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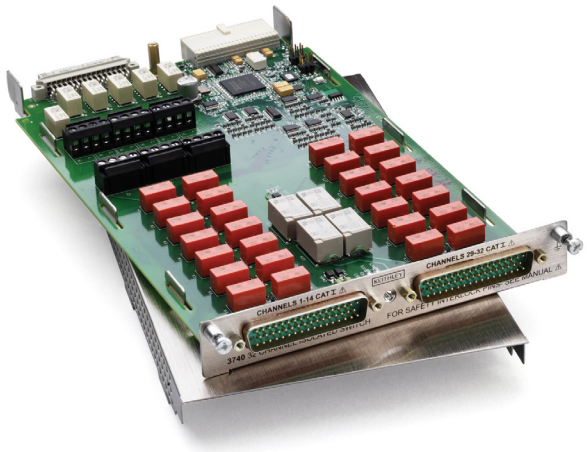
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Tektronix®

3740 32-channel Isolated Switch Card

28 Form C relays and 4 high power Form A relays

DATA SHEET



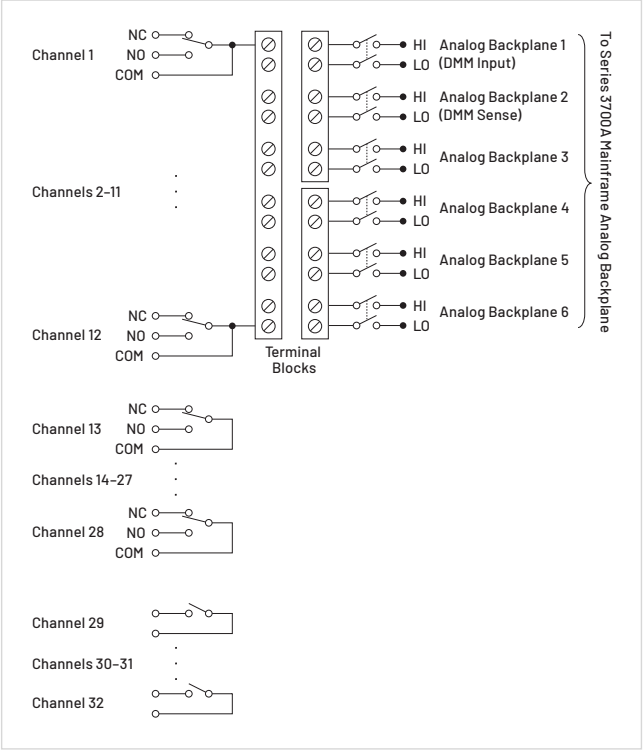
The 3740 offers 28 general-purpose form C channels that are ideal for routing power or other control devices. For higher power applications of up to 7 A, four additional high current form A channels are provided.

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.

Key Features

- 28 general purpose Form C relays rated for 300 V, 2 A switched or 3 A carry signal capacity; 60 Ω, 125 VA
- 4 high current Form A relays rated for 250 VAC, 7 A or 30 VDC, 7 A switched capacity; 210 Ω
- Analog backplane connection relays provided for user interconnections
- Screw terminal connections provided on removable 3740-ST accessory
- Relay closures stored in onboard memory
- Latching electromechanical relays

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



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Specifications

Relay Switch Configuration	32 general purpose independent channels. 28 channels of Form C switching at 2A and 4 channels of Form A switching at 7 A. 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.
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. 44 conductors per card maximum.
Maximum Signal Level	**Form C:** 300 V DC or RMS, 2 A switched (3 A carry), 60 Ω, 125 VA. **Form A:** 250 VAC 7 A, 30 VDC 7 A, 210 Ω.
Common Mode Voltage	300 V DC or RMS between any terminal and chassis.
Volt-Hertz Limit	8×10^7.
Contact Life	**Form C:** $>10^5$ operations at maximum signal level. $>10^8$ operations no load.[1] **Form A:** $>10^5$ operations at maximum signal level, $>5\times10^7$ operations no load.[1]
Channel Resistance (end of contact life)	<0.5 Ω.
Contact Potential	<±3 µV typical per contact.
Isolation	**Channel-channel:** 10^9 Ω, <200 pF. **Common Mode:** $>10^{10}$ Ω, <150 pF.
Crosstalk (Channel-channel, 50 Ω load–50 Ω source)	**100 kHz:** <–50dB. **1 MHz:** <–35dB. **1 MHz:** <–15dB.
Bandwidth	30 MHz.

Notes

1. Minimum signal level 10 mV, 10 µA.

General

Over-Temperature	Temperature sensor indicates over temperature.
Actuation Time	**Form C:** 4 ms. **Form A:** 10 ms.
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.
Safety	Conforms to European Union Directive 73/23/EEC, EN61010-1.
EMC	Conforms to European Union Directive 2004/108/EC, EN61326-1.

Ordering Information

3740	General Purpose Card with 32 Independent Channels

Accessories Available

3721-MTC-3	50-pin D-sub Female to Male Cable, 3 m (10 ft.)
3740-ST	Screw Terminal Block

Available Services

3740-3Y-EW-STD	1-year factory warranty extended to 3 years from date of shipment
3740-5Y-EW-STD	1-year factory warranty extended to 5 years from date of shipment
C/3740-3Y-STD	3 (Z540-1 compliant) calibrations within 3 years of purchase*

*Not available in all countries

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