## 3722

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


## Ordering Information

3722 Dual $1 \times 48$, High Density, Multiplexer Card

## Dual $1 \times 48$, High Density, Multiplexer Card

 96 differential channels, 300 Volts/1 Amp

The Model 3722 offers two independent banks of $1 \times 48$ two-pole multiplexers, which is ideal for applications that require a high channel count. The two banks can automatically be 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 $1 \times 96$ 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 $300 \mathrm{~V}, 1 \mathrm{~A}$ switched signal levels.

The Model 3722 uses two 104 -pin D-sub connectors for signal connections. A solder style connector kit (Model 3792-KIT104-R) and pre-assembled cables (Model 3722-MTC-1.5 and 3722-MTC-3) are available for card connections.

## ACCESSORIES AVAILABLE

3722-MTC-1.5 104-pin D-sub Male to Female Cable, 1.5 m ( 5 ft .) 3722 -MTC-1.5/MM 104-pin D-sub Male to Male Cable, 1.5 m ( 5 ft ) 3722-MTC-3 $\quad 104$-pin D-sub Male to Female Cable, 3 m ( 10 ft .) 3722-MTC-3/MM 104 -pin D-sub Male to Male Cable, 3 m ( 10 ft ) 3791-CIT

3792-KIT104-R Contact Insertion and Extraction Tool 104-pin Male D-sub Connector kit (contains 2 male D-sub connectors with housings and 208 solder-cup contacts)
3792-KIT104-R/F 104-pin Female D-sub Connector kit (contains 2 female D-sub connectors with housings and 208 solder-cup contacts)

## SERVICES AVAILABLE

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

# Dual 1×48, High Density, Multiplexer Card <br> 96 differential channels, 300 Volts/ 1 Amp 

## Multiplexer Bank 1

Output 1


Channel 48

Multiplexer Bank 2
Output 2


Channels 50-95

Channel 96

MULTIPLEXER CONFIGURATION: Two independent $1 \times 48$ 2-pole multiplexers. Banks can be connected together via relays creating a single $1 \times 96$ 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 (2A carry), $60 \mathrm{~W}, 125 \mathrm{VA}$.
COMMON MODE VOLTAGE: 300 V DC or RMS between any terminal and chassis.
VOLT-HERTZ LIMIT: $8 \times 10^{7}$.
CONTACT LIFE: $>10^{5}$ operations at maximum signal level. $>10^{8}$ operations no load. ${ }^{1}$

|  | Dual $1 \times 48^{2}$ | Single $1 \times 96$ |
| :---: | :---: | :---: |
| Channel Resistance (end of contact life) | $<1.5 \Omega$ | $<2.5 \Omega$ |
| Contact Potential (differential) | $< \pm 1 \mu \mathrm{~V}$ | $< \pm 2 \mu \mathrm{~V}$ |
| Offset Current | $<100 \mathrm{pA}$ | $<100 \mathrm{pA}$ |
| Isolation |  |  |
| Differential | $5 \times 10^{9} \Omega, 200 \mathrm{pF}$ | $5 \times 10^{9} \Omega, 400 \mathrm{pF}$ |
| Bank-Bank | $10^{9} \Omega, 50 \mathrm{pF}$ | - |
| Channel-channel | $10^{9} \Omega, 50 \mathrm{pF}$ | $10^{9} \Omega, 50 \mathrm{pF}$ |
| Common Mode | $10^{10} \Omega, 200 \mathrm{pF}$ | $10^{10} \Omega, 400 \mathrm{pF}$ |
| Crosstalk Channel-channel |  |  |
| 300 kHz | $<-65 \mathrm{~dB}$ | $<-65 \mathrm{~dB}$ |
| 1MHz | $<-55 \mathrm{~dB}$ | $<-55 \mathrm{~dB}$ |
| 20 MHz | $<-30 \mathrm{~dB}$ | $<-30 \mathrm{~dB}$ |
| Bandwidth | 25 MHz | 15 MHz |

TYPICAL SCANNING SPEEDS:
Switch Only ${ }^{3}$ : Sequential scanning, single channel, immediate trigger advance: $>120 \mathrm{ch} / \mathrm{s}$.
With Measurements Into Memory ${ }^{4}$ :
DCV ( 10 V range) or 2 W Ohms ( $1 \mathrm{k} \Omega$ range): $>110 \mathrm{ch} / \mathrm{s}$.
3 - or 4 -Wire RTD: > $100 \mathrm{ch} / \mathrm{s}$.
4-Wire Ohms ( $1 \mathrm{k} \Omega$ range): $>100 \mathrm{ch} / \mathrm{s}$.
$\mathrm{ACV}(10 \mathrm{~V}, 400 \mathrm{~Hz}$ range): > $>110 \mathrm{ch} / \mathrm{s}$.

## GENERAL

ACTUATION TIME: 4ms.
RELAY TYPE: Latching electromechanical.
RELAY DRIVE SCHEME: Matrix.
OPERATING ENVIRONMENT: Specified for $0^{\circ}$ to $50^{\circ} \mathrm{C}$. Specified to $70 \%$ R.H. at $35^{\circ} \mathrm{C}$.
STORAGE ENVIRONMENT: $-25^{\circ}$ to $65^{\circ} \mathrm{C}$.
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.

## NOTES

1. Minimum signal level $10 \mathrm{mV}, 10 \mu \mathrm{~A}$.
2. 3706 A mainframe with all DMM backplane relays disconnected. Maximum two card backplane relays closed.
3. Scanning script local to 3706A mainframe, within same bank, and break before make switching.
4. 3706 A mainframe with autorange off, limits off, dmm.autozero $=0$, dmm .autodelay $=0,41 / 2$ 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.
