41-742
Programmable DC Power Supply

- Dual Isolated Outputs; 0-48VDC/ 2A / 60W
- Current Capability 2A to 30V, 1.25A at 48V
- Programmable Current Limit
- Includes Over Voltage, Over Current and Short Circuit Protection
- On-Board Isolation and Remote Sense Relays
- 16 Bit Read Back of Output Voltage and Current
- Outputs May Be Connected in Parallel or Series
- DLLs & LabVIEW™ Application Software

Pickering Interfaces' 41-742 programmable power supply is designed specifically for test applications that demand precision output voltage/current and tightly coupled measurement capabilities.

The versatile design of the 41-742 makes it ideal for a broad range of testing applications in markets as diverse as communications, aerospace, and automotive manufacturing.

Power Levels

The 41-742 Programmable power supply provide two independent and isolated 60W(MAX) supplies, each channel is programmable from 0-48VDC to a maximum of 2.0 Amps. The 41-742 includes programmable current limit to protect critical UUTs from excessive current, the output will automatically switch into constant current mode when limit is reached. For greater power or voltage applications, channels can be connected in series or parallel.

Measurement function

In operation, the capabilities include quickly setting I/V and then measuring I/V automatically without processor intervention. The 41-742 has a hardware built in sequence list that can execute commands and store data in a FIFO without processor action. With the tight integration of a Pickering Interfaces 41-742, you'll get high speeds for high throughput as well as high measurement accuracy and repeatability for yield integrity.

Input Power

To avoid excess power draw from the PXI backplane, the 41-742 draws input power from a mains supply. Universal power (60–260VAC) is applied directly to a connector on the front panel in order to produce the dual isolated programmable outputs.

Pickering's Range of PXI Power Supplies					
Model No.	Configuration	Channels	Input	Output Voltage	Max Current
41-735	Programmable	2	Backplane or External	0 to +10V	1A
41-736	Programmable	2	Backplane or External	0 to -10V	1A
41-740	Programmable	2	56VDC	0 to 48V	2A to 30V, 1.25A at 48V
41-743	Programmable	1	Backplane	0 to 48V	2A to 20V, 0.8A at 48V
41-752	Battery Simulator	6	Backplane	0 to 7V	300mA Source, 100mA Sink
41-753	Battery Simulator	1	Backplane	0 to 6V	2.8A Source, 0.5A Sink

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Input:	90 to 260VAC, 47 to 63Hz
Output Channels:	2
Output Voltage Range:	0V to 48V
Output Voltage Accuracy:	0.5% of programmed value ±50mV
Voltage Setting Resolution:	12-Bits
Line Regulation:	0.1%
Load Regulation:	0.1% (10 to 90% load change)
Output Current Range:	2A to 30V, 1.25A at 48V.
Current Limit Accuracy:	0.5% ±50mA
Read back Voltage:	±0.2% of Reading +60mV
Read back Current:	±0.5% of Reading +10mA
Rise Time (typical):	14ms (full load)
Efficiency	84% typical
Isolation:	500V (channel to channel) 500V (channel to chassis)
Measurement Function:	Maximum sampling rate: 5kS/s of each channel
	Input Impedance: 5kΩ
	Trigger sources: Software, external
	Buffer size: 2K samples per channel
	Data transfers: Polling
Sequence Function:	Trigger sources: Software, external
	Input Impedance - 5kΩ
	Buffer size: 256 command words per channel
PCI Interface:	32 bit, 33MHz
Width & Dimensions:	3-slot 3U PXI (CPCI)
Connectors:	Power supply input: 3-way IEC "clover-leaf" connector
	Power supply outputs & sense: 8-way plug-in screw terminal block
	Trigger Input: SMB coaxial connector.
	PXI bus: 32 bit P1/J1 backplane connector
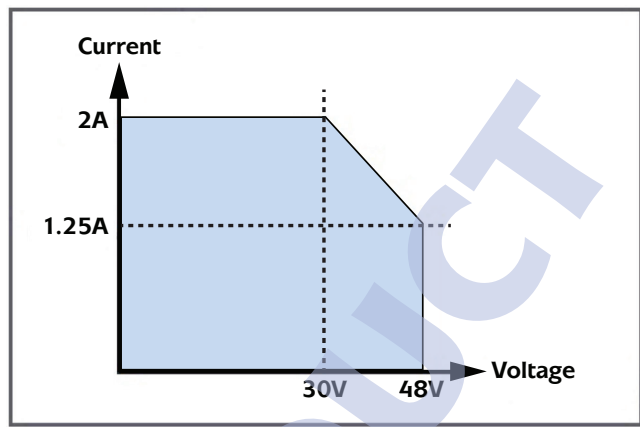
41-742 Safe Operational Area

Product Order Codes

Dual 0-48VDC Programmable Power Supply 90-260VAC input.	**41-742-001**

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Programming

Pickering provide kernel, IVI and VISA (NI) drivers which are compatible with all Microsoft supported versions of Windows and popular older versions. 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
- **Marvin** ATE Easy

PXI & CompactPCI Compliance

The module is compliant with the PXI Specification 2.2. Local Bus. 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 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.

Not compatible with Pickering Interfaces LXI Modular Chassis

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

Latest Details

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

Please refer to the 200 page Pickering Interfaces "**Connection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. 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.
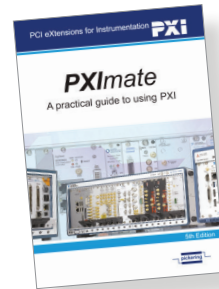
Ever wondered what PXI is all about?
Pickering Interfaces' "**PXImate**" explains the basics of PXI and provides useful data for engineers working on switch based test systems.
The PXImate is available free on request from the Pickering website.
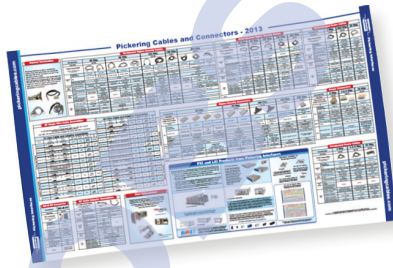
The "**Cables & Connectors Map**" - outlines the cable and connector options available for all PXI Modules.
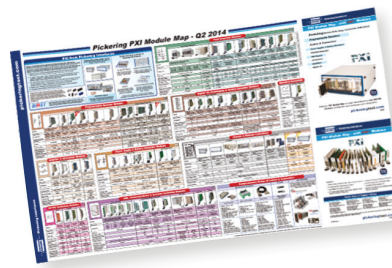
The "**PXI Module Map**" - a simple fold-out selection guide to all Pickering's 1000+ PXI Modules.

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