7700

- 20 channels for generalpurpose measurements, plus two channels to measure current
- **Oversize screw terminal** connection blocks are standard for easier connections
- **50MHz bandwidth**
- 300V, 1A capacity for voltage channels; 60W, 125VA
- 3A capacity for current channels
- Low insertion loss of up to 50MHz
- Relay closures stored in onboard memory

Ordering Information

7700 20-channel, Differential **Multiplexer Module** with Automatic CJC and Screw Terminals



The Model 7700 plug-in module offers 20 channels of 2-pole or 10 channels of 4-pole multiplexer switching that can be configured as two independent banks of multiplexers. There are two additional protected channels for current measurements. Automatic CJC is provided so that no other accessories are required to make thermocouple temperature measurements. In addition, the Model 7700 contains latching electromechanical relays that enable signal bandwidths of up to 50MHz. The Model 7700 is ideal for RTD, thermistor, and thermocouple temperature applications.

н 0 Card Input 10 ΗΙ Card Sense 10 old junctior ef x3 н Channel 1 10 ee Note) (see Note Backplane isolation (Channels 2-9) -01 0 о ні Channel 10 Input LO οĽο Channel 23 2-Pole (Open) 4-Pole (Closed) (see Note) Channel 24 (see Note) Backplane isolation Cold junction Ref x3 -0 HI ΗΙ 0 0 -01 ്റ Channel 11 To Model 2700, 2701, or 2750 Backplane 10 0 -0 L 0 : (Channels 12-19) HI Channel 20 LO AMPS HI of) oo Channel 21 NOTE: Channels 23-25 in this schematic ∖ œ refer to the designations used for control and not actual available channels. Channel 22 10 For more information, refer to the ROUTe:MULTiple command section AMPS in the Model 2700, 2701, or 2750 User's Manual. Card LO Channels 24 and 25 can be individually

controlled using ROUTe:MULTiple if the module is not to be connected to the internal DMM

CAPABILITIES

20-channel, Differential Multiplexer Module

with Automatic CJC, Screw Terminals, and up to 50MHz Bandwidth

- CHANNELS 1-20: Multiplex one of 20 2-pole or one of 10 4-pole signals into DMM.
- CHANNELS 21-22: Multiplex one of 2 2-pole current signals into DMM

INPUTS

MAXIMUM SIGNAL LEVEL:

MAAIMUM SIGNAL LEVEL:
Channels (1-20): 300V DC or 300V rms (425V peak) for
AC waveforms, 1A switched, 60W, 125VA maximum.
Channels (21-22): 60V DC or 30V rms, 3A switched, 60W,
125VA maximum.
CONTACT LIFE (typ.): >10 ⁵ operations at max. signal level. >10 ⁸ operations no load ¹ .
1 Open thermocouple detector on during thermocouple measurements. Minimum signal level 10 mV, 10 $\mu A.$
CONTACT RESISTANCE: $<1\Omega$ 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: $>10^{10}\Omega$, <100 pF.
ISOLATION BETWEEN ANY TERMINAL AND EARTH: >10° Ω , <200pF.
INSERTION LOSS (50 Ω Source, 50 Ω Load):
w/Internal DMM w/o Internal DMM*
<0.1 dB: 1 MHz 1 MHz
<3 dB: 2 MHz 50 MHz
CROSSTALK (50Ω Load):
w/Internal DMM w/o Internal DMM*
10 MHz: $<-40 \text{ dB}$ $<-40 \text{ dB}$
25 MHz : ** <-25 dB
COMMON MODE VOLTAGE: 300V or 300V rms (425V peak) for AC waveforms between any terminal and chassis.
TEMPERATURE ACCURACY USING INTERNAL CIC:

- TEMPERATURE ACCURACY USING INTERNAL CJC: 1.0°C (see mainframe specification for details).
- * Channels 24 and 25 are open. Refer to ROUTe:MULTiple command in 27XX User Manual.
- ** Not valid

GENERAL

20 CHANNELS: 20 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.

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°C to 65°C.

WEIGHT: 0.45kg (1 lb).

ACCESSORY AVAILABLE: Model 7401 Type K Thermocouple Wire, 30.5m (100 ft).

SERVICES AVAILABLE

7700-3Y-EW 1-year factory warranty extended to 3 years

Use with Integra Series mainframes: 2700, 2701, 2750

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