# 7702 40-Channel Differential Multiplexer

## **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: <3ms.

## **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.

 $\begin{array}{ll} \textbf{CONTACT LIFE (typ):} & > 10^5 \ operations \ at \ max \ signal \ level. \\ & > 10^8 \ operations \ no \ load.^1 \end{array}$ 

**CONTACT RESISTANCE:** <1 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:  $>10^{10}$  , <100 pE

ISOLATION BETWEEN ANY TERMINAL AND EARTH: >109 , <200 pF.

CROSS TALK (10MHz, 50 Load): <-40dB.

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

<3dB below 2MHz.

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

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

Specifications subject to change without notice.

Card Input
LO
Card Sense
LO
Channel 1
LO
Channel 2-19
Channel 20
Channel 3-19
Channel 43
Channel 41
LO
Channel 41
LO
Channel 42
LO
Channel 43
Channel 44
See Note)
Backplane
Isolation
HI
Channel 40
Channel 41
LO
AMPS
AMPS
Channel 41
Channel 42
Channel 42
LO

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 27xx 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.

<sup>1.</sup> Minimum signal level 10mV, 10uA.