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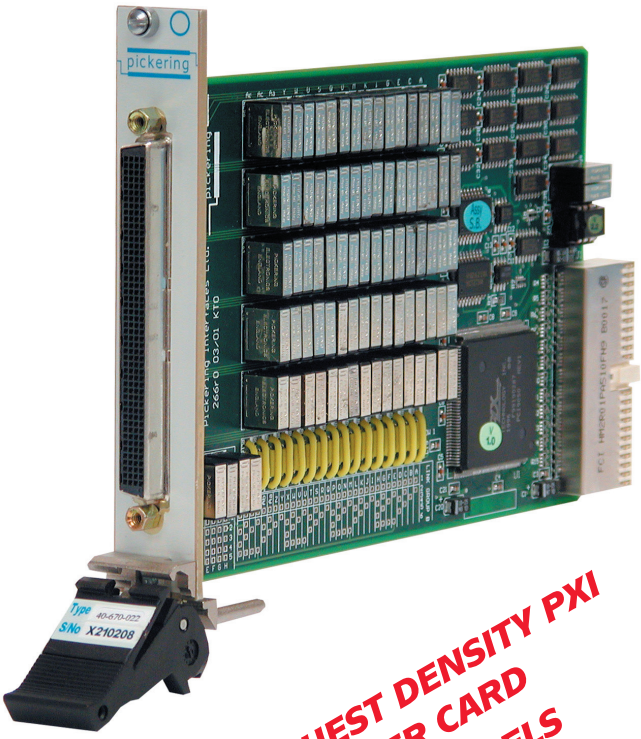
Expert team | Trust guarantee | 100% satisfaction

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Find the *Pickering 40-670A-022-198/1* at our website: *Click HERE*

40-670
Very High Density Multiplexer

- Very High Density Multiplexer
- Up to 198 Switch Pins Available with 1, 2, 4, 8, 16 or 32 Pole Switching Formats
- Screened Option with 50MHz Bandwidth
- All Versions Use High Reliability Pickering Reed Relays
- Fast Operating Speed < 500µS
- Switch up to 100Volts, 1.2A with 20W Max Power
- Automatic Isolation Switches Reduce Capacitive Loading in Large Systems
- Drivers Supplied for Windows 95/98/2000/NT
- Complies with PXI and CompactPCI Specifications



WORLD'S HIGHEST DENSITY PXI MULTIPLEXER CARD WITH 198 CHANNELS

The 40-670 series of very high density multiplexer modules feature a wide range of switching configurations. Typical applications include signal routing in ATE and data acquisition systems.

Each module is factory configured into one of the configuration modes *(refer to schematics overleaf)*. Connections are made via a front panel 200 pin connector. Available reed relay formats are:-

198 Channel 1 Pole
99 Channel 2 Pole
49 Channel 4 Pole
24 Channel 8 Pole
10 Channel 16 Pole
5 Channel 32 Pole

99 Channel 1 Pole
49 Channel 2 Pole
24 Channel 4 Pole
10 Channel 8 Pole
5 Channel 16 Pole

99 Channel 1 Pole Screened
49 Channel 2 Pole Screened
24 Channel 4 Pole Screened
10 Channel 8 Pole Screened
5 Channel 16 Pole Screened

The 40-670 multiplexer may be operated as a conventional multiplexer with break-before-make action when a new channel is selected. In addition multiple channels may be simultaneously selected *(not available in for 40-670-0221 pole mode)*.

Built in Automatic Isolation Switching *(available in 1, 2 and 4 pole mode, see diagrams overleaf)* connects only the currently active multiplexer bank on to the analogue common, thereby keeping capacitive loading and leakage currents in large multiplexer systems to a minimum. Larger multiplexers may be constructed by Daisy Chaining the common signals from multiple PXI cards.

The screened version (40-670-021-S) is suitable for switching frequencies up to 50MHz. It may also be used with low frequency signals where very good isolation and crosstalk performance is required.

Relay Type

The 40-670 is fitted with Reed Relays (Ruthenium electroplated type), these offer very long life with good low level switching performance and excellent contact resistance stability.

Spare Reed Relays are built onto the circuit board to facilitate easy maintenance with minimum downtime.

All reed relays are manufactured by our sister company Pickering Electronics, www.pickeringrelay.com.

Programming

All PXI cards are supplied with complete Windows 95/98/2000/NT drivers, these perform the following functions:-

- Write word/s to card (to set relay pattern)
- Write bit to card (to operate an individual relay)
- Full relay status reporting
- Card identification and location information
- Set and read card calibration information

Up to date driver software is available from our web site at www.pickeringswitch.com

Power Requirements

Power consumption from the 5V backplane supply is as follows:

Minimum 0.8W. Typical 1.4W. Maximum 6.7W.

Width and Dimensions

Single slot 3U PXI (CompactPCI card).

PXI and CompactPCI Compliance

All Pickering Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug 2000). Local Bus, Interrupts, Trigger Bus and Star Trigger are not implemented.

Supplied soft front panels and driver software are fully Windows 95/98/2000 and NT 4 compatible.

Connectors

PXI bus via 32 bit P1/J1 backplane connector.

Signals via a front panel 200 Way connector.



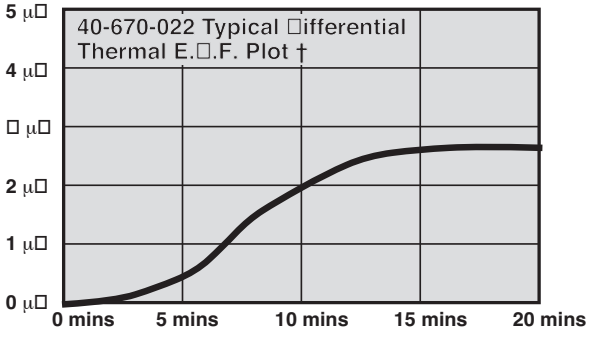
40-961-200
200 Way Mating Connector



40-971-200 200 Way to 4 x 50 Way Cable Assembly

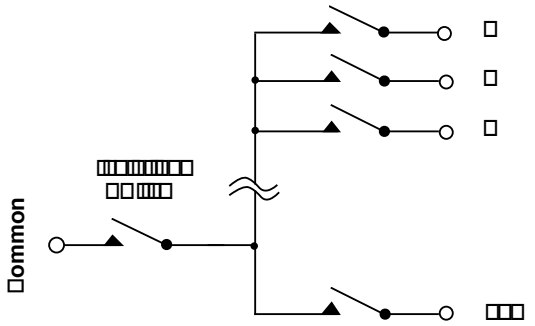
Switching Specification

Switch Type	Ruthenium Reed
Max Standoff Voltage	100V
Max Power	20W
Max Switch Current	0.5A
Max Carry Current	1.2A
Path Resistance	
On (Single Module):	< 300m Ohm
Off (Single Module):	> 10^9 Ohm
Differential Thermal Offset	< 5μV
Capacitance -022 version	
Open Channel	< 6pF
Channel to Channel	< 15pF
Capacitance -021-S version	
Open Channel	< 4pF
Channel to Channel	< 6pF
Crosstalk -022 version (Single Chan On, 50 Ohm)	
Channel to Channel 10kHz	> 90dB
Channel to Channel 100kHz	> 70dB
Channel to Channel 1MHz	> 50dB
Bandwidth (3dB, 1 module)	> 20MHz
Noise Level (0 to 1MHz in 50 Ohm System)	< - 80dBm
Crosstalk -S versions (Single Chan On, 50 Ohm)	
Channel to Channel 300kHz	> 65dB
Channel to Channel 1MHz	> 55dB
Bandwidth (3dB, 1 module)	> 50MHz
Noise Level (0 to 1MHz in 50 Ohm System)	< - 90dBm
Operate Time	< 0.5ms
Release Time	< 0.5ms
Expected Life (Operations)	
Low power load	> 10^8
Full power load	> 10^6

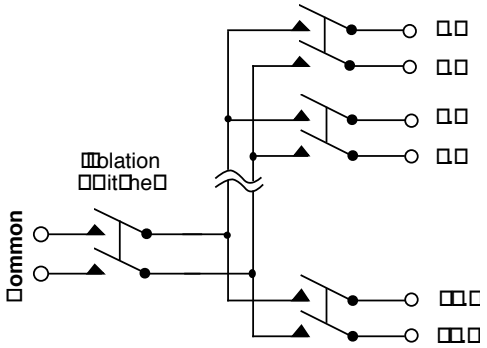


Thermal e.m.f. Plot

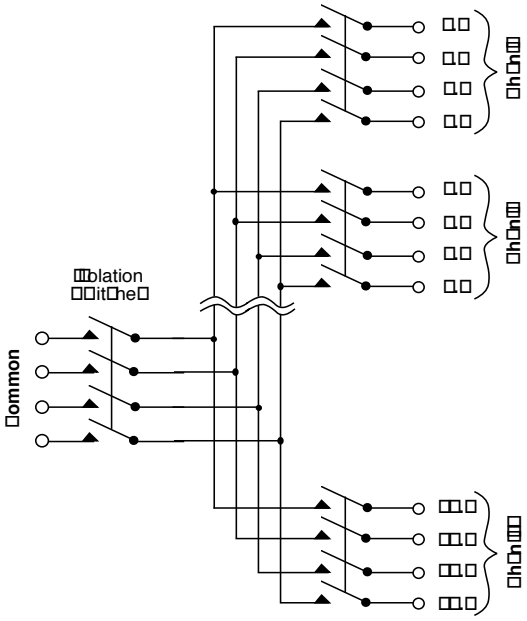
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Pickering Interfaces maintains a commitment to continuous product development, consequently we reserve the right to vary from the description given in this data sheet.



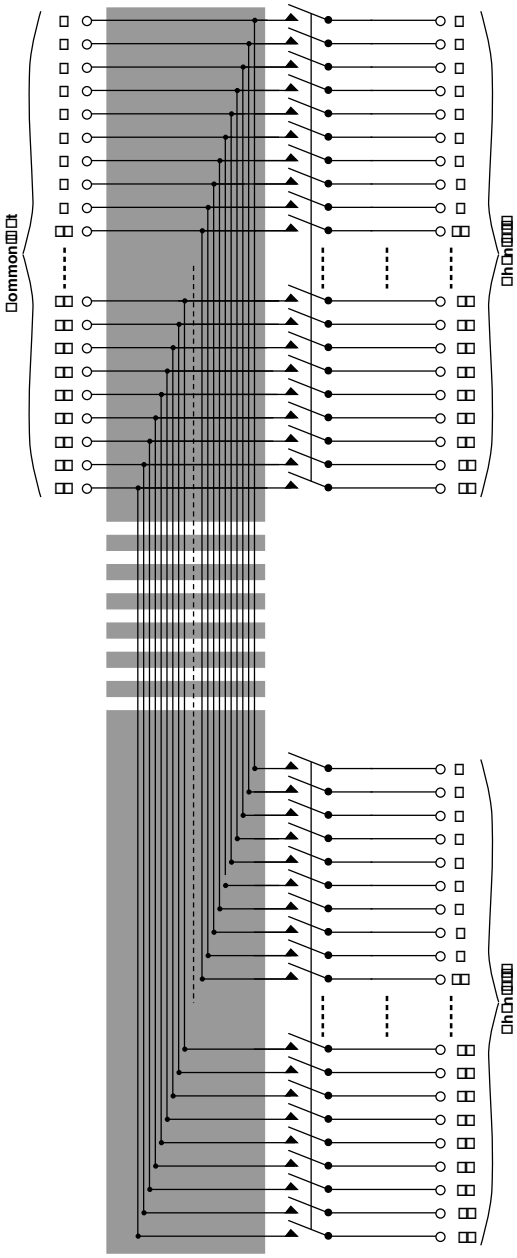
40-670-022 198 Channel 1 Pole Multiplexer Mode (multiple channel selection not available)



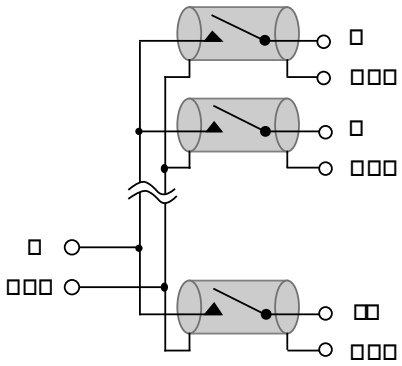
40-670-022 99 Channel 2 Pole Multiplexer Mode



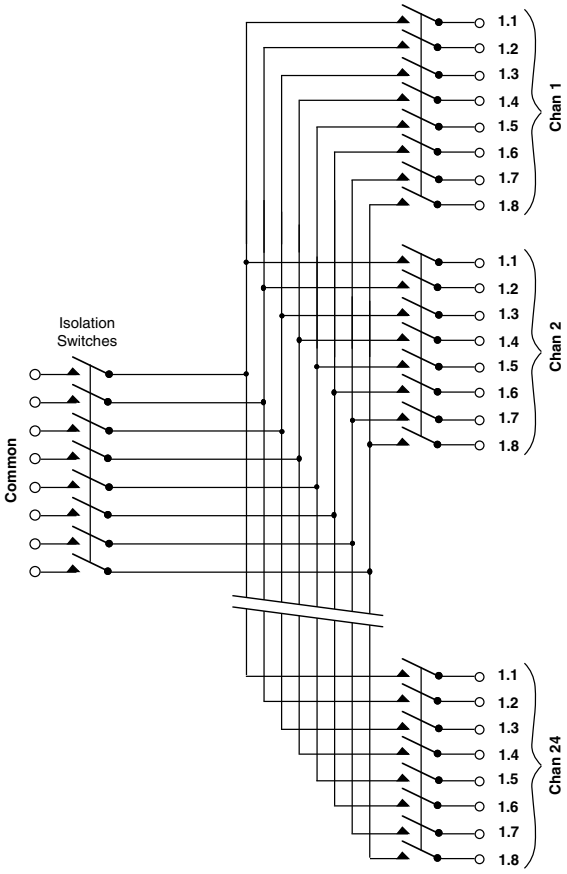
40-670-022 49 Channel 4 Pole Multiplexer Mode



40-670-022 5 Channel 32 Pole Multiplexer Mode



40-670-021-S 99 Channel Screened Multiplexer Mode



50-670-022 24 Channel 8 Pole Multiplexer Mode

Product Order Codes

H D MUX 99 Channel 1 Pole	**40-670-021-99/1**
H D MUX 49 Channel 2 Pole	**40-670-021-49/2**
H D MUX 24 Channel 4 Pole	**40-670-021-24/4**
H D MUX 10 Channel 8 Pole	**40-670-021-10/8**
H D MUX 5 Channel 16 Pole	**40-670-021-5/16**
V H D MUX 198 Channel 1 Pole	**40-670-022-198/1**
V H D MUX 99 Channel 2 Pole	**40-670-022-99/2**
V H D MUX 49 Channel 4 Pole	**40-670-022-49/4**
V H D MUX 24 Channel 8 Pole	**40-670-022-24/8**
V H D MUX 10 Channel 16 Pole	**40-670-022-10/16**
V H D MUX 5 Channel 32 Pole	**40-670-022-5/32**
H D Screened 99 Channel 1 Pole	**40-670-021-S-99/1**
H D Screened 49 Channel 2 Pole	**40-670-021-S-49/2**
H D Screened 24 Channel 4 Pole	**40-670-021-S-24/4**
H D Screened 10 Channel 8 Pole	**40-670-021-S-10/8**
H D Screened 5 Channel 16 Pole	**40-670-021-S-5/16**

Mating Connectors

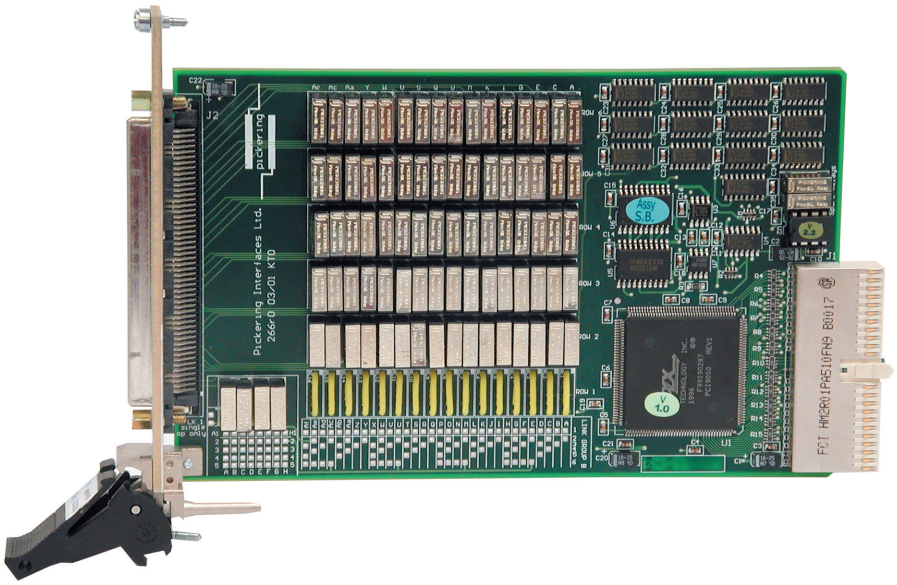
200 Way Male Connector, IDC	**40-961-200**

Custom cable assemblies made to order.

When ordering please specify which shipping configuration you would like the card set to.

Latest Details

Please refer to our Web Site for Latest Product Details.
www.pickeringswitch.com



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