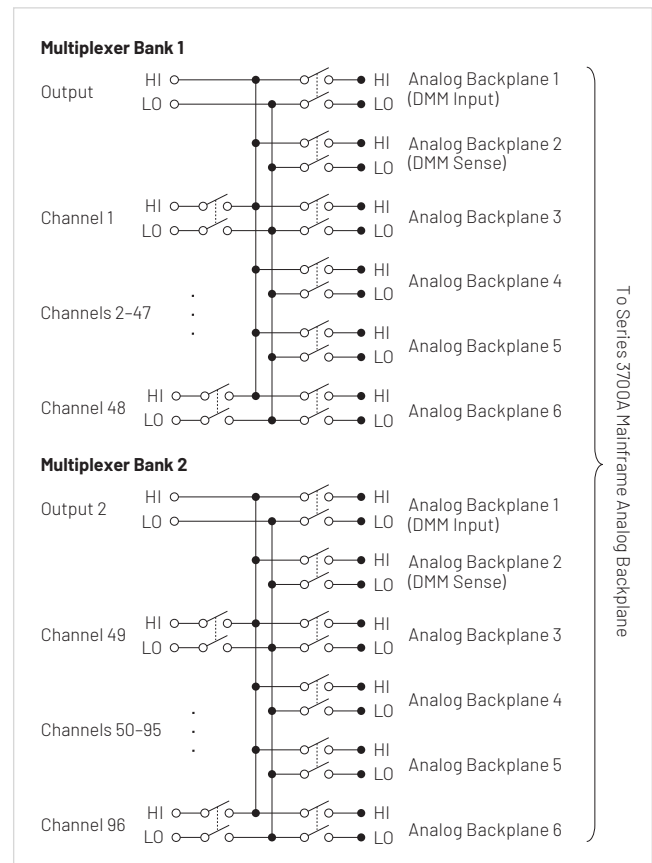


The 3722 offers two independent banks of 1×48 two-pole multiplexers, which is ideal for applications that require a high channel count. The two banks can be automatically connected to the Series 3700A mainframe backplane and optional DMM through the analog backplane connection relays. This connection allows the mainframe to reconfigure the card as a single 1×96 two-pole multiplexer or to enable card-to-card expansion for even larger configurations. Another feature of this card is the latching electromechanical relays. They can accommodate 300 V, 1 A switched signal levels.

The 3722 uses two 104-pin D-sub connectors for signal connections. A solder style connector kit (3722-MTC-1.5-KIT) and pre-assembled cables (3722-MTC-1.5/MM) are available for card connections.

### Key Features

- 96 two-pole or 48 four-pole channels for general purpose measurements
- Analog backplane connection relays provide easy bank and card interconnections
- 300 V, 1 A switched or 2 A carry signal capacity; 60 Ω, 125 VA
- 1 μV and 100 pA offsets
- 25 MHz bandwidth
- Relay closures stored in onboard memory
- Latching electromechanical relays
- Scan and measure over 110 channels/second



## Specifications

<b>Multiplexer Configuration</b>	Two independent 1×48 2-pole multiplexers. Banks can be connected together via relays creating a single 1×96 multiplexer. Banks can be isolated from the backplane by relays. Card can be configured for 2- and 4-wire mode.
<b>Contact Configuration</b>	2-pole form A.
<b>Connector Type</b>	Two 104-pin female D-shells.
<b>Maximum Signal Level</b>	300 V DC or RMS, 1 A switched (2 A carry), 60 Ω, 125 VA.
<b>Common Mode Voltage</b>	300 V DC or RMS between any terminal and chassis.
<b>Volt-Hertz Limit</b>	$8 \times 10^7$ .
<b>Contact Life</b>	$>10^5$ operations at maximum signal level. $>10^8$ operations no load. <sup>1</sup>

		Dual 1×48 <sup>2</sup>	Single 1×96
Channel Resistance (end of contact life)		<1.5 Ω	<2.5 Ω
Contact Potential (differential)		<±1 μV	<±2 μV
Offset Current		<100 pA	<100 pA
Isolation	Differential	$5 \times 10^9$ Ω, 200 pF	$5 \times 10^9$ Ω, 400 pF
	Bank-Bank	$10^9$ Ω, 50 pF	—
	Channel-Channel	$10^9$ Ω, 50 pF	$10^9$ Ω, 50 pF
	Common Mode	$10^{10}$ Ω, 200 pF	$10^{10}$ Ω, 400 pF
Crosstalk Channel-channel	300 kHz	<-65 dB	<-65 dB
	1 MHz	<-55 dB	<-55 dB
	20 MHz	<-30 dB	<-30 dB
	Bandwidth	25 MHz	15 MHz

### Typical Scanning Speeds

<b>Switch Only<sup>3</sup></b>	Sequential scanning, single channel, immediate trigger advance	>120 ch/s.
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#### With Measurements Into Memory<sup>4</sup>

##### DCV (10 V range) or 2W Ohms (1 kΩ range)

>110 ch/s.

##### 3- or 4-Wire RTD

>100 ch/s.

##### 4-Wire Ohms (1 kΩ range)

>100 ch/s.

##### ACV (10 V, 400 Hz range)

>110 ch/s.

## Notes

- Minimum signal level 10 mV, 10 μA.
- 3706A mainframe with all DMM backplane relays disconnected. Maximum two card backplane relays closed.
- Scanning script local to 3706A mainframe, within same bank, and break before make switching.
- 3706A mainframe with autorange off, limits off, dmm.autozero=0, dmm.autodelay=0, 4½ digits (NPLC=.006), for ACV dmm.detectorbandwidth=300, for OHMs dmm.offsetcompensation=off. Scanning script local to mainframe, sequential scan within same bank (2-pole) or card (4-pole), and break before make switching.

## General

<b>ACTUATION TIME</b>	4 ms.
<b>RELAY TYPE</b>	Latching electromechanical.
<b>RELAY DRIVE SCHEME</b>	Matrix.
<b>OPERATING ENVIRONMENT</b>	Specified for 0° to 50°C. Specified to 70% relative humidity at 35°C.
<b>STORAGE ENVIRONMENT</b>	-25° to 65°C.
<b>WEIGHT</b>	2.5 lbs.
<b>SAFETY</b>	Conforms to European Union Directive 73/23/EEC, EN61010-1.
<b>EMC</b>	Conforms to European Union Directive 2004/108/EC, EN61326-1.

## Ordering Information

<b>3722</b>	Dual 1×48, High Density, Multiplexer Card
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## Available Accessories

<b>3722-MTC-1.5-KIT</b>	104-pin, male-to-female D-sub cable assembly, 1.5 m (4.9 ft.) 104-pin, male, D-sub connector kit (solder-cup contacts) 104-pin, female, D-sub connector kit (solder-cup contacts)
<b>3722-MTC-1.5/MM</b>	104-pin D-sub Male to Male Cable, 1.5 m (5 ft.)
<b>3722-MTC-3</b>	104-pin D-sub Male to Female Cable, 3 m (10 ft.)

## Available Services

<b>3722-3Y-EW-STD</b>	1-year factory warranty extended to 3 years from date of shipment
<b>3722-5Y-EW-STD</b>	1-year factory warranty extended to 5 years from date of shipment
<b>C/3722-3Y-STD</b>	3 (Z540-1 compliant) calibrations within 3 years of purchase*

\*Not available in all countries

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