

# MODEL 2750 MULTIMETER/SWITCH SYSTEM

## SWITCH/CONTROL MODULE SPECIFICATIONS

# 7701

### 7701 Low-Voltage 32-Channel Differential Multiplexer

#### Features

- Configurable for 32 channels of differential measurements, with up to 16 channels of 4-pole measurements.
- Configurable for 32 channels of common-side 4-wire ohms.
- Configurable as two independent banks of multiplexers.
- Two female D-shell connectors are standard for secure hook-up and quick teardown.
- 150V, 1A capacity for voltage channels; 60W, 125VA.
- Two mating IDC connectors for ribbon cable (Model 7790) are supplied.
- Relay closures stored in on-board memory.
- Screw terminal jumpers allow user-configurable DMM connections.

#### GENERAL

**32 CHANNELS:** 32 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. B03 and Model 2750 rev. A01.

**DMM CONNECTIONS:** Screw terminals provide internal DMM connections to channels 34 and 35 and connections to external wiring access.

#### CAPABILITIES

**CHANNELS 1–32:** Multiplex one of 32 2-pole or one of 16 4-pole signals into DMM. Configuration supports dual 1×16 independent multiplexers.

#### INPUTS

**MAXIMUM SIGNAL LEVEL:** Any channel to Any Channel (1–32): 150V DC or 150Vrms (212V peak) for AC waveforms, 1A switched, 60W, 125VA maximum.

**SAFETY:** Conforms to European Union Directive 73/23/EEC EN61010-1, CAT I.

**CONTACT LIFE (typ):** >10<sup>5</sup> operations at max signal level.  
>10<sup>8</sup> operations cold switching.

**CONTACT RESISTANCE:** <1Ω any path and additional 1Ω at end of contact life.

**CONTACT POTENTIAL:** <6μV per contact pair.

**OFFSET CURRENT:** <100pA.

**CONNECTOR TYPE:** 50-pin female D-shell, Channels 1–24.  
25-pin female D-shell, Channels 25–32.  
Supplied with male IDC ribbon cable connectors.

**ISOLATION BETWEEN ANY TWO TERMINALS:** >10<sup>9</sup>Ω, <200pF.

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:** >10<sup>9</sup>Ω, <400pF.

**CROSS TALK (1MHz, 50Ω Load):** <-35dB.

**INSERTION LOSS (50Ω Source, 50Ω Load):** <0.35dB below 1MHz.  
<3dB below 2MHz.

**COMMON MODE VOLTAGE:** 300VDC or 300Vrms (425V peak) for AC waveforms between any terminal and chassis.

#### ENVIRONMENTAL:

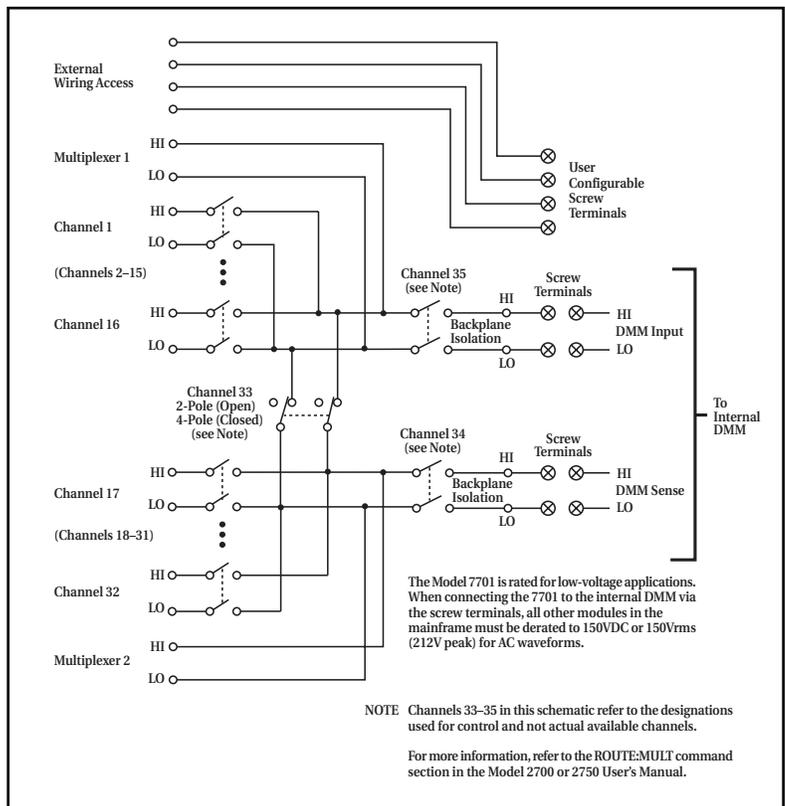
**OPERATING ENVIRONMENT:** Specified for 0°C to 50°C.  
Specified to 50% R.H. at 35°C.

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

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

#### ACCESSORIES AVAILABLE:

- Model 7789 50/25 Pin Male D-Shell Solder Cup Connectors
- Model 7790 50/50/25 Pin Female/Male D-Shell IDC Connectors



See page 36 for common-side 4-wire ohms configuration example.