- Integrated PXI Matrix Module With Built In High Performance Screened Analog Bus
- Available as 2, 4, 8 & 12 Slot 3U PXI Modules
- 1 Pole Switching
- Switch up to 140 V, 0.5 A, 10 W
- Automatic Isolation Relay Switches
 Maximizes Bandwidth and Matrix Reliability
- Simplified Maintenance Through The Use of Leaded Reed Relays
- Support in Any PXI Compliant Chassis or Control Through Ethernet in Our LXI Modular Chassis
- Drivers Supplied for Windows & Linux, Plus Support for Real-time Systems
- Reduced Service and Maintenance Costs Through the Use of Built-In Diagnostics - BIRSTTM
- Supported by eBIRST™
- 3 Year Warranty

BRIC™ PXI Reed Relay Matrices

The 40-560B PXI BRIC is an ultra high density matrix module. It is available in 2, 4, 8 or 12-slot sizes to suit high performance PXI matrix requirements and is constructed using instrumentation quality reed relays. With its high level of switching density, the 40-560B allows a complete functional ATE system to be housed in a single 3U PXI chassis, BRIC Modules allow the use of much lower cost 8 or 14 slot PXI chassis.

- **BRIC2** is a 2-slot PXI Module, this can hold up to 3 matrix daughtercards, up to 1104 crosspoints.
- **BRIC4** is a 4-slot PXI Module, this can hold up to 6 matrix daughtercards, up to 2208 crosspoints.
- **BRIC8** is an 8-slot PXI Module, this can hold up to 12 matrix daughtercards, up to 4416 crosspoints.
- **BRIC12** is a 12-slot PXI Module, this can hold up to 18 matrix daughtercards, up to 6624 crosspoints.

High Reliability and Easy of Use

All models are constructed using the world's smallest and highest reliability Ruthenium Reed Relays, offering >10° operations to give maximum switching confidence with long life and very stable contact resistance.



The 40-560B PXI BRICs are designed to minimize the cost and complexity of cable assemblies to the device under test and instrumentation. Analog busing is housed within the module using a high performance screened analog backplane. We can construct custom cable assemblies for all of our PXI modules, please contact sales office for further assistance.

Built-In Relay Self-Test - BIRST

The *BIRST* facility provides a quick and simple way of finding relay failures. No test equipment is required, simply disconnect the UUT from the BRIC's connectors, launch the *BIRST* application and the tool will run a diagnostic test that will find all relays with faulty contacts.

For more information go to: pickeringtest.com/birst

Supported by *eBIRST*

These modules are also supported by *eBIRST*. These test tools simplify switching fault-finding by quickly testing the system and graphically identifying the faulty relay.

For more information go to: pickeringtest.com/ebirst

Updated Product Information

These products have been introduced as a "form & fit" update to the 40-560A range with the addition of BRIC12 versions. Electrical performance is very similar and the software and pinout are identical.

Issue 1.1 March 2024



Pickering Reed Relay BRIC Advantages

- Only uses the highest quality instrument grade reed relays – be wary of inferior copies.
- Simplified cabling and interconnection for large matrix solutions.
- Extensive accessory support.
- Built in self-test to find defective and degrading relays with full path resistance characterisation.
- Simplified operation through automated isolation relay operation and single matrix presentation.
- · Highest density reed relay solution in PXI.
- · Simple relay replacement and ease of field service.
- Extensive range of configurations and solutions.
- Fast operation through VISA driver with multiple relay operation in one command or have the convenience and simplicity of IVI drivers.

Pickering *SoftCenter*™ Instrumentation Grade Reed Relays

Reed relay switching solutions can only be as good as the relays used, and Pickering uses only the highest quality instrumentation grade reed relays manufactured by our Relay Division.

These are the reed relays of choice for ATE manufacturers, providing the most reliable and consistent switching available in the industry.

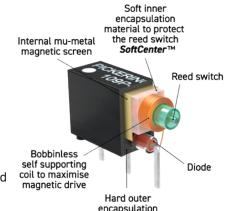
Pickering has over 50 years of experience designing relays to the highest quality levels demanded by the ATE industry. We know what makes a good relay and how to construct a reliable relay.

All our reed relays use **SoftCenter** construction that allows for the constant expansion and contraction of the reed relay coils and glass body without fear of damage to wires or glass seals. The high performance of reed relays is due to their hermetic

structure, and only

SoftCenter provides the means to reliably avoid damage, ensuring long contact life.

So choose the right matrix solution, and use the best quality reed relays by choosing Pickering Interfaces' reed relay BRICs.

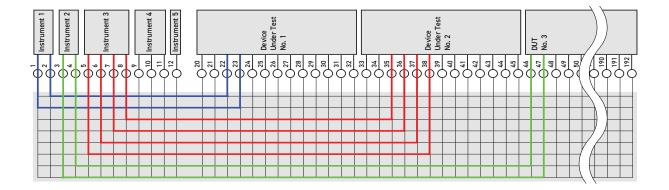


material

Pickering's Range of BRIC Matrix Modules

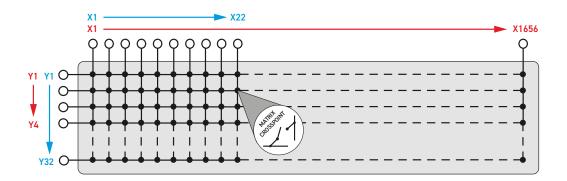
| | ng's Range of BRIC Matrix Modules |
|---|--|
| 40-558 - | - 1-Pole Matrix - 0.5 A Reed Relay |
| BRIC2 | Up to 252x6, 192x8, 126x12 or 96x16 |
| BRIC4 | Up to 504x6, 384x8, 252x12 or 192x16 |
| BRIC8 | Up to 1008x6, 768x8, 504x12 or 384x16 |
| BRIC12 | Up to 1512x6, 1152x8, 756x12 or 576x16 |
| 40-559 - | - 1-Pole Matrix - 1 A Reed Relay |
| BRIC2 | 256x4, 168x6, 128x8, 84x12 or 64x16 |
| BRIC4 | Up to 512x4, 336x6, 256x8, 168x12 or 128x16 |
| BRIC8 | Up to 1024x4, 672x6, 512x8, 336x12 or 256x16 |
| 40-560E | 3 - 1-Pole Matrix - 0.5 A Reed Relay |
| BRIC2 | Up to 276x4, 138x8, 69x16 or 33x32 |
| BRIC4 | Up to 552x4, 276x8, 138x16 or 66x32 |
| BRIC8 | Up to 1104x4, 552x8, 276x16 or 132x32 |
| BRIC12 | Up to 1656x4, 828x8, 414x16 or 198x32 |
| 40-561A | - 1-Pole or 2-Pole Matrix - 0.5 A Reed Relay |
| BRIC2 | Up to 90x8 or 45x16 |
| BRIC4 | Up to 180x8 or 90x16 |
| BRIC8 | Up to 360x8 or 180x16 |
| 40-562E | 3 - 1-Pole or 2-Pole Matrix - 1 A Reed Relay |
| BRIC2 | Up to 132x4, 66x8, 33x16 or 15x32 |
| BRIC4 | Up to 264x4, 132x8, 66x16 or 30x32 |
| BRIC8 | Up to 528x4, 264x8, 132x16 or 60x32 |
| BRIC12 | Up to 792x4, 396x8, 198x16 or 90x32 |
| 40-563E | 3 - 1-Pole Matrix - 0.25 A Solid State |
| BRIC2 | Up to 96x8 |
| BRIC4 | Up to 192x8 |
| BRIC8 | Up to 384x8 |
| 40-565E | 3 - 2-Pole Matrix - 2 A Electro-mechanical Relay |
| BRIC2 | Up to 58x8 |
| BRIC4 | Up to 116x8 |
| BRIC8 | Up to 232x8 |
| | - 2-Pole Matrix - 2 A Electro-mechanical Relay |
| BRIC4 | Up to 165x4 |
| BRIC8 | Up to 385x4 |
| 40-567 - | 1-Pole Matrix -2 A Electro-mechanical Relay |
| BRIC2 | Up to 88x8 |
| BRIC4 | OP 10 00X0 |
| DIVIC4 | Up to 176x8 |
| BRIC8 | |
| BRIC8 40-568 - | Up to 176x8 |
| BRIC8 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 |
| BRIC8 40-568 - | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC4 BRIC8 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 BRIC2 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 Up to 128x12 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 BRIC4 BRIC8 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 Up to 128x12 Up to 356x12 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 BRIC4 BRIC8 40-598 - | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 Up to 128x12 Up to 356x12 - 1-Pole Matrix - 2 A Electro-mechanical Relay |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 BRIC4 BRIC8 BRIC4 BRIC8 BRIC2 | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 Up to 128x12 Up to 356x12 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 48x16 |
| BRIC8 40-568 - BRIC2 BRIC4 BRIC8 40-596 - BRIC2 BRIC4 BRIC8 40-597 - BRIC2 BRIC4 BRIC8 40-598 - | Up to 176x8 Up to 352x8 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 150x4 Up to 300x4 Up to 600x4 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 161x6 Up to 232x6 Up to 464x6 - 1-Pole Matrix - 2 A Electro-mechanical Relay Up to 64x12 Up to 128x12 Up to 356x12 - 1-Pole Matrix - 2 A Electro-mechanical Relay |

How to use the BRIC matrix to connect instrumentation to the UUT



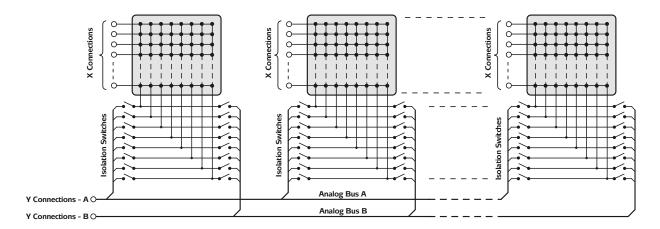
40-560B Matrices

40-560B are single pole matrices extending from 22x32 configurations to 1656x4 configurations



Dual Bus Matrices

The x8 versions of the 40-560B are available with dual analog buses allowing extra flexibility.



Relay Type

The 40-560B BRIC modules are fitted with ruthenium sputtered reed relays, 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 allow easy maintenance with minimum downtime.

All reed relays are manufactured by our Relay Division, for more information please visit: pickeringrelay.com

General Switching Specification

| Switch Type: | Ruthenium Reed |
|------------------------------|---------------------------------|
| Max Switch Voltage | |
| x4, x8 & x32 configurations: | 140 VDC/100 VAC* |
| x16 configurations: | 120 VDC/100 VAC* |
| Max Power: | 10 W |
| Max Switch Current: | 0.5 A |
| Max Carry Current: | 0.5 A |
| Relay Resistance: | 100 mΩ typical |
| On Path Resistance X to X: | 1 Ω typical (within same |
| | daughter card) |
| | 2Ω typical (across |
| | different daughter cards) |
| Off Path Resistance: | >1x10°Ω |
| Thermal Offset: | 250 µV (typical) |
| Typical Operate Time: | 1 ms |
| Typical Operate Time | |
| (-R version): | 0.5 ms |
| Expected Life (Operations) | |
| Low Power Load: | >1x10 ⁹ |
| Full Power Load | >1x10 ⁶ |

^{*} For full voltage rating, signal sources to be switched must be fully isolated from mains supply and safety earth.

Power Requirements

| +3.3 V | +5 V | +12 V | -12 V |
|------------------|-------------------|-------|-------|
| 290 mA (typical) | 4 A (typical 1 A) | 35 mA | 0 |

Notes: +5 V power consumption will vary by daughtercard loading.

Both PXI backplane connectors must be engaged for BRIC12 configurations.

RF Specification

| Bandwidth, -3 dB (typical): | x4 configurations: | 8 MHz |
|-----------------------------|----------------------|--------|
| | x8 configurations: | 18 MHz |
| | x8-M configurations: | 9 MHz |
| | x16 configurations: | 13 MHz |
| | x32 configurations: | 15 MHz |
| Crosstalk (typical): | 10 kHz: | -60 dB |
| | 100 kHz: | -60 dB |
| | 1 MHz: | -35 dB |
| | 10 MHz | -20 dB |
| Isolation (typical): | 10 kHz: | 65 dB |
| | 100 kHz: | 60 dB |
| | 1 MHz: | 50 dB |
| | 10 MHz | 30 dB |

Maximum Crosspoint Count

The 40-560B has a suggested maximum number of simultaneously operated crosspoints:

- 50 per BRIC2
- · 50 per BRIC4
- · 100 per BRIC8
- 100 per BRIC12

Please contact your local sales office for applications requiring higher closure counts.

Specifications

Width and Dimensions

Two, four, eight or twelve slot 3U PXI module (CompactPCI).

3D models for these modules in a variety of popular file formats are available on request.

Module Weight

| | Empty BRIC | Fully Loaded BRIC |
|--------------------|------------|-------------------|
| BRIC2 | 0.6 Kg | 1.2 Kg |
| BRIC4 | 0.9 Kg | 2.1 Kg |
| BRIC8 | 1.6 Kg | 4.0 Kg |
| BRIC12 | 2.5 Kg | 6.1 Kg |
| BRIC daughter card | 0.2 Kg | |

Connectors

BRIC2/4/8 - PXI bus via 32-bit P1/J1 backplane connector.

BRIC12 - PXI bus via two 32-bit P1/J1 backplane connectors (second PXI connector on BRIC12 is for power only).

Signals are carried via multiple front panel connectors (up to three per 2-slot module, up to six per 4-slot module, up to twelve per 8-slot module or up to eighteen per 12-slot module), the types are as follows:

- x4 configurations: 96-pin male micro-D connectors
- x8, x16 & x32 configurations: 68-pin male micro-D connectors

For pin out information please refer to the operating manual.

Operating/Storage Conditions

Operating Temperature: 0 °C to +55 °C

Humidity: Up to 90 % non-condensing

Altitude: 5000 m

Storage Temperature: -20 °C to +75 °C

Humidity: Up to 90 % non-condensing

Altitude: 15000 m

PXI & CompactPCI Compliance

The module is compliant with the PXI Specification 2.2. Local Bus, Trigger Bus and Star Trigger are not implemented. Uses a 33 MHz 32-bit backplane interface.

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives:

Low-voltage safety EN61010-1:2010, EMC Immunity EN61326-1:2013, Emissions EN55011:2009+A1:2010.

40-560B BRIC Matrix Product Order Codes

BRIC2 - 2-Slot
Ultra High Density 1-Pole Matrix 40-560B-221-(config)
BRIC4 - 4-Slot
Ultra High Density 1-Pole Matrix 40-560B-021-(config)
BRIC8 - 8-Slot
Ultra High Density 1-Pole Matrix 40-560B-121-(config)
BRIC12 - 12-Slot
Ultra High Density 1-Pole Matrix 40-560B-321-(config)

When ordering 40-560B modules the matrix configuration **must** be specified, this includes the prefix code together with the configuration code, see the tables for specific details.

For the expansion of an existing BRIC matrix or replacement of faulty BRIC daughter cards please contact your local sales office.

Product Customization

Pickering modules are designed and manufactured on our own flexible manufacturing lines, giving complete product control and enabling simple customization to meet very specific requirements. Customization can include:

- · Alternative reed relay types
- · Mixture of reed relay types
- · Alternative number of relays
- · Different performance specifications

All customized products are given a unique part number, fully documented and may be ordered at any time in the future. Please contact your local sales office to discuss.

| x4 Configuration Options | | | | | |
|--|---------------|---------|---------|---------|--|
| | BRIC2 | BRIC4 | BRIC8 | BRIC12 | |
| | 40-560B | 40-560B | 40-560B | 40-560B | |
| | -221 | -021 | -121 | -321 | |
| 184x4 Matrix | -184x4 | -184x4 | -184x4 | -184x4 | |
| 276x4 Matrix | -276x4 | -276x4 | -276x4 | -276x4 | |
| 368x4 Matrix | | -368x4 | -368x4 | -368x4 | |
| 460x4 Matrix | | -460x4 | -460x4 | -460x4 | |
| 552x4 Matrix | | -552x4 | -552x4 | -552x4 | |
| 644x4 Matrix | | | -644x4 | -644x4 | |
| 736x4 Matrix | | | -736x4 | -736x4 | |
| 828x4 Matrix | | | -828x4 | -828x4 | |
| 920x4 Matrix | | | -920x4 | -920x4 | |
| 1012x4 Matrix | | | -1012x4 | -1012x4 | |
| 1104x4 Matrix | | | -1104x4 | -1104x4 | |
| 1196x4 Matrix | | | | -1196x4 | |
| 1288x4 Matrix | | | | -1288x4 | |
| 1380x4 Matrix | | | | -1380x4 | |
| 1472x4 Matrix | | | | -1472x4 | |
| 1564x4 Matrix | | | | -1564x4 | |
| 1656x4 Matrix | 1656x4 Matrix | | | | |
| Further Options - Isolation Relays Removed | | | | | |
| This will improve path resistance by $150\text{m}\Omega$ but | | | | -R | |
| will degrade isolation and bandwith. | | | | -11 | |

| x8 Configuration Options | | | | |
|---|---------|---------|---------|---------|
| | BRIC2 | BRIC4 | BRIC8 | BRIC12 |
| | 40-560B | 40-560B | 40-560B | 40-560B |
| | -221 | -021 | -121 | -321 |
| 92x8 Matrix | -92x8 | -92x8 | -92x8 | -92x8 |
| 138x8 Matrix | -138x8 | -138x8 | -138x8 | -138x8 |
| 184x8 Matrix | | -184x8 | -184x8 | -184x8 |
| 230x8 Matrix | | -230x8 | -230x8 | -230x8 |
| 276x8 Matrix | | -276x8 | -276x8 | -276x8 |
| 322x8 Matrix | | | -322x8 | -322x8 |
| 368x8 Matrix | | | -368x8 | -368x8 |
| 414x8 Matrix | | | -414x8 | -414x8 |
| 460x8 Matrix | | | -460x8 | -460x8 |
| 506x8 Matrix | | | -506x8 | -506x8 |
| 552x8 Matrix | | | -552x8 | -552x8 |
| 598x8 Matrix | | | | -598x8 |
| 644x8 Matrix | | | | -644x8 |
| 690x8 Matrix | | | | -690x8 |
| 736x8 Matrix | | | | -736x8 |
| 782x8 Matrix | | | | -782x8 |
| 828x8 Matrix | -828x8 | | | |
| Further Options - Isolation Relays Removed | | | | |
| This will improve path resistance by $150\text{m}\Omega$ but will degrade isolation and bandwith. | | | | -R |

| x16 Configuration Options | | | | |
|--|--|---------|---------|---------|
| | BRIC2 | BRIC4 | BRIC8 | BRIC12 |
| | 40-560B | 40-560B | 40-560B | 40-560B |
| | -221 | -021 | -121 | -321 |
| 46x16 Matrix | -46x16 | -46x16 | -46x16 | -46x16 |
| 69x16 Matrix | -69x16 | -69x16 | -69x16 | -69x16 |
| 92x16 Matrix | | -92x16 | -92x16 | -92x16 |
| 115x16 Matrix | | -115x16 | -115x16 | -115x16 |
| 138x16 Matrix | | -138x16 | -138x16 | -138x16 |
| 161x16 Matrix | | | -161x16 | -161x16 |
| 184x16 Matrix | | | -184x16 | -184x16 |
| 207x16 Matrix | | | -207x16 | -207x16 |
| 230x16 Matrix | | | -230x16 | -230x16 |
| 253x16 Matrix | | | -253x16 | -253x16 |
| 276x16 Matrix | | | -276x16 | -276x16 |
| 299x16 Matrix | | | | -299x16 |
| 322x16 Matrix | | | | -322x16 |
| 345x16 Matrix | | | | -345x16 |
| 368x16 Matrix | | | | -368x16 |
| 391x16 Matrix | | | | -391x16 |
| 414x16 Matrix | 414x16 Matrix | | | |
| Further Options | Further Options - Isolation Relays Removed | | | |
| This will improve path resistance by $150\text{m}\Omega$ but | | | -R | |
| will degrade isolation and bandwith. | | | | -11 |

| x32 Configuration Options | | | | |
|--|---------|---------|---------|---------|
| | BRIC2 | BRIC4 | BRIC8 | BRIC12 |
| | 40-560B | 40-560B | 40-560B | 40-560B |
| | -221 | -021 | -121 | -321 |
| 22x32 Matrix | -22x32 | -22x32 | -22x32 | -22x32 |
| 33x32 Matrix | -33x32 | -33x32 | -33x32 | -33x32 |
| 44x32 Matrix | | -44x32 | -44x32 | -44x32 |
| 55x32 Matrix | | -55x32 | -55x32 | -55x32 |
| 66x32 Matrix | | -66x32 | -66x32 | -66x32 |
| 77x32 Matrix | | | -77x32 | -77x32 |
| 88x32 Matrix | | | -88x32 | -88x32 |
| 99x32 Matrix | | | -99x32 | -99x32 |
| 110x32 Matrix | | | -110x32 | -110x32 |
| 121x32 Matrix | | | -121x32 | -121x32 |
| 132x32 Matrix | | | -132x32 | -132x32 |
| 143x32 Matrix | | | | -143x32 |
| 154x32 Matrix | | | | -154x32 |
| 165x32 Matrix | | | | -165x32 |
| 176x32 Matrix | | | | -176x32 |
| 187x32 Matrix | | | | -187x32 |
| 198x32 Matrix | -198x32 | | | |
| Further Options - Isolation Relays Removed | | | | |
| This will improve path resistance by $150\text{m}\Omega$ but | | | | -R |
| will degrade isolation and bandwith. | | | | -rx |

40-560B Dual Bus BRIC Matrix Product Order Codes

| BRIC4 - 4-Slot Ultra High Density | |
|-------------------------------------|----------------------|
| Dual Analog Bus 1-Pole Matrix | 40-560B-021-(config) |
| BRIC8 - 8-Slot Ultra High Density | |
| Dual Analog Bus 1-Pole Matrix | 40-560B-121-(config) |
| BRIC12 - 12-Slot Ultra High Density | |
| Dual Analog Bus 1-Pole Matrix | 40-560B-321-(config) |

When ordering 40-560B Dual Analog Bus modules the matrix configuration **must** be specified, this includes the prefix code together with the configuration code, see the tables for specific details.

For the expansion of an existing BRIC matrix or replacement of faulty BRIC daughter cards please contact your local sales office.

| Dual Analog Bus Version (Dual 8 Wire) | | | | |
|---------------------------------------|----------|----------|----------|--|
| x8 Configuration Options | | | | |
| | BRIC4 | BRIC8 | BRIC12 | |
| | 40-560B | 40-560B | 40-560B | |
| | -021 | -121 | -321 | |
| 92x8 Matrix Dual Bus | -92x8-M | -92x8-M | -92x8-M | |
| 138x8 Matrix Dual Bus | -138x8-M | -138x8-M | -138x8-M | |
| 184x8 Matrix Dual Bus | -184x8-M | -184x8-M | -184x8-M | |
| 230x8 Matrix Dual Bus | -230x8-M | -230x8-M | -230x8-M | |
| 276x8 Matrix Dual Bus | -276x8-M | -276x8-M | -276x8-M | |
| 322x8 Matrix Dual Bus | | -322x8-M | -322x8-M | |
| 368x8 Matrix Dual Bus | | -368x8-M | -368x8-M | |
| 414x8 Matrix Dual Bus | | -414x8-M | -414x8-M | |
| 460x8 Matrix Dual Bus | | -460x8-M | -460x8-M | |
| 506x8 Matrix Dual Bus | | -506x8-M | -506x8-M | |
| 552x8 Matrix Dual Bus | | -552x8-M | -552x8-M | |
| 598x8 Matrix Dual Bus | | | -598x8-M | |
| 644x8 Matrix Dual Bus | | | -644x8-M | |
| 690x8 Matrix Dual Bus | | | -690x8-M | |
| 736x8 Matrix Dual Bus | | | -736x8-M | |
| 782x8 Matrix Dual Bus | | | -782x8-M | |
| 828x8 Matrix Dual Bus | | | -828x8-M | |

Support Products

eBIRST Switching System Test Tool

This product is supported by the *eBIRST* test tools which simplify the identification of failed relays, the required *eBIRST* tools are listed below. This product requires master slave testing and two sets of tools are required together with the master slave cable: **93-970-301**.

For more information go to: pickeringtest.com/ebirst

| Product | Test Tool | Adaptor | Termination |
|------------|------------|------------|-------------|
| x4 Config | 93-002-001 | 93-002-226 | 93-016-103 |
| x8 Config | 93-006-001 | 93-006-222 | 93-015-103 |
| x16 Config | 93-006-001 | 93-006-222 | 93-015-103 |
| x32 Config | 93-006-001 | 93-006-222 | 93-015-103 |

Spare Relay Kits

Kits of replacement relays are available for the majority of our PXI switching products, simplifying servicing and reducing down-time.

Product Relay Kit

40-560B 91-100-010 (Relay Kit 10)

For further assistance, please contact the Pickering sales office.

Mating Connectors & Cabling

For connection accessories for the 40-560B series BRIC modules please refer to the 90-015D 68-pin micro-D or 90-016D 96-pin micro-D Connector Accessories data sheets where a complete list and documentation can be found for accessories, or refer to the Connection Solutions catalog.

Chassis Compatibility

This PXI module must be used in a suitable chassis. It is compatible with the following chassis types:

- · All chassis conforming to the 3U PXI and 3U Compact PCI (cPCI) specification
- · Legacy and Hybrid Peripheral slots in a 3U PXI Express (PXIe) chassis
- Pickering Interfaces LXI or LXI/USB Modular Chassis

Chassis Selection Guide

Standard PXI or hybrid PXIe Chassis From Any Vendor:

- Mix our 1000+ PXI switching & simulation modules with any vendor's PXI instrumentation
- Embedded or remote Windows PC control
- · Real-time Operating System Support
- High data bandwidths, especially with PXI Express
- Integrated module timing and synchronization



Pickering LXI or LXI/USB Modular Chassis Only accept our PXI Switching & Simulation Modules:

- · Choose from 1000+ Pickering PXI Modules
- Ethernet or USB control enables remote operation
- Low-cost control from practically any controller
- LXI provides manual control via Web browsers
- Driverless software support
- · Power sequencing immunity
- Ethernet provides chassis/controller voltage isolation
- Independence from Windows operating system



Connectivity Solutions

We provide a full range of supporting cable and connector solutions for all our switching products—20 connector families with 1200+ products. We offer everything from simple mating connectors to complex cables assemblies and terminal blocks. All assemblies are manufactured by Pickering and are guaranteed to mechanically and electrically mate to our modules. These accessories are detailed in Connector Accessories data sheets, where a complete list and documentation can be found for each accessory.













Connectors & Backshells

Multi-way Cable Assemblies

RF Cable Assemblies

Breakouts

Connector Blocks

We also offer customized cabling and have a free online **Cable Design Tool** that can be used to create custom cable solutions for many applications.

- · Fully supported on modern browsers and tablet operating systems.
- · Built-in tutorials and videos allow you to get quickly up to speed.
- · Store cable assemblies in the Cloud and develop over time.
- Each cable design has a downloadable PDF documentation file detailing all specifications

Start designing your custom cabling, go to pickeringtest.com/cdt



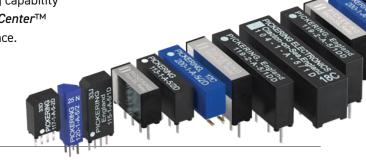
Mass Interconnect

We recommend the use of a mass interconnect solution when an Interchangeable Test Adapter (ITA) is required for PXI/LXI based test systems. Our modules are fully supported by Virginia Panel and MacPanel.

Pickering Reed Relays

We are the only switch provider with in-house reed relay manufacturing capability via our Relay Division. These instrument grade reed relays feature *SoftCenter*TM technology, ensuring long service life and repeatable contact performance.

To learn more go to pickeringrelay.com



Programming

Pickering provide kernel, IVI and VISA (NI & Keysight) drivers which are compatible with all Microsoft supported versions of Windows and popular older versions.

For more information go to pickeringtest.com/os

The VISA driver support is provided for LabVIEW Real Time Operating Systems (Pharlap and Linux-RT). For other RTOS support contact Pickering. These drivers may be used with a variety of programming environments and applications including:

- · Pickering Interfaces Switch Path Manager
- National Instruments products (LabVIEW, LabWindows/CVI, Switch Executive, MAX, TestStand, VeriStand, etc.)
- Microsoft Visual Studio products (Visual Basic, Visual C++)
- Programming Languages C, C++, C#, Python
- · Keysight VEE and OpenTAP
- Mathworks MATLAB, Simulink
- · Marvin ATEasy
- MTQ Testsolutions Tecap Test & Measurement Suite

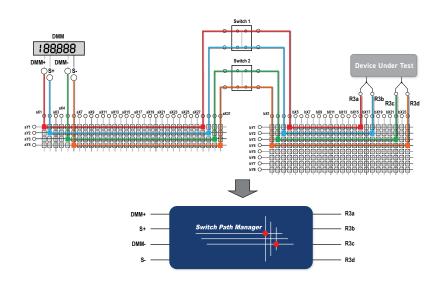
Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries. We provide Soft Front Panels (SFPs) for our products for familiarity and manual control, as well as comprehensive documentation and example programs to help you develop test routines with ease.

To learn more about software drivers and development environments go to pickeringtest.com/software

Signal Routing Software

Our signal routing software, Switch Path Manager, automatically selects and energizes switch paths through Pickering switching systems. Signal routing is performed by simply defining test system endpoints to be connected together, greatly accelerating Test System software development.

To learn more go to pickeringtest.com/spm



Diagnostic Relay Test Tools

eBIRST Switching System Test Tools are designed specifically for our PXI, PCI or LXI products, these tools simplify switching system fault-finding by quickly testing the system and graphically identifying the faulty relay.

To learn more go to pickeringtest.com/ebirst



Three Year Warranty & Guaranteed Long-Term Support

All standard products manufactured by Pickering Interfaces are warranted against defective materials and workmanship for three years from the date of delivery to the original purchaser. Extended warranty and service agreements are available with various levels for your requirements. Although we offer a 3-year warranty as standard, we also include guaranteed long-term support—with a history of supporting our products for typically 15-20 years.

To learn more go to pickeringtest.com/support

Available Product Resources

We have a library of resources including success stories, product and support videos, articles and white papers as well as application-specific brochures to assist you. We have also published reference books on switching technology and the PXI and LXI standards.

To view, download or request any of our product resources go to pickeringtest.com/resources



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