32-channel Isolated Switch Card

28 Form C relays and 4 high power Form A relays

The Model 3740 offers 28 general-purpose form C channels that are ideal for routing power or other control devices. For higher power applications of up to 7A, four additional high current form A channels are provided.

If any general purpose signal requires routing to the Series 3700A mainframe backplane, terminal blocks are located on the card, which are enabled with jumpers. Custom configurations can be created with the user accessible terminal blocks. For additional protection, an onboard temperature sensor will notify the mainframe when the card’s operating temperature exceeds 70°C, compromising system specifications.

The Model 3740 uses two 50-pin male D-sub connectors for signal connections. For screw terminal connections, use the detachable Model 3740-ST accessory.

**ACCESSORIES AVAILABLE**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>3721-MTC-1.5</td>
<td>50-pin D-sub Female to Male Cable, 1.5m (5 ft)</td>
</tr>
<tr>
<td>3721-MTC-3</td>
<td>50-pin D-sub Female to Male Cable, 3m (10 ft)</td>
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<tr>
<td>3740-ST</td>
<td>Screw Terminal Block</td>
</tr>
<tr>
<td>3790-KIT50-R</td>
<td>50-pin Female D-sub Connector Kit (contains 2 female D-sub connectors and 100 solder cup contacts)</td>
</tr>
</tbody>
</table>

**SERVICES AVAILABLE**

<table>
<thead>
<tr>
<th>Service Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>3740-3Y-EW-STD</td>
<td>1-year factory warranty extended to 3 years from date of shipment</td>
</tr>
<tr>
<td>3740-5Y-EW-STD</td>
<td>1-year factory warranty extended to 5 years from date of shipment</td>
</tr>
<tr>
<td>C/3740-3Y-STD</td>
<td>3 (Z540-1 compliant) calibrations within 3 years of purchase*</td>
</tr>
</tbody>
</table>

*Not available in all countries
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RELAY SWITCH CONFIGURATION: 32 general purpose independent channels. 28 channels of Form C switching at 2A and 4 channels of Form A switching at 7A. Relays can be connected to each other and backplane via removable terminal blocks.

CONTACT CONFIGURATION: General Purpose: 1 pole Form C. High Current: 1 pole Form A.

CONNECTOR TYPE: Two 50 pin male D-shells.

MODEL 3740-ST SCREW TERMINAL OPTION: #22 AWG typical wire size with 0.062 inch O.D. 84 conductors maximum. #16 AWG maximum wire size with 0.092 inch O.D. +4 conductors per card maximum.

MAXIMUM SIGNAL LEVEL: Form C: 300V DC or RMS, 2A switched (3A carry), 60W, 125VA.
Form A: 250VAC 7A, 30VDC 7A, 210W.

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

VOLT-HERTZ LIMIT: 8×10^7.

CONTACT LIFE: Form C: >10^6 operations at maximum signal level. >10^7 operations no load.
Form A: >10^6 operations at maximum signal level. >5×10^7 operations no load.

CHANNEL RESISTANCE (end of contact life): <0.5Ω.

CONTACT POTENTIAL: <=3μV typical per contact.

ISOLATION: Channel-channel: 10^15Ω, <200pF. Common Mode: >10^15Ω, <150pF.
Crosstalk (Channel-channel, 50Ω load–50Ω source): 100kHz: <-50dB. 1MHz: <-35dB. 10MHz: <-15dB.

BANDWIDTH: 30MHz.

GENERAL

OVER-TEMPERATURE: Temperature sensor indicates over temperature.

ACTUATION TIME: Form C: 4ms. Form A: 10ms.

RELAY TYPE: Form C: Latching electromechanical. Form A: Nonlatching electromechanical.

RELAY DRIVE SCHEME: Direct.

INTERLOCK: Backplane relays disabled when interlock connection is removed.

OPERATING ENVIRONMENT: Specified for 0° to 50°C. Specified to 70% R.H. at 35°C.

STORAGE ENVIRONMENT: −25° to 65°C.

WEIGHT: 2.5 lbs.


NOTES

1. Minimum signal level 10mV, 10μA.