

# 7709

# 6x8 Matrix Module

- Automatic two- or four-wire connection to DMM
- 6 row x 8 column matrix
- Expandable to larger switch configurations by daisy-chaining or cascading multiple modules
- Two female D-sub connectors are standard for secure hook-up and quick teardown
- 300V, 1A capacity
- Relay closures stored in onboard memory

## Ordering Information

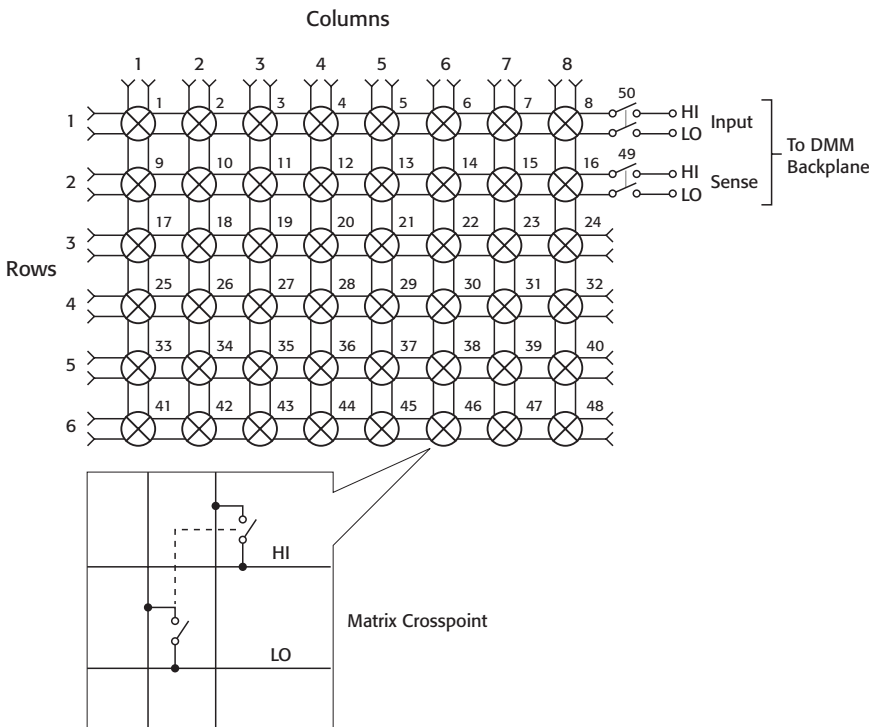
**7709 6x8 Matrix Module**

### Accessories Supplied

Two mating IDC connectors



The Model 7709 plug-in module is a two-pole, 6x8 matrix module. It can connect any combination of six differential channels of instrumentation to any combination of eight differential device-under-test channels. The instrumentation can be AC and DC sources, internal or external meters, oscilloscopes, etc. This matrix configuration allows wide flexibility for complex test systems.



## 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 1.

**CONTACT LIFE (typ):** >10<sup>5</sup> operations at max. signal level. >10<sup>8</sup> operations no load<sup>1</sup>.

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

**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:** >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.

## GENERAL

**MATRIX CONFIGURATION:** 6 rows x 8 columns.

**CONTACT CONFIGURATION:** 2 pole Form A.

**FIRMWARE:** Specified for Model 2700 rev. B03, Model 2701 rev. A01, and Model 2750 rev. A01 or higher.

**RELAY TYPE:** Latching electromechanical.

**ACTUATION TIME:** <3ms.

## 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

7789	50/25 Pin Male D-Shell Solder Cup Connectors
7790	50/50/25 Pin Female/Male D-Shell IDC Connectors
7705-MTC-2	50 Pin Male to Female DSUB Cable, 2m (6.6 ft).
7707-MTC-2	25 Pin Male to Female DSUB Cable, 2m (6.6 ft).

## SERVICES AVAILABLE

7709-3Y-EW	1-year factory warranty extended to 3 years from date of shipment
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