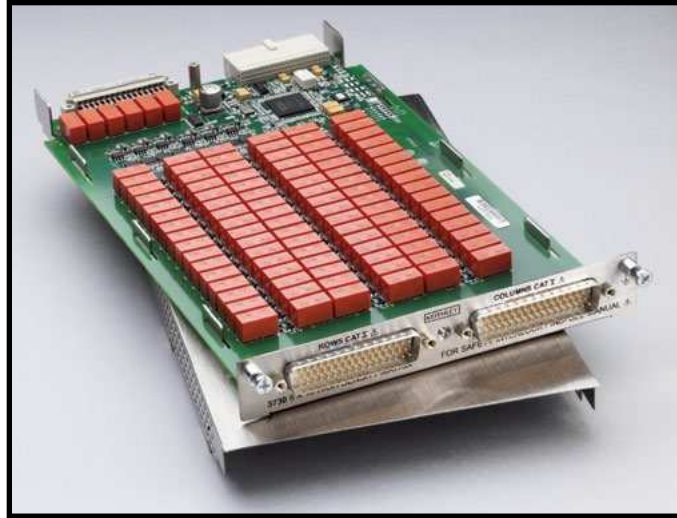


# 3730

## 6×16, High Density, Matrix Card

96 two-pole crosspoints with column expansion relays

- 6 row by 16 column matrix (2-pole)
- Analog backplane connection relays provide easy column expansion
- 300V, 1A switched or 2A carry signal capacity; 60W, 125VA
- Screw terminal connections provided on removable 3730-ST accessory
- 2µV and 100pA offsets
- Relay closures stored in onboard memory
- Latching electromechanical relays



The Model 3730 is a two-pole, 6 row by 16 column matrix card. It can connect up to six differential instrument channels to any combination of 16 DUTs (devices under test). Any row can be connected to the Series 3700A mainframe backplane by using the analog backplane connection relays. This allows for easy matrix column expansion. A matrix of up to 6 rows by 96 columns can be supported within a single Model 3706A mainframe (with six Model 3730 cards).

The Model 3730 uses two 50-pin male D-sub connectors for signal connections. For screw terminal connections, use the detachable Model 3730-ST accessory.

### ACCESSORIES AVAILABLE

3721-MTC-1.5	50 Pin D-sub Female to Male Cable, 1.5m (5 ft.)
3721-MTC-3	50 Pin D-sub Female to Male Cable, 3m (10 ft.)
3730-ST	Screw Terminal Block
3790-KIT50-R	50 Pin Female D-sub Connector Kit (contains 2 female D-sub connectors and 100 solder-cup contacts)

### SERVICES AVAILABLE

3730-3Y-EW-STD	1-year factory warranty extended to 3 years from date of shipment
3730-5Y-EW-STD	1-year factory warranty extended to 5 years from date of shipment
C/3730-3Y-STD	3 (Z540-1 compliant) calibrations within 3 years of purchase*

\*Not available in all countries

### Ordering Information

**3730**      **6×16, High Density,  
Matrix Card**

1.888.KEITHLEY (U.S. only)

[www.keithley.com](http://www.keithley.com)

[www.valuetronics.com](http://www.valuetronics.com)

A Greater Measure of Confidence

**KEITHLEY**

A Tektronix Company

High density 6×16 matrix card

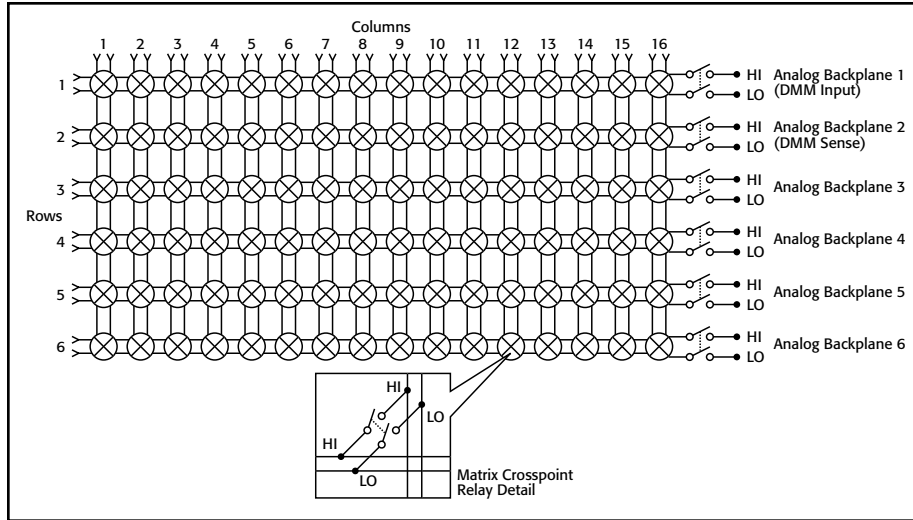
SWITCHING AND CONTROL

# 3730

## 6×16, High Density, Matrix Card

96 two-pole crosspoints with column expansion relays

Model 3730 specifications



**MATRIX CONFIGURATION:** 6 row by 16 column matrix. Columns can be expanded using the backplane or isolated by relays.

**CONTACT CONFIGURATION:** 2 pole form A.  
**CONNECTOR TYPE:** Two 50 pin male D-shells.

**MODEL 3730-ST SCREW TERMINAL OPTION:** #22 AWG typical wire size with 0.062 inch O.D. 88 conductors maximum. #16 AWG maximum wire size with 0.092 inch O.D. 44 conductor per card maximum.

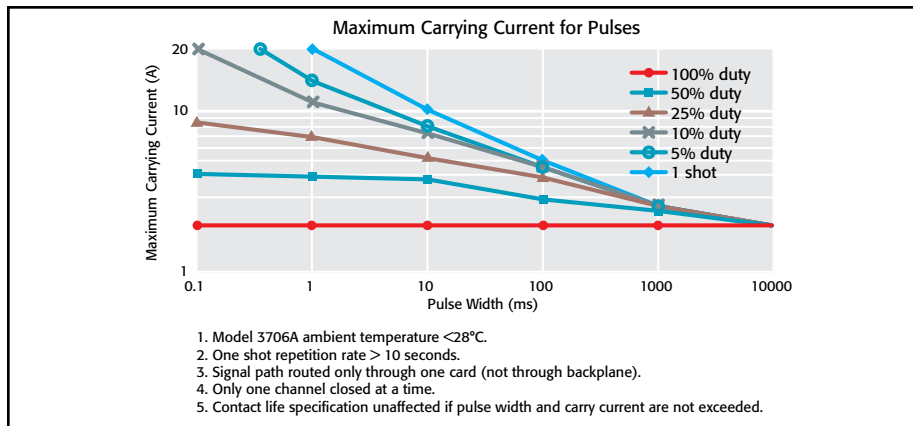
**MAXIMUM SIGNAL LEVEL:** 300V DC or RMS, 1A switched (2A carry), 60W, 125VA.

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

**VOLT-HERTZ LIMIT:**  $8 \times 10^7$ .

**CONTACT LIFE:**  $>10^5$  operations @ maximum signal level.  $>10^8$  operations no load.<sup>1</sup>

	$6 \times 16^{2,3}$
Channel Resistance (end of contact life)	$<1.0 \Omega$
Contact Potential (differential)	$<\pm 2 \mu V$
Offset Current	$<\pm 100 \text{ pA}$
<b>Isolation</b>	
Differential	$10^{10} \Omega, 250 \text{ pF}$
Channel-channel	$10^{10} \Omega, 75 \text{ pF}$
Common Mode	$10^{10} \Omega, 150 \text{ pF}$
<b>Crosstalk Channel-channel</b>	
300kHz	$<-65 \text{ dB}$
1MHz	$<-55 \text{ dB}$
20MHz	$<-30 \text{ dB}$
Bandwidth	27 MHz



1. Model 3706A ambient temperature  $<28^\circ\text{C}$ .
2. One shot repetition rate  $>10$  seconds.
3. Signal path routed only through one card (not through backplane).
4. Only one channel closed at a time.
5. Contact life specification unaffected if pulse width and carry current are not exceeded.

### GENERAL

**ACTUATION TIME:** 4ms.  
**RELAY TYPE:** Latching electromechanical.  
**RELAY DRIVE SCHEME:** Hybrid Matrix.  
**INTERLOCK:** Backplane relays disabled when terminal assembly is removed.  
**OPERATING ENVIRONMENT:** Specified for  $0^\circ$  to  $50^\circ\text{C}$ . Specified to 70% R.H. at  $35^\circ\text{C}$ .  
**STORAGE ENVIRONMENT:**  $-25^\circ$  to  $65^\circ\text{C}$ .  
**WEIGHT:** 2.5 lbs.  
**SAFETY:** Conforms to European Union Directive 73/23/EEC, EN61010-1.  
**EMC:** Conforms to European Union Directive 2004/108/EC, EN61326-1.

### NOTES

1. Minimum signal level 10mV,  $10 \mu\text{A}$ .
2. Connections made using 3730-ST accessory.
3. 3706A mainframe with all DMM backplane relays disconnected.

SWITCHING AND CONTROL

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