

Keithley Instruments, Inc.
 28775 Aurora Road
 Cleveland, Ohio 44139
 1-888-KEITHLEY
 www.keithley.com

Dual 1x30, High Speed Multiplexer Specifications

60 differential channels, long life reed relays

MULTIPLEXER CONFIGURATION: Two independent 1x 30 2-pole Multiplexers. Banks can be connected together via relay creating a single 1 x 60 Multiplexer. Banks can be isolated from the backplane by relays. Card can be configured for 1,2 and 4 wire.

CONTACT CONFIGURATION: 2 pole form A.

CONNECTOR TYPE: Two 78 pin male D-shells.

Model 3723-ST screw terminal option:

#22AWG typical wire size with .062 inch O.D 124 conductors maximum. 16 AWG maximum wire size with .092 inch O.D. 36 conductor per card maximum.

MAXIMUM SIGNAL LEVEL: 200V DC or RMS, 1A switched (1.25A carry), 15W.

COMMON MODE VOLTAGE: 300V DC or RMS between any terminal and chassis.

VOLT-HERTZ LIMIT : 8×10^7

CONTACT LIFE: REED > 1×10^9 operations, No Load

1×10^7 operation @100V, 10mA

EMR > 1×10^8 operations @5V,10mA

1×10^5 operations @ max signal level

	Dual 1x30 ¹	Single 1x60 ^{1,2}
Channel Resistance (end of contact life)	<1.5Ω	<2.0Ω
Contact Potential (differential) (single ended)	<±6μV <±12μV	<±6μV <±12μV
Offset Current	<250pA	<250pA
Isolation		
Differential	$10^{10}\Omega, 260\text{pF}$	$10^{10}\Omega, 500\text{pF}$
Bank-Bank	$10^{10}\Omega, 75\text{pF}$	—
CH –CH	$10^{10}\Omega, 75\text{pF}$	$10^{10}\Omega, 75\text{pF}$
Common mode	$10^{10}\Omega, 280\text{pF}$	$10^9\Omega, 625\text{pF}$
Crosstalk CH-CH 300KHz: 1MHz: 20MHz:	<-55dB <-50dB <-20dB	<-55dB <-45dB <-20dB
Bandwidth	20MHz	10MHz

¹ Connections made using 3723-ST

² 3706 mainframe with all DMM backplane relays disconnected. Maximum two card backplane relays closed.

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GENERAL:**ACTUATION TIME:** <.5ms**RELAY TYPE:** Dry reed**RELAY DRIVE SCHEME:** Direct**INTERLOCK:** Backplane relays disabled when interlock connection removed.**RELAY DRIVE CURRENT:** 10mA**OPERATING ENVIRONMENT:**

Specified for 0°C to 50°C.

Specified to 70% R.H. at 35°

STORAGE ENVIRONMENT: -25°C to 65°C**WEIGHT:** 3.0lb**SAFETY:** Conforms to European Union Directive 73/23/EEC,EN61010-1**EMC:** Conforms to European Union Directive 2004/108/EC,EN61326-1**Typical Scanning Speeds,switch only³**

	Ch/Sec
Sequential scanning ,single channel,Immediate Trigger Advance	> 1000

Typical Scanning Speeds,with measurements into memory⁴

	Ch/Sec
DCV (10V range) or 2W Ohms (1KΩ range)	>800
3 or 4 Wire RTD	>450
4 Wire Ohms1KΩ range)	>450
ACV (10V,400Hz range)	>800

ACCESSORIES AVAILABLE:

3791-KIT78-R 78 pin female D-sub connector kit (Contains 2 female D-sub connectors and 156 solder cups)

3720-MTC-3 78 pin D-sub female to male cable,3m.

3720-MTC-1.5 78 pin D-sub female to male cable,1.5m.

3723-ST screw terminal block

3723-ST-1 screw terminal block for Single-Pole applications.

3791-CIT Contact insertion and extraction tool.

³ Scanning script local to mainframe, within same bank, break before make.

⁴ 3706 mainframe with autorange off, limits off, dmm.autodelay=0, dmm.autozero=0, 4½ digits (NPLC=.006), for ACV dmm.detectorbandwidth=300,for OHMs dmm.offsetcompensation=off, dmm.opendetector=off . Scanning script local to mainframe, sequential scan within same bank (2 pole) or card (4 pole), and break before make switching.

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