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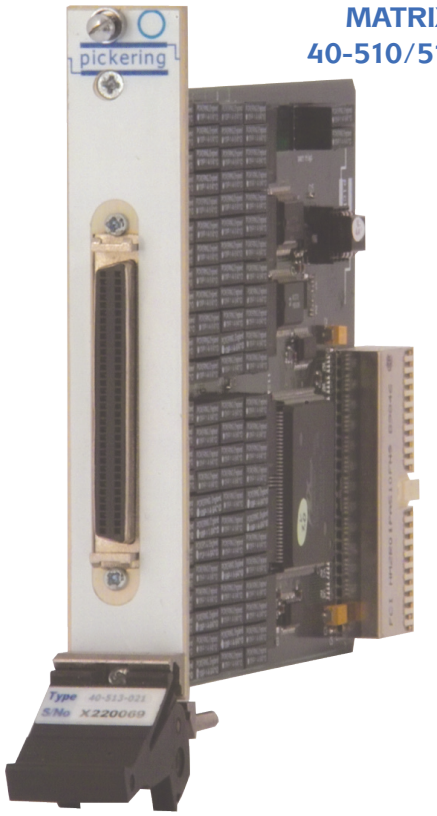
Expert team | Trust guarantee | 100% satisfaction

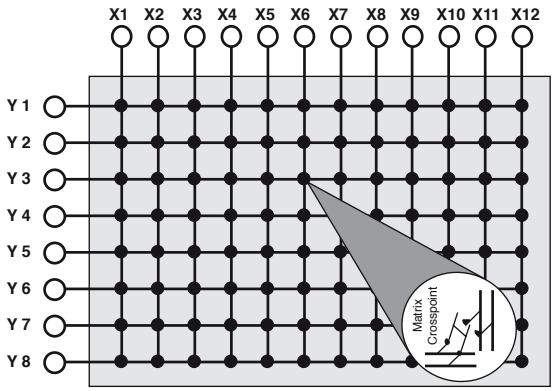
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Find the *Pickering 40-513-021* at our website: ***Click HERE***

40-510/511/512/513
Matrix Module

- Reed Relay Matrix Module
- 12 x 4, Dual 12 x 4, 24 x 4 or 12 x 8
- 1 Pole, 2 Pole or Screened Versions
- Large Matrices Built Using Multiple Modules
- Screened 50Ω Option with 50MHz Bandwidth
- Uses High Reliability Pickering Reed Relays For Maximum Performance
- Fast Operating Speed < 500µs
- Switch up to 150Volts, 1.2A with 20W Max Power
- VISA/IVI Drivers Supplied for Windows 2000/NT/XP
- Supported by PXI or LXI Chassis
- Diagnostic Tool Available (PI-MXT)
- 2 Year Warranty





40-512 Matrix 12 x 8 (2-pole)

The 40-510 series of matrix modules feature a wide range of selectable switching configurations (12x4, dual 12x4, 12x8 and 24x4). Typical applications include signal routing in ATE and data acquisition systems.

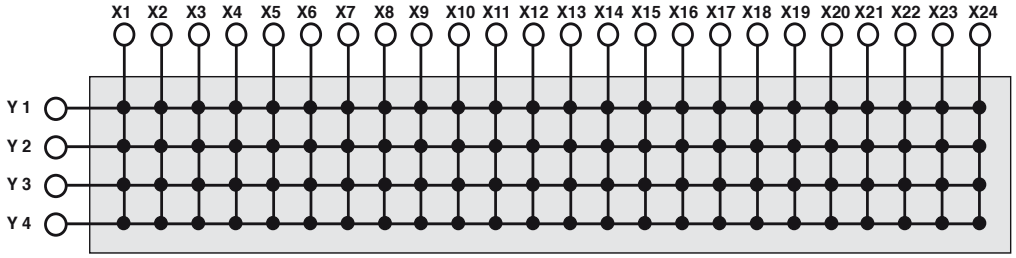
Available reed relay formats are 1 pole, 2 pole and 1 Pole screened. The screened version is suitable for switching signals up to 50MHz. Larger matrices may be constructed by Daisy Chaining the common signals from multiple PXI moodules.

Relay Type

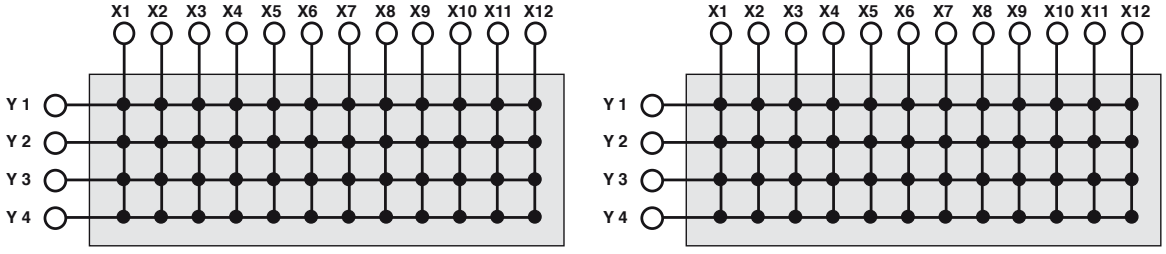
All 40-510 series modules are fitted with Reed Relays (Ruthenium sputtered type), these offer very long life with good low level switching performance and excellent contact resistance stability.

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.



40-513 Matrix 24 x 4



40-511 Matrix Dual 12 x 4

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Switching Specification

Switch Type:	Ruthenium Reed
Max Switch Voltage:	150V DC/100V AC
Max Power: Max Switch Current: Max Carry Current:	20W 1A 1.2A
Path Resistance On (single module): Off (single module): Differential Thermal Offset:	 <600mΩ (40-510/511/513) <1000mΩ (40-512) $>10^9$Ω <5µV
Operate Time: Release Time:	<0.5ms, 0.25ms typ. <0.5ms, 0.25ms typ.
Expected Life Low power load: Full power load:	 $1x10^9$ operations $>5x10^6$ operations

Isolation and Crosstalk (screened reed versions)

Crosstalk	@1MHz:	62dB (typical)
	@10MHz:	42dB (typical)
	@25MHz:	40dB (typical)
Isolation	@1MHz:	65dB (typical)
	@10MHz:	49dB (typical)
	@25MHz:	45dB (typical)

Programming

Pickering provide kernel, VISA and IVI drivers which are compatible with Windows 2000/NT/XP operating systems, the VISA driver is also compatible with the LabVIEW RT operating system.

These drivers may be used with a variety of programming environments and applications including :-

National Instruments products (LabVIEW/LabWindows/CVI/ Switch Executive/MAX/TestStand etc.)

Microsoft Visual Studio products (Visual Basic/Visual C+)

Agilent VEE

Mathworks Matlab

Other environments are also supported, please contact Pickering with specific enquiries.

Power Requirements

+3.3V	+5V	+12V	-12V
0	400mA (typ 280mA)	0	0

Width and Dimensions

Single slot 3U PXI (CompactPCI card).

PXI & CompactPCI Compliance

All Pickering Interfaces PXI modules comply with the PXI Specification 2.1. Local Bus, Interrupts, Trigger Bus and Star Trigger are not implemented.

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

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.

Connectors

PXI bus via 32 bit P1/J1 backplane connector.

Signals via front panel 68 Way SCSI female connector, pin outs are in the operating manual.

Product Order Codes

Single 12 x 4 Matrix, 1 Pole	**40-510-021**
Single 12 x 4 Matrix, 2 Pole	**40-510-022**
Dual 12 x 4 Matrix, 1 Pole	**40-511-021**
Dual 12 x 4 Matrix, 2 Pole	**40-511-022**
Single 12 x 8 Matrix, 1 Pole	**40-512-021**
Single 12 x 8 Matrix, 2 Pole	**40-512-022**
Single 24 x 4 Matrix, 1 Pole	**40-513-021**
Single 24 x 4 Matrix, 2 Pole	**40-513-022**

Options

–S All 1 pole versions are available with screened reed relays (e.g. 40-512-021-S)

Mating Connectors & Cabling

Examples of connectors and cabling for the 40-510 series are:

40-961-068	68 way SCSI style ribbon cable connector
40-970-068-1M	Cableform, 68 way SCSI Style Male to Male, 1A, 1m Length
40-965-068	Connector Block, Shielded, 68 way SCSI Style, Module Mounted

Please refer to the Pickering Interfaces "**Interconnection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/ cabling options, including pricing, for all Pickering PXI modules.

Latest Details

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

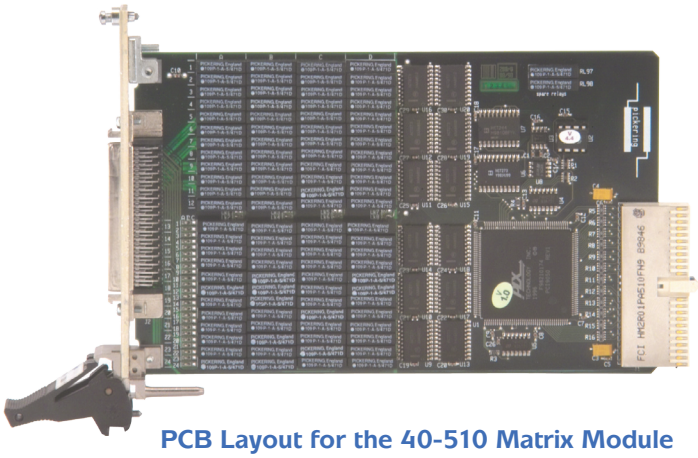
Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to 55°C
Humidity:	Up to 95% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 95% non-condensing
Altitude:	15000m



PCB Layout for the 40-510 Matrix Module

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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.

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