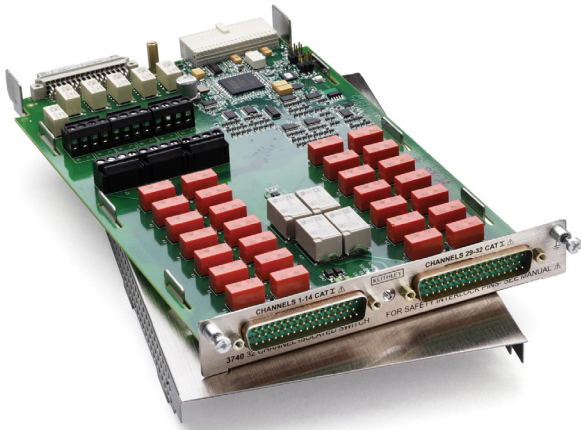


## 3740 32-channel Isolated Switch Card

28 Form C relays and 4 high power Form A relays

### DATA SHEET



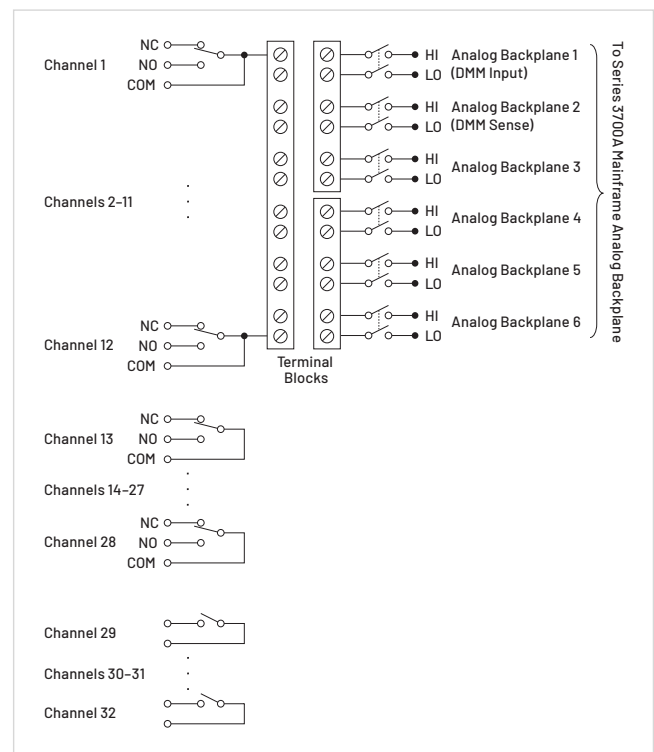
The 3740 offers 28 general-purpose form C channels that are ideal for routing power or other control devices. For higher power applications of up to 7 A, four additional high current form A channels are provided.

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.



## Specifications

<b>Relay Switch Configuration</b>	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.
<b>Contact Configuration</b>	<b>General Purpose:</b> 1-pole Form C. <b>High Current:</b> 1-pole Form A.
<b>Connector Type</b>	Two 50-pin male D-shells.
<b>3740-ST Screw Terminal Option</b>	#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.
<b>Maximum Signal Level</b>	<b>Form C:</b> 300 V DC or RMS, 2 A switched (3 A carry), 60 $\Omega$ , 125 VA. <b>Form A:</b> 250 VAC 7 A, 30 VDC 7 A, 210 $\Omega$ .
<b>Common Mode Voltage</b>	300 V DC or RMS between any terminal and chassis.
<b>Volt-Hertz Limit</b>	$8 \times 10^7$ .
<b>Contact Life</b>	<b>Form C:</b> $>10^6$ operations at maximum signal level. $>10^8$ operations no load. <sup>1</sup> <b>Form A:</b> $>10^6$ operations at maximum signal level, $>5 \times 10^7$ operations no load. <sup>1</sup>
<b>Channel Resistance (end of contact life)</b>	$<0.5 \Omega$ .
<b>Contact Potential</b>	$<\pm 3 \mu\text{V}$ typical per contact.
<b>Isolation</b>	<b>Channel-channel:</b> $10^9 \Omega$ , $<200 \text{ pF}$ . <b>Common Mode:</b> $>10^{10} \Omega$ , $<150 \text{ pF}$ .
<b>Crosstalk (Channel-channel, 50 <math>\Omega</math> load-50 <math>\Omega</math> source)</b>	100 kHz: $<-50\text{dB}$ . 1 MHz: $<-35\text{dB}$ . 1 MHz: $<-15\text{dB}$ .
<b>Bandwidth</b>	30 MHz.

### Notes

1. Minimum signal level 10 mV, 10  $\mu\text{A}$ .

## General

<b>Over-Temperature</b>	Temperature sensor indicates over temperature.
<b>Actuation Time</b>	<b>Form C:</b> 4 ms. <b>Form A:</b> 10 ms.
<b>Relay Type</b>	<b>Form C:</b> Latching electromechanical. <b>Form A:</b> Nonlatching electromechanical.
<b>Relay Drive Scheme</b>	Direct.
<b>Interlock</b>	Backplane relays disabled when interlock connection is removed.
<b>Operating Environment</b>	Specified for 0° to 50 °C. Specified to 70% R.H. at 35°C.
<b>Storage Environment</b>	-25° to 65 °C.
<b>Weight</b>	2.5 lbs.
<b>Safety</b>	Conforms to European Union Directive 73/23/EEC, EN61010-1.
<b>EMC</b>	Conforms to European Union Directive 2004/108/EC, EN61326-1.

## Ordering Information

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**3740** General Purpose Card with 32 Independent Channels

## Accessories Available

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**3721-MTC-3** 50-pin D-sub Female to Male Cable, 3 m (10 ft.)

**3740-ST** Screw Terminal Block

## Available Services

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**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

## Contact Information:

Australia 1 800 709 465  
Austria\* 00800 2255 4835  
Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777  
Belgium\* 00800 2255 4835  
Brazil +55 (11) 3530-8901  
Canada 1 800 833 9200  
Central East Europe / Baltics +41 52 675 3777  
Central Europe / Greece +41 52 675 3777  
Denmark +45 80 88 1401  
Finland +41 52 675 3777  
France\* 00800 2255 4835  
Germany\* 00800 2255 4835  
Hong Kong 400 820 5835  
India 000 800 650 1835  
Indonesia 007 803 601 5249  
Italy 00800 2255 4835  
Japan 81(3) 6714 3086  
Luxembourg +41 52 675 3777  
Malaysia 1 800 22 55835  
Mexico, Central/South America and Caribbean 52 (55) 88 69 35 25  
Middle East, Asia, and North Africa +41 52 675 3777  
The Netherlands\* 00800 2255 4835  
New Zealand 0800 800 238  
Norway 800 16098  
People's Republic of China 400 820 5835  
Philippines 1 800 1601 0077  
Poland +41 52 675 3777  
Portugal 80 08 12370  
Republic of Korea +82 2 565 1455  
Russia / CIS +7 (495) 6647564  
Singapore 800 6011 473  
South Africa +41 52 675 3777  
Spain\* 00800 2255 4835  
Sweden\* 00800 2255 4835  
Switzerland\* 00800 2255 4835  
Taiwan 886 (2) 2656 6688  
Thailand 1 800 011 931  
United Kingdom / Ireland\* 00800 2255 4835  
USA 1 800 833 9200  
Vietnam 12060128

\* European toll-free number. If not accessible, call: +41 52 675 3777

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