

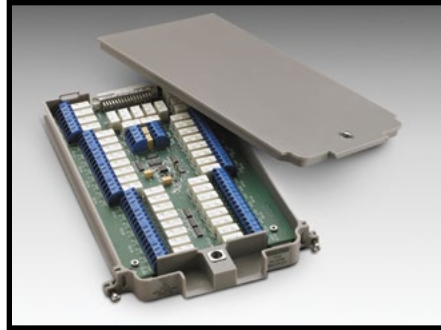
# 7702

## 40-channel Differential Multiplexer Module with Screw Terminals

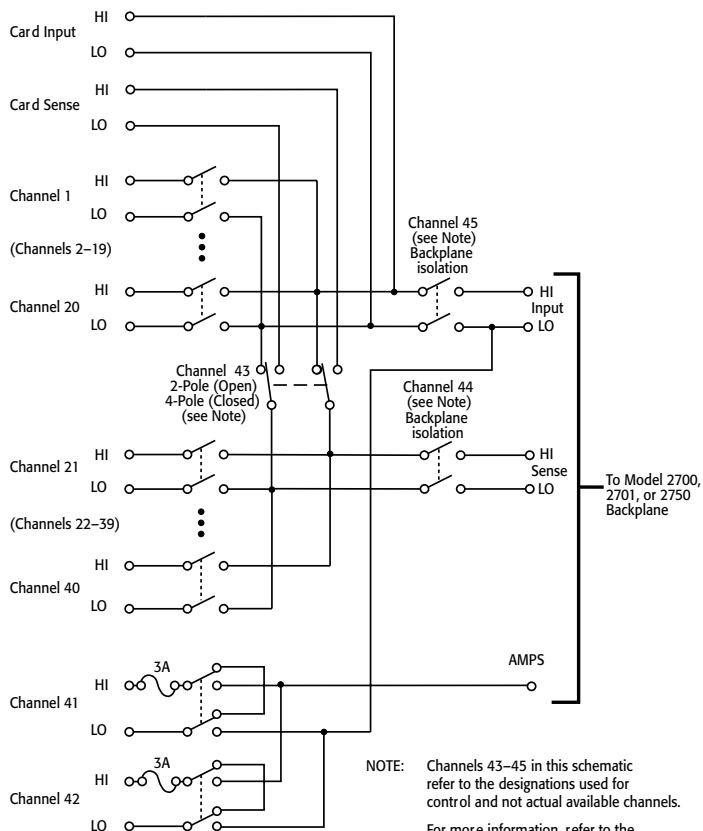
- 40 channels for general-purpose measurements, plus 2 channels to measure current
- Two- or four-wire measurement
- Oversize screw terminal connection blocks are standard for easier connection
- 300V, 1A capacity for voltage channels; 60W, 125VA
- 3A capacity for current channels
- Relay closures stored in onboard memory

### Ordering Information

**7702 40-channel Differential Multiplexer Module with Screw Terminals**



The Model 7702 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 Model 7702 provides two additional protected channels for current measurements. It is ideal for RTD, thermistor, and thermocouple temperature applications.



**NOTE:** Channels 43–45 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 44 and 45 can be individually controlled using ROUTe:Multiple if the module is not to be connected to the internal DMM.

### CAPABILITIES

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

**CHANNELS 41-42:** Multiplex one of 2 2-pole current signals into DMM.

### INPUTS

#### MAXIMUM SIGNAL LEVEL:

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

**Channels (41-42):** 60V DC or 30V rms, 3A switched, 60W, 125VA maximum.

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

<sup>1</sup> Minimum signal level 10mV, 10 $\mu$ A.

**CONTACT RESISTANCE:**  $<1\Omega$  at end of contact life.

#### CONTACT POTENTIAL:

$<\pm 500$ nV typical per contact, 1 $\mu$ V max.

$<\pm 500$ nV typical per contact pair, 1 $\mu$ V max.

**OFFSET CURRENT:**  $<100$ pA.

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

**ISOLATION BETWEEN ANY TWO TERMINALS:**  $>10^6\Omega$ ,  $<100$ pF.

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:**  $>10^6\Omega$ ,  $<200$ pF.

**CROSS TALK (10MHz, 50 $\Omega$  Load):**  $<-40$ dB.

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

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

### GENERAL

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

**2 CHANNELS:** 2 channels of current only input.

**RELAY TYPE:** Latching electromechanical.

**ACTUATION TIME:**  $<3$ ms.

**FIRMWARE:** Specified for Model 2700 rev. A01, 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:**  $-25^\circ\text{C}$  to  $65^\circ\text{C}$ .

**WEIGHT:** 0.5kg (1.1 lb).

### SERVICES AVAILABLE

7702-3Y-EW 1-year factory warranty extended to 3 years from date of shipment

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