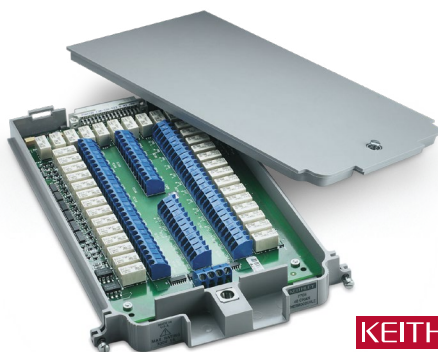


7708 40-channel, Differential Multiplexer Module

with Automatic CJC and Screw Terminals

Datasheet

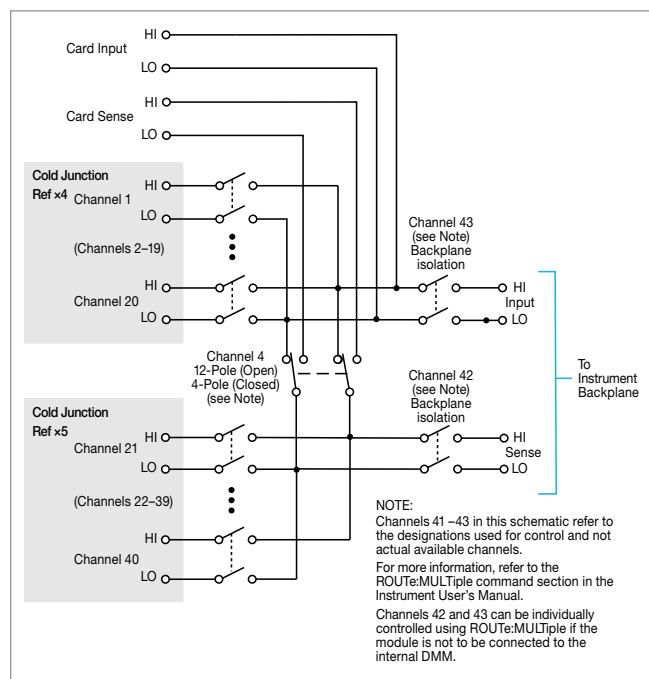


KEITHLEY
A Tektronix Company

The 7708 plug-in module offers 40 channels of 2-pole or 20 channels of 4-pole multiplexer switching that can be configured as two independent banks of multiplexers. The built-in CJC sensors automatically linearize thermocouples, making the 7708 ideal for RTD, thermistor, and thermocouple temperature applications. It is also well suited for mixed-signal measurement applications that require multi-point monitoring, such as environmental stress screening.

Key Features

- 40 differential channels for general purpose measurements
- Two- or four-wire measurements
- 300 V, 1 A capacity for voltage channels; 60 W, 125 VA
- Oversize screw terminal connection blocks are standard for easier connection
- Relay closures stored in onboard memory



Specifications

Capabilities

Channels 1–40	Multiplex one of 40 2-pole or one of 20 4-pole signals into DMM.
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Inputs

Maximum Signal Level

Channels (1–40)	300 V DC or rms, 1 A switched, 60 W, 125 VA maximum.
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Contact Life (typ.)	>10 ⁵ operations at max. signal level. >10 ⁸ operations no load ¹ .
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1. Open thermocouple detector on during thermocouple measurements. Minimum signal level 10 mV, 10 μ A.

Contact Resistance	<2 Ω at end of contact life.
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Contact Potential	< $\pm$ 500 nV typical per contact, 1 μ V max. < $\pm$ 500 nV typical per contact pair, 1 μ V max.
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Offset Current	<100 pA.
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Connector Type	Screw terminal, #20 AWG wire size.
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Isolation Between Any Two Terminals	>10 ⁹ Ω , <200 pF.
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Isolation Between Any Terminal and Earth	>10 ⁹ Ω , <400 pF.
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Cross Talk (1 MHz, 50 Ω Load)	<–40 dB.
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Insertion Loss (50 Ω Source, 50 Ω Load)	<0.1 dB below 1 MHz. <3 dB below 2 MHz.
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Common Mode Voltage	300 V between any terminal and chassis.
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General

40 Channels	40 channels of 2-pole relay input. All channels configurable to 4-pole.
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Relay Type	Latching electromechanical.
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Actuation Time	<3 ms.
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Environmental and Safety

Operating Environment: Specified for 0° to 50°C. Specified to 80% R.H. at 35°C.

Storage Environment: –25° to 65°C.

EMC: Conforms to European Union EMC Directive.

Safety: Conforms to European Union Low Voltage Directive

RoHS: Conforms to European Union RoHS Directive

Weight	0.52 kg (1.16 lb).
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Supplied Accessories

CC-92-1	Set of 20 Cable Ties
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TL-23	Screwdriver
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Available Accessories

7708-3Y-EW	1-year factory warranty extended to 3 years from date of shipment
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Ordering Information

7708	40-channel Differential Multiplexer Module with Automatic CJC and Screw Terminals
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Warranty	1 year
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