

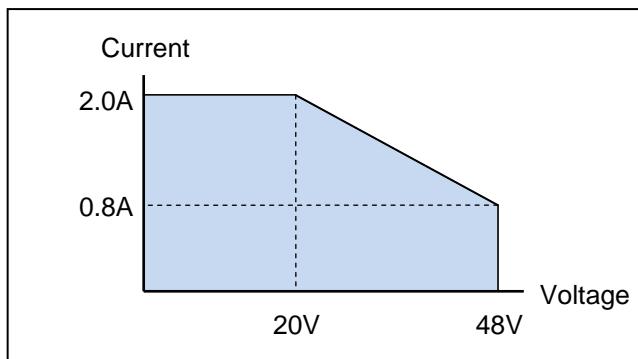
PS48401 - Programmable PXI Power Supply

Features

- 0-48VDC / 2A / 40W max.
- Isolated output
- No external power source required
- High accuracy / low noise output voltage
- Programmable Current Limit
- 16 Bit Read Back of Output Voltage / Current
- 2-slot width, PXI / cPCI Instrument
- Programmable sequencer
- LabVIEW and LabWindows/CVI (VXI*plug&play* compatible) drivers included



The PS48401 is a Programmable DC Power supply in a 2-slot PXI / cPCI form factor. Featuring a fully isolated output capable of providing 0-48VDC / 2A / 40W. It offers a programmable current limit and the ability to measure the output voltage and current under software or trigger control.

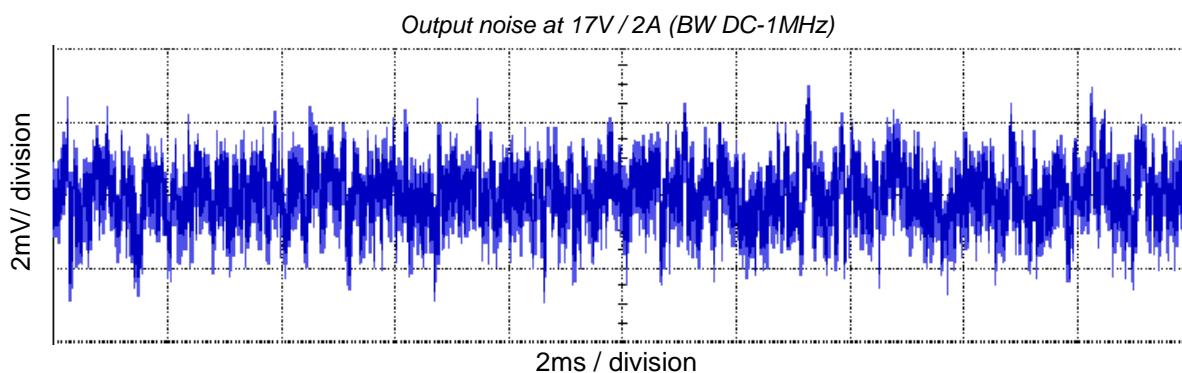


Safe operating area

Both the output voltage and current can be updated under trigger control and an on-board memory allows for storage of voltage and current limit sequencing and measured results.

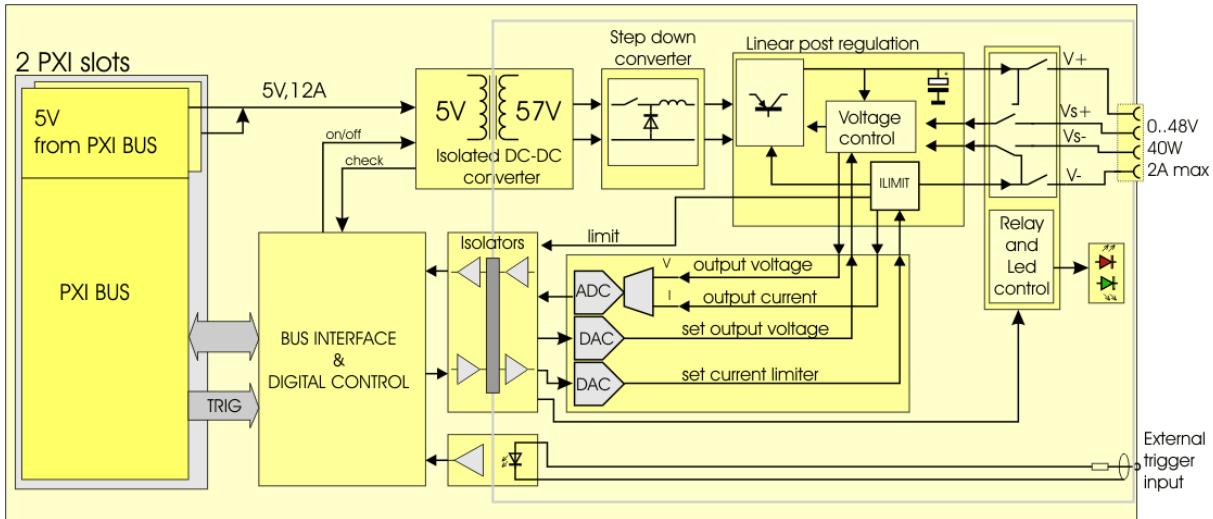
Special functions:

- Measure output voltage or current, software controlled.
- Measure output voltage or current, external trigger controlled.
- Update output voltage and current limit, external trigger controlled.
- Sequence above functions and store measured values into on-board memory



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Block diagram



Specifications

Output Voltage	0 to 48V
Voltage setting resolution	0.74mV
Voltage setting accuracy	$\pm 0.2\%$ of programmed value $\pm 25\text{mV}$
Load regulation	0.1% of programmed value + 5mV (10 to 90% load change)
Output current	2A max. above 20V linearly de-rating to 0.8A (40W max.)
Current limit resolution	35 μA
Current limit accuracy	0.5% of programmed value $\pm 10\text{mA}$
Sense line regulation area	0.5V (sum of both sense lines)
Output ripple (typical)	1.5mVrms, 6mVpp (Full load, BW = DC - 1MHz)
Voltage Read back resolution	0.74mV
Voltage Read back accuracy	$\pm 0.1\%$ reading $\pm 10\text{mV}$
Current read back resolution	35 μA
Current read back accuracy	$\pm 0.2\%$ reading $\pm 5\text{mA}$
Memory Depth	16k
Rise time	1Volt/ms (typical at full load)
Trigger input	Floating opto-coupler input (220 Ohm in series with a diode)
Trigger level	4.0V - 12V (approx. 10mA - 50mA)
Minimum trigger pulse low / high time	20 μs
Maximum sequencing frequency	10kHz
Sequence memory depth	16384 readings
Voltage to chassis (any pin)	60VDC (safety limit, design breakdown voltage > 250VDC)
Insulation resistance	> 100M Ω
Backplane 5V under-voltage lockout	4.65V
Backplane 12V under-voltage lockout	11.3V
Operating temperature	0°C to 50°C