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 .062 inch O.D. 88 conductors maximum. #16 AWG maximum wire size with .092 inch O.D. 44 conductors 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 at max signal level.

$> 10^8$ operations no load.  

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Resistance</td>
<td>&lt;1.0Ω</td>
</tr>
<tr>
<td>(end of contact life)</td>
<td></td>
</tr>
<tr>
<td>Contact Potential</td>
<td>&lt;= ± 2μV</td>
</tr>
<tr>
<td>(differential)</td>
<td></td>
</tr>
<tr>
<td>Offset Current</td>
<td>&lt;= ±100pA</td>
</tr>
<tr>
<td>Isolation</td>
<td></td>
</tr>
<tr>
<td>Differential</td>
<td>$10^{10}$Ω, 250pF</td>
</tr>
<tr>
<td>CH – CH</td>
<td>$10^{10}$Ω, 75pF</td>
</tr>
<tr>
<td>Common mode</td>
<td>$10^{10}$Ω, 150pF</td>
</tr>
<tr>
<td>Crosstalk CH-CH</td>
<td>&lt;= -65dB</td>
</tr>
<tr>
<td>300KHz:</td>
<td></td>
</tr>
<tr>
<td>1MHz:</td>
<td>&lt;= -55dB</td>
</tr>
<tr>
<td>20MHz:</td>
<td>&lt;= -30dB</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>27MHz</td>
</tr>
</tbody>
</table>

1 Minimum signal level 10mV, 10μA
2 Connections made using 3730-ST
3 3706 mainframe with all DMM backplane relays disconnected.
Model 3730

6x16 Matrix Specifications

96 two-pole crosspoints with column expansion relays

GENERAL:

ACTUATION TIME: 4ms

RELAY TYPE: Latching electromechanical

RELAY DRIVE SCHEME: Hybrid Matrix

INTERLOCK: Backplane relays disabled when terminal assemble removed.

OPERATING ENVIRONMENT:

Specified for 0ºC to 50ºC.
Specified to 70% R.H. at 35ºC.

STORAGE ENVIRONMENT: -25ºC to 65ºC

WEIGHT: 2.5lbs

SAFETY: Conforms to European Union Directive 73/23/EEC, EN61010-1

EMC: Conforms to European Union Directive 2004/108/EC, EN61326-1

ACCESSORIES AVAILABLE:

3790-KIT-R 50 pin female D-sub connector kit (Contains 2 female D-sub connectors and 100 solder-cup contacts)
3721-MTC-1.5 50 pin D-sub female to male cable, 1.5m.
3721-MTC-3 50 pin D-sub female to male cable, 3m.
3730-ST screw terminal block

Specifications are subject to change without notice.
96 two-pole crosspoints with column expansion relays

Maximum carry current for pulses

- 100% duty
- 50% duty
- 25% duty
- 10% duty
- 5% duty
- 1 shot

1. 3706 ambient temperature < 28°C
2. 1 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.

Specifications are subject to change without notice.
SPEC-3730 Rev. C / February 2009
Model 3730

6x16 Matrix Specifications

96 two-pole crosspoints with column expansion relays

Cross point relay detail

Bank relay detail