

SWITCH/CONTROL MODULE SPECIFICATIONS

7709

7709 6×8 Matrix Module

Features

- Automatic 2- or 4-wire connection to DMM
- 6 row × 8 column matrix
- Two female “D-sub” connectors are standard for secure hook-up and quick teardown.
- 300V, 1A capacity.
- Two mating IDC connectors for ribbon cable (Model 7790) are supplied.
- Relay closures stored in on-board memory.

GENERAL

MATRIX CONFIGURATION: 6 rows × 8 columns.

CONTACT CONFIGURATION: 2 pole Form A.

FIRMWARE: Specified for Model 2700 rev. B03 and Model 2750 rev. A01.

RELAY TYPE: Latching electromechanical.

ACTUATION TIME: <3ms.

CAPABILITIES

DMM CONNECTION:

2-Wire Functions

Row 1, channels 1–8, through channel 50.

4-Wire Functions

Row 1, channels 1–4 (Source) through channel 50 and Row 2, channels 13–16 (Sense), through channel 49.

CLOSE CHANNEL: CLOSE command connects channels 1–8 to DMM.

For 4-wire, channels 1–4 are automatically paired with channels 13–16. ROUTe: MULTiple allows any combination of rows and columns to be connected at the same time.

INPUTS

MAXIMUM SIGNAL LEVEL: Any Channel to Any Channel (1–48): 300VDC or 300Vrms (425V 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): >10⁵ operations at max signal level.
>10⁸ operations cold switching.

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

CONTACT POTENTIAL: <3μV per contact pair.

OFFSET CURRENT: <100pA.

CONNECTOR TYPE: 50-pin female D-shell for rows and columns.
25-pin female D-shell for “daisy-chain” rows.
Supplied with male IDC ribbon cable connectors.

ISOLATION BETWEEN ANY TWO TERMINALS: >10⁹Ω, <200pF.

ISOLATION BETWEEN ANY TERMINAL AND EARTH: >10⁹Ω, <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

