

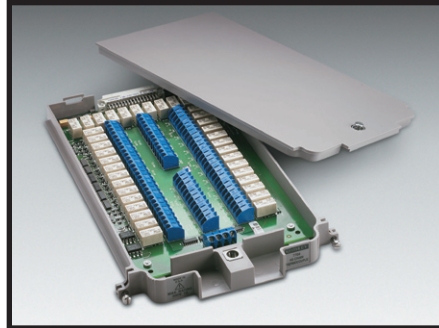
# 7708

# 40-Channel Differential Multiplexer Module with Automatic CJC and Screw Terminals

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

## Ordering Information

**7708 40-Channel Differential Multiplexer Module with Automatic CJC and Screw Terminals**



The Model 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 Model 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.

### CAPABILITIES

**CHANNELS 1–40:** Multiplex one of 40 2-pole or one of 20 4-pole signals into DMM.

### INPUTS

#### MAXIMUM SIGNAL LEVEL:

**Channels (1–40):** 300V DC or rms, 1A switched, 60W, 125VA maximum.

**CONTACT LIFE (typ):** >10<sup>5</sup> operations at max. signal level.  
>10<sup>8</sup> operations no load<sup>1</sup>.

<sup>1</sup> Open thermocouple detector on during thermocouple measurements. Minimum signal level 10mV, 10μA.

**CONTACT RESISTANCE:** <1Ω at end of contact life.

#### CONTACT POTENTIAL:

<±500nV typical per contact, 1μV max.  
<±500nV typical per contact pair, 1μV max.

**OFFSET CURRENT:** <100pA.

**CONNECTOR TYPE:** Screw terminal, #20 AWG wire size.

**ISOLATION BETWEEN ANY TWO TERMINALS:** >10<sup>10</sup>Ω, <100pF.

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:** >10<sup>10</sup>Ω, <200pF.

**CROSS TALK (10MHz, 50Ω Load):** <–40dB.

**INSERTION LOSS (50Ω Source, 50Ω Load):** <0.1dB below 1MHz. <3dB below 2MHz.

**COMMON MODE VOLTAGE:** 300V between any terminal and chassis.

#### TEMPERATURE ACCURACY USING INTERNAL CJC:

1.0°C (see mainframe specification for details).

### GENERAL

**40 CHANNELS:** 40 channels of 2-pole relay input. All channels configurable to 4-pole.

**RELAY TYPE:** Latching electromechanical.

**ACTUATION TIME:** <3ms.

**FIRMWARE:** Specified for Model 2700 rev. B02, 2701 rev. A01, and 2750 rev. A01 or higher.

### ENVIRONMENTAL

**OPERATING ENVIRONMENT:** Specified for 0°C to 50°C.  
Specified to 80% R.H. at 35°C.

**STORAGE ENVIRONMENT:** –25°C to 65°C.

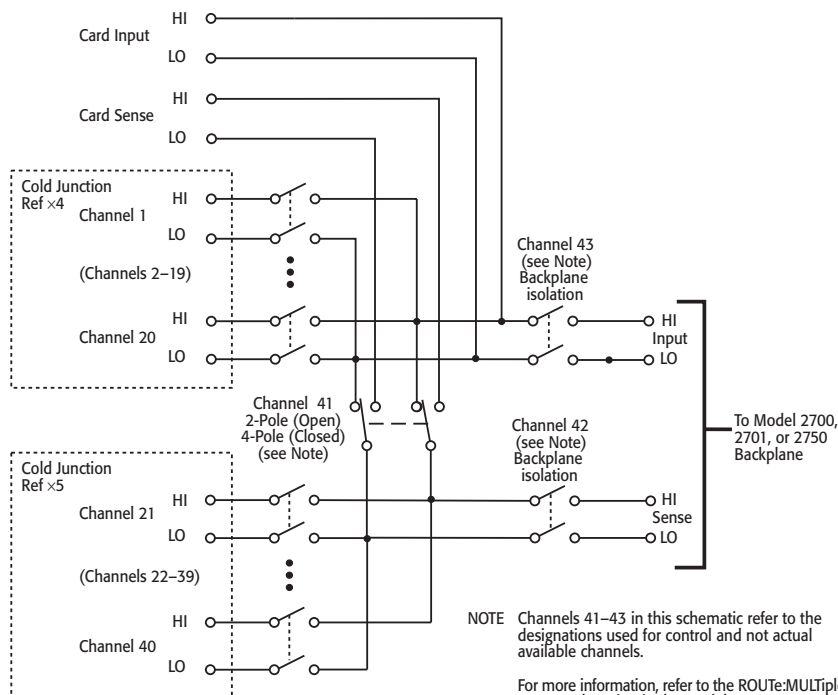
**WEIGHT:** 0.52kg (1.16 lb).

### ACCESSORIES AVAILABLE

7401 Type K Thermocouple Wire, 30.5m (100 ft).

### SERVICES AVAILABLE

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



**NOTE** Channels 41–43 in this schematic refer to the designations used for control and not actual available channels.

For more information, refer to the ROUTe:MULTiple command section in the Model 2700, 2701, or 2750 User's Manual.

Channels 42 and 43 can be individually controlled using ROUTe:MULTiple if the module is not to be connected to the internal DMM.

Use with Integra Series mainframes: 2700, 2701, 2750

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