

KEITHLEY

3722

The Keithley 3722 is a high-density, dual 1x48 multiplexer plug-in card designed for the Series 3700 and 3700A System Switch/Multimeter mainframes. Featuring 96 two-pole channels utilizing latching reed relays, it is optimized for high-speed, multi-channel switching applications requiring rapid actuation and long life.

SPECIFICATIONS

Physical

Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	114 mm × 33 mm × 258 mm mm
Weight	0.62 kg kg

General & Configuration

Module Type	Multiplexer Card
Number of Channels	96 (2-pole)
Multiplexer Configuration	Dual 1x48, Single 1x96, or 1x48 (4-pole)
Contact Form	2-pole Form A
Relay Type	Latching Reed
Compatible Mainframes	Keithley Series 3700, Series 3700A
Number of Slots Required	1

DC Electrical Specifications

Maximum Switching Voltage (DC)	200 V
Maximum Switching Current (DC)	1 A
Maximum Carry Current (DC)	1 A
Maximum Switching Power (DC)	10 W
Contact Resistance (Initial)	< 1.5 Ω
Contact Potential (Thermal EMF)	< 50 μV
Insulation Resistance	> 10 ⁹ Ω

AC Electrical Specifications

Maximum Switching Voltage (AC RMS)	141 V RMS (200 V peak)
Maximum Switching Current (AC RMS)	1 A
Maximum Switching Power (AC)	10 VA

Timing & Relay Lifetime

Actuate Time	< 1 ms
Release Time	< 1 ms
Mechanical Relay Life	10 ⁹ cycles

Connectivity & Accessories	
Rear Panel Connector Type	Dual 78-pin D-sub (male)
Analog Backplane Connection Capability	Yes (automatic via backplane relays)
Supported Terminal Block Models	3722-ST
Supported Cable Accessories	3722-MTC-1.5 (1.5 m), 3722-MTC-3 (3 m)

Environmental & Safety	
Storage Temperature Range	-40 °C to 70 °C
Operating Humidity Range	Up to 80% R.H. @ 35 °C (non-condensing)

AC Performance	
Bandwidth (Dual 1x48, 50 Ω load)	4.5 MHz (typical)
Bandwidth (1x96, 50 Ω load)	3.5 MHz (typical)
Crosstalk (100 kHz, 50 Ω load)	-60 dB (typical)
Crosstalk (1 MHz, 50 Ω load)	-40 dB (typical)
Isolation (100 kHz, 50 Ω load)	-65 dB (typical)
Isolation (1 MHz, 50 Ω load)	-45 dB (typical)

Reliability	
Electrical Relay Life (10 V, 10 mA)	10^8 operations
Electrical Relay Life (100 V, 10 mA)	10^7 operations

Safety	
Maximum Voltage to Earth Ground	300 V

Electrical Specifications	
Maximum Carry Current (AC)	1 A
Maximum Voltage Between Any Two Terminals	300 V DC or AC RMS

Environmental	
Operating Altitude	Up to 2000 meters
Storage Altitude	Up to 4600 meters

Compliance	
Safety Compliance	Conforms to European Union Low Voltage Directive
EMC Compliance	Conforms to European Union EMC Directive

TECHNOLOGY	
Latching Reed Relay	

APPLICATIONS	
High-speed multi-channel scanning and multiplexing	

