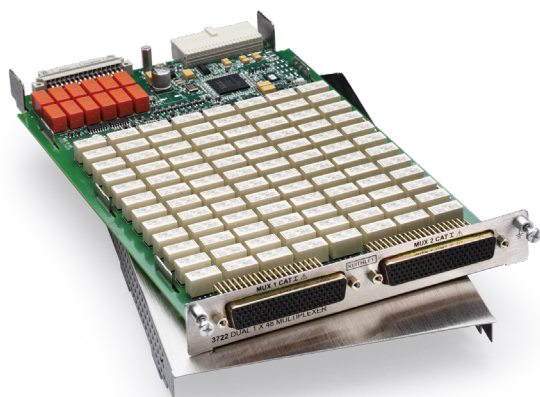


3722 Dual 1×48, High Density, Multiplexer Card

96 differential channels, 300 Volts/1 Amp

DATASHEET

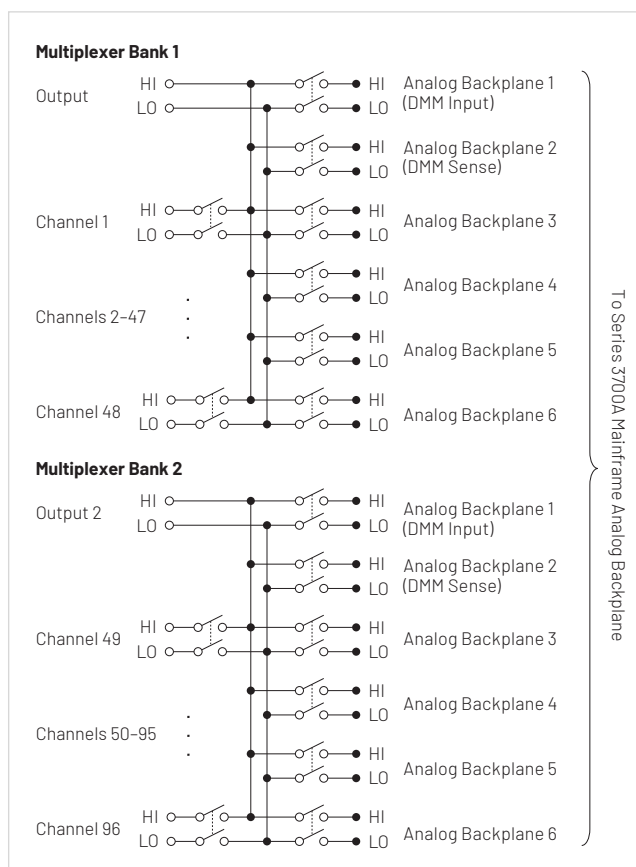


The 3722 offers two independent banks of 1×48 two-pole multiplexers, which is ideal for applications that require a high channel count. The two banks can be automatically connected to the Series 3700A mainframe backplane and optional DMM through the analog backplane connection relays. This connection 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 μ V and 100 pA offsets
- 25 MHz bandwidth
- Relay closures stored in onboard memory
- Latching electromechanical relays
- Scan and measure over 110 channels/second



Specifications

Multiplexer Configuration	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.		
Contact Configuration	2-pole form A.		
Connector Type	Two 104-pin female D-shells.		
Maximum Signal Level	300 V DC or RMS, 1 A switched (2 A carry), 60 Ω, 125 VA.		
Common Mode Voltage	300 V DC or RMS between any terminal and chassis.		
Volt-Hertz Limit	8×10 ⁷ .		
Contact Life	>10 ⁵ operations at maximum signal level. >10 ⁸ operations no load. ¹		
		Dual 1×48²	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	5×10 ⁹ Ω, 200 pF	5×10 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

Switch Only³ Sequential scanning, single channel, immediate trigger advance >120 ch/s.

With Measurements Into Memory⁴

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

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

Ordering Information

3722	Dual 1×48, High Density, Multiplexer Card
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Available Accessories

3722-MTC-1.5-KIT	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)
3722-MTC-1.5/MM	104-pin D-sub Male to Male Cable, 1.5 m (5 ft.)
3722-MTC-3	104-pin D-sub Male to Female Cable, 3 m (10 ft.)

Available Services

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

*Not available in all countries

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