

# 7703

# 32-Channel, High-Speed, Differential Multiplexer Module

- 32 channels for general purpose measurements
- Relay actuation time of less than 1ms for high-speed scanning
- Two- or four-wire measurement
- Two 50-pin female D-subconnectors are standard for secure hook-up and quick teardown

## Ordering Information

**7703 32-Channel, High-Speed, Differential Multiplexer Module**

## Accessories Supplied

Two mating connectors with solder cup (Model 7788)



The Model 7703 plug-in module offers 32 channels of 2-pole or 16 channels of 4-pole multiplexer switching that can be configured as two independent banks of multiplexers. The non-latching reed relays provide high speeds and are designed with 300 volt, 500mA; 10VA. The relay closures are stored in onboard memory. The Model 7703 is ideal for RTD and thermistor temperature applications.

## CAPABILITIES

**CHANNELS 1-32:** Multiplex one of 32 2-pole or one of 16 4-pole signals into DMM.

## INPUTS

### MAXIMUM SIGNAL LEVEL:

**Channels (1-32):** 300V DC or rms, 0.5A switched, 10W maximum.

**Contact Life (typ):**  $>5 \times 10^4$  operations at max signal level.  $>10^8$  operations cold switching.

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

### CONTACT POTENTIAL:

$<\pm 3\mu\text{V}$  typical per contact,  $6\mu\text{V}$  max.  
 $<\pm 3\mu\text{V}$  typical per contact pair,  $6\mu\text{V}$  max.

**OFFSET CURRENT:**  $<100\text{pA}$ .

**CONNECTOR TYPE:** 50 pin D-sub $\times 2$ .

**RELAY DRIVE CURRENT:** 20mA per channel.

**ISOLATION BETWEEN ANY TWO TERMINALS:**  $>10^9\Omega$ ,  $<200\text{pF}$ .

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:**  $>10^9\Omega$ ,  $<400\text{pF}$ .

**CROSS TALK (1 MHz, 50 $\Omega$  Load):**  $<-40\text{dB}$ .

**INSERTION LOSS (50 $\Omega$  Source, 50 $\Omega$  Load):**  $<0.35\text{dB}$  below 1MHz.  $<3\text{dB}$  below 2MHz.

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

## GENERAL

**32 CHANNELS:** 32 channels of 2-pole relay input. All channels configurable to 4-pole.

**RELAY TYPE:** Reed.

**ACTUATION TIME:**  $<1\text{ms}$ .

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

## ENVIRONMENTAL

**OPERATING ENVIRONMENT:** Specified for  $0^\circ\text{C}$  to  $50^\circ\text{C}$ .

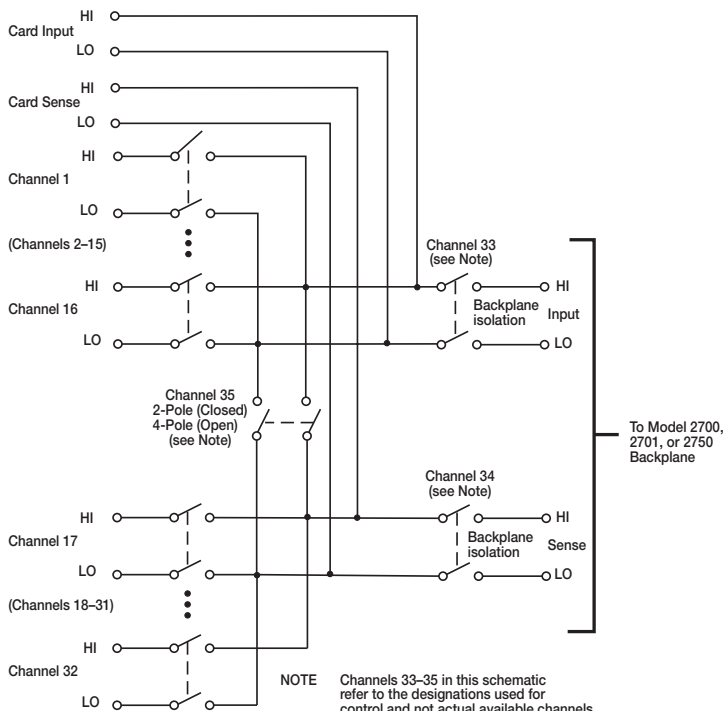
Specified for 80% R.H. at  $35^\circ\text{C}$ .

**STORAGE ENVIRONMENT:**  $-25^\circ\text{C}$  to  $65^\circ\text{C}$ .

**WEIGHT:** 0.8kg (1.75 lbs).

## ACCESSORIES AVAILABLE

7705-MTC-2 50 Pin Male to Female DSUB Cable, 2m (6.6 ft).



**NOTE** Channels 33-35 in this schematic refer to the designations used for control and not actual available channels.

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

Use with Integra Series Mainframes: 2700, 2701, 2750

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