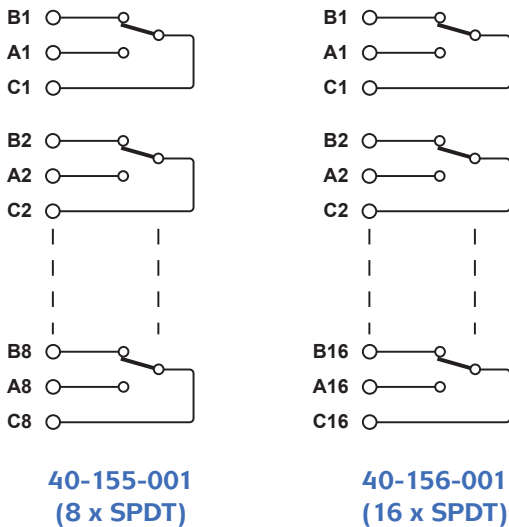
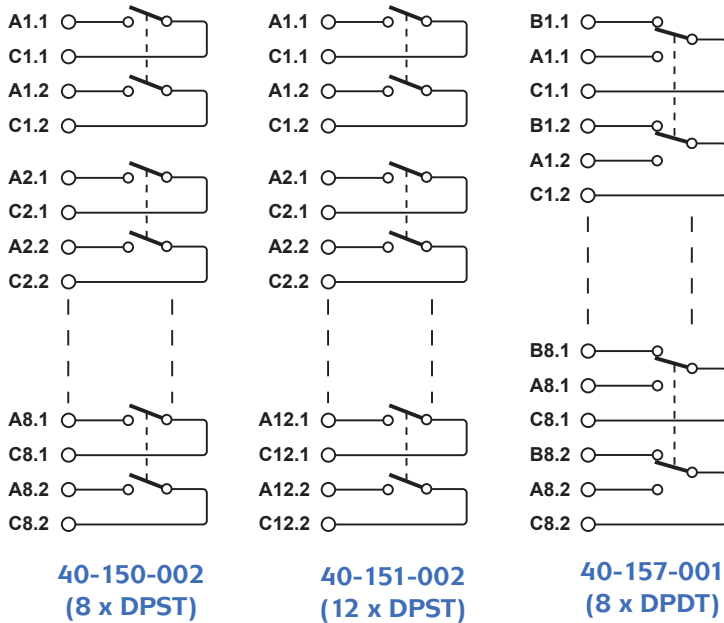
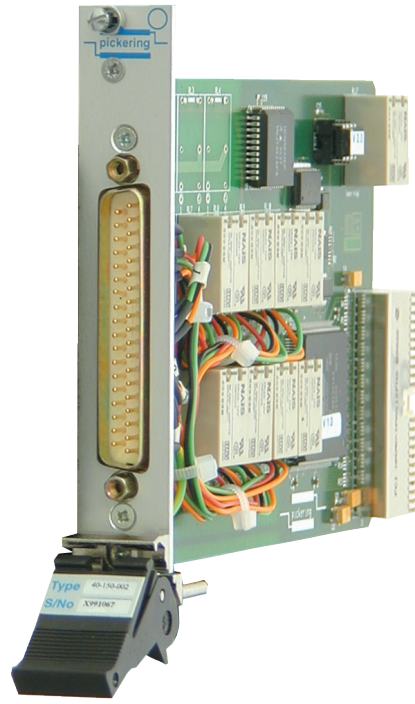


40-150/151/155/156/157 Power Relay Module

- 8 or 12 x DPST Power Relays Per Module
- 8 or 16 x SPDT Power Relays Per Module
- 8 x DPDT Power Relays Per Module
- Hot Switch up to 250 Volts AC, 5A
- Cold Switch up to 400VDC/400VAC Peak
- Maximum Power Handling 175W/1250VA
- VISA, IVI & Kernel Drivers Supplied for Windows XP/Vista/7/8
- Supported by PXI or LXI Chassis
- 3 Year Warranty



Pickering Interfaces have a range of power switching PXI modules, available in relay, matrix or multiplexer configurations. Connections are made via a front panel 37 or 50-way D-Type male connectors.

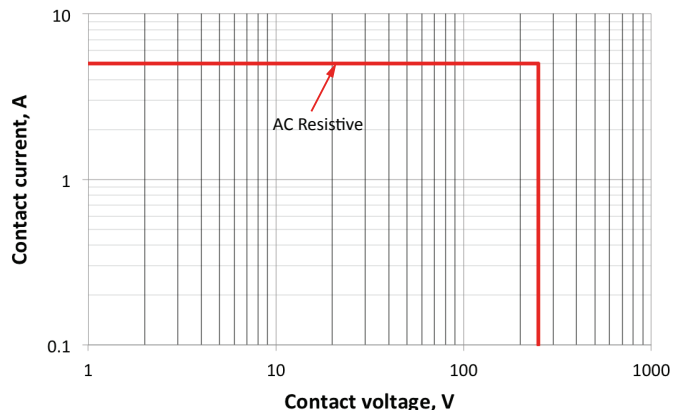
40-150/151 modules have 8xDPST or 12xDPST power relays, suitable for switching inductive/capacitive loads up to 5A at 250VAC. 40-155/156 modules have 8xSPDT or 16xSPDT power relays and 40-157 is configured as 8xDPDT.

Power relay modules are intended for switching heavy AC or DC loads or for slave switching large external relays, contactors and solenoids.

The 40-150 series of power relay module are suitable for applications requiring switching of either mains voltage or DC current.

Power Relay Type

The 40-150/151/155/156/157 are fitted with electro-mechanical power relays, gold-flash over silver alloy. A **Spare Relay** is built onto the circuit board to facilitate easy maintenance with minimum downtime.



40-155/156/157 (SPDT & DPDT) Current/Voltage Curve



Switching Specification - 40-150/151 (DPST)

Contact Type:	Gold flash over silver alloy
Cold Switching Capacity	
Maximum Current:	5A
Maximum Voltage:	400VDC/250VAC
Hot Switching Capacity	
Maximum Current:	5A
Maximum Voltage:	125VDC/250VAC
Maximum Power:*	175W/1250VA
Min. Switching Capacity:	10mA, 5VDC
Initial Path Resistance, On:	<250mΩ
Path Resistance, Off:	>10 ⁹ Ω
Bandwidth:	>20MHz
Operate Time:	10ms typical
Expected Life (operations)	
- resistive load	
Mechanical Life:	>5x10 ⁷
At Max. Switch Capacity:	>1x10 ⁵

* For variation of maximum hot switching capacity of voltage with current refer to plot.

Switching Specification - 40-155/156/157 (SPDT & DPDT)

Contact Type:	Gold flash over silver alloy
Cold Switching Capacity	
Maximum Current:	5A
Maximum Voltage:	400VDC/250VAC
Hot Switching Capacity	
Maximum Current:	5A
Maximum Voltage:	35VDC/250VAC
Maximum Power:*	175W/1250VA
Min. Switching Capacity:	10mA, 5VDC
Initial Path Resistance, On:	<250mΩ
Path Resistance, Off:	>10 ⁹ Ω
Bandwidth:	>20MHz
Operate Time:	8ms typical
Expected Life (operations)	
- resistive load	
Mechanical Life:	>5x10 ⁶
At Max. Switch Capacity:	>5x10 ⁴

* For variation of maximum hot switching capacity of voltage with current refer to plot.

Power Requirements

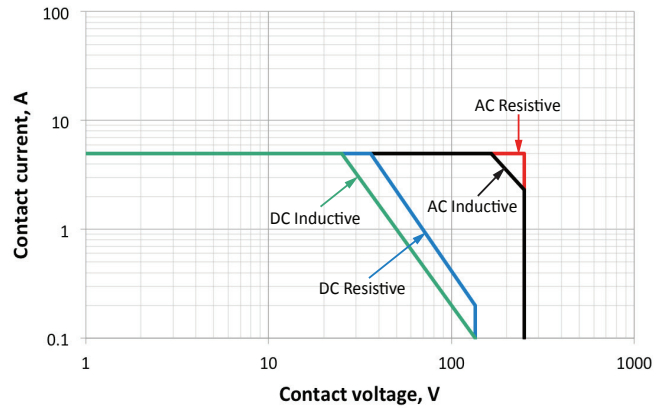
+3.3V	+5V	+12V	-12V
0	360mA (typ 280mA)	0	0

Connectors

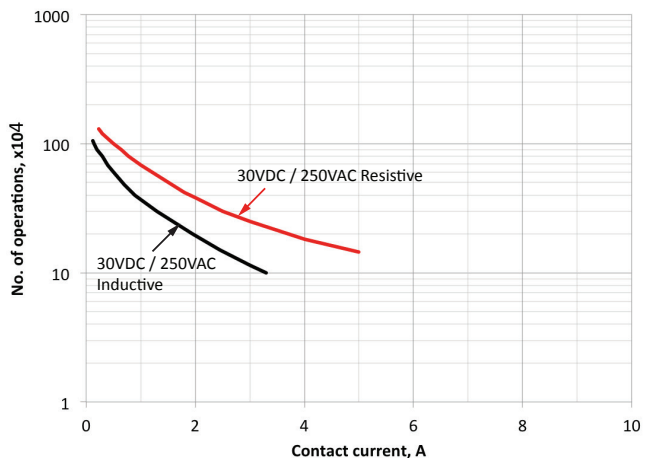
PXI bus via 32-bit P1/J1 backplane connector.
 40-150 and 40-155: front panel 37-pin male D-type.
 40-151, 40-156 and 40-157: front panel 50-pin male D-type.

Mechanical Characteristics

Single slot 3U PXI (CompactPCI card).
 Module weight: 220g (40-151-002)
 240g (40-156-001)
 3D models for all versions in a variety of popular file formats are available on request.



40-150/151 (DPST) Current/Voltage Curve



40-150/151 (DPST) Current/Operating Life Curve

Product Order Codes

8 x DPST Power Relay Module	40-150-002
12 x DPST Power Relay Module	40-151-002
8 x SPDT Power Relay Module	40-155-001
16 x SPDT Power Relay Module	40-156-001
8 x DPDT Power Relay Module	40-157-001

Mating Connectors & Cabling

For connection accessories for the 40-150 series please refer to the **90-007D** 37-way D-type and **90-005D** 50-way D-type Connector Accessories data sheets where a complete list and documentation can be found for accessories, or refer to the Connection Solutions catalog.

Support Products

Spare Relay Kits

Kits of replacement relays are available for the majority of Pickering's PXI switching modules, simplifying servicing and reducing down-time. The relay kits for the 40-150 range are as follows:

- 91-100-052 kit for 40-150-002
- 91-100-052 kit for 40-151-002
- 91-100-049 kit for 40-155-001
- 91-100-049 kit for 40-156-001
- 91-100-049 kit for 40-157-001

For further assistance, please contact your local Pickering sales office.



Programming

Pickering provide kernel, IVI and VISA (NI and Agilent) drivers which are compatible with 32/64-bit versions of Windows including XP, Vista, 7 and 8 operating systems. The VISA driver is also compatible with Real-Time Operating Systems such as LabVIEW RT. For other RTOS support contact Pickering.

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**
- **Geotest ATE Easy**
- **MTQ Testsolutions Tecap**

Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

PXI & CompactPCI Compliance

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

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.

PXI & LXI Chassis Compatibility

Compatible with all chassis conforming to the 3U PXI and 3U cPCI specification. Compatible with Legacy and Hybrid peripheral slots in a 3U PXI Express chassis.

Compatible with Pickering Interfaces LXI Modular Switching chassis. For information on driving your switching solution in an LXI environment refer to the LXI Product Guide.



Latest Details

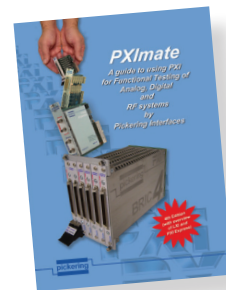
Please refer to our Web Site for Latest Product Details.
www.pickeringtest.com



Please refer to the Pickering Interfaces **"Connection 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.



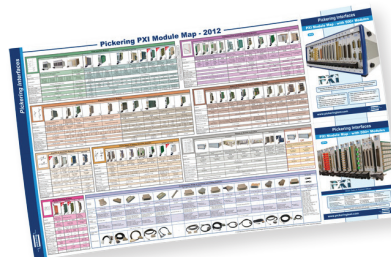
"The Big PXI Catalog" gives full details of Pickering's entire range of PXI switch modules, instrument modules and support products. At over 500 pages, the Big PXI Catalog is available on request or can be downloaded from the Pickering website.



Ever wondered what PXI is all about?

Pickering Interfaces' **"PXImate"** explains the basics of PXI and provides useful data for engineers working on switch based test systems.

The PXImate is available free on request from the Pickering website.



The **"PXI Module Map"** - a simple fold-out selection guide to all Pickering's 600+ PXI Modules.



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