

PS48401 - Programmable PXI Power Supply

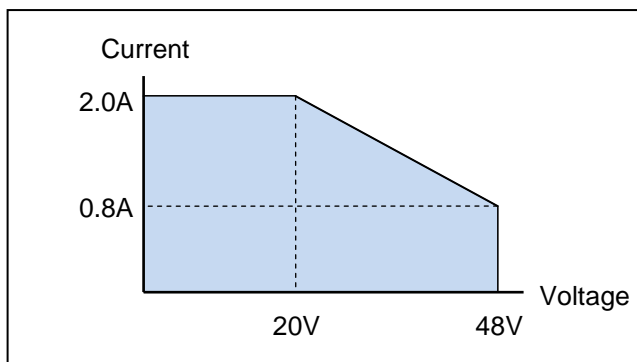
PS48401

- 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



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.

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.

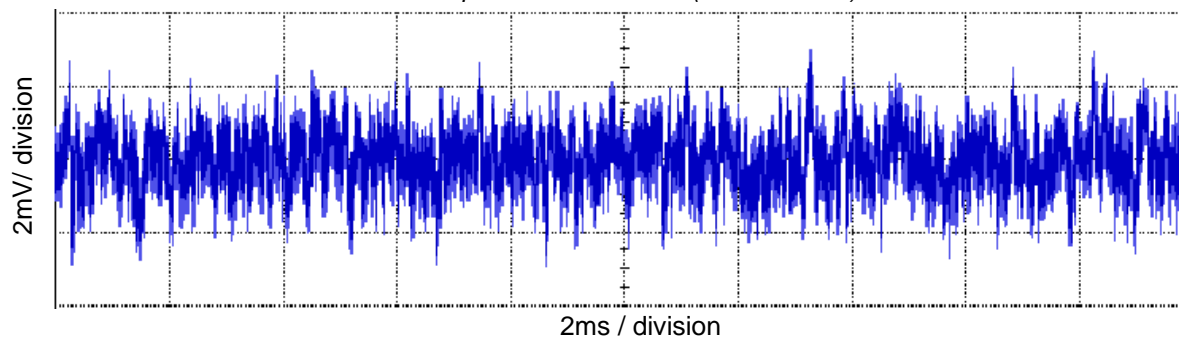


Safe operating area

Special functions:

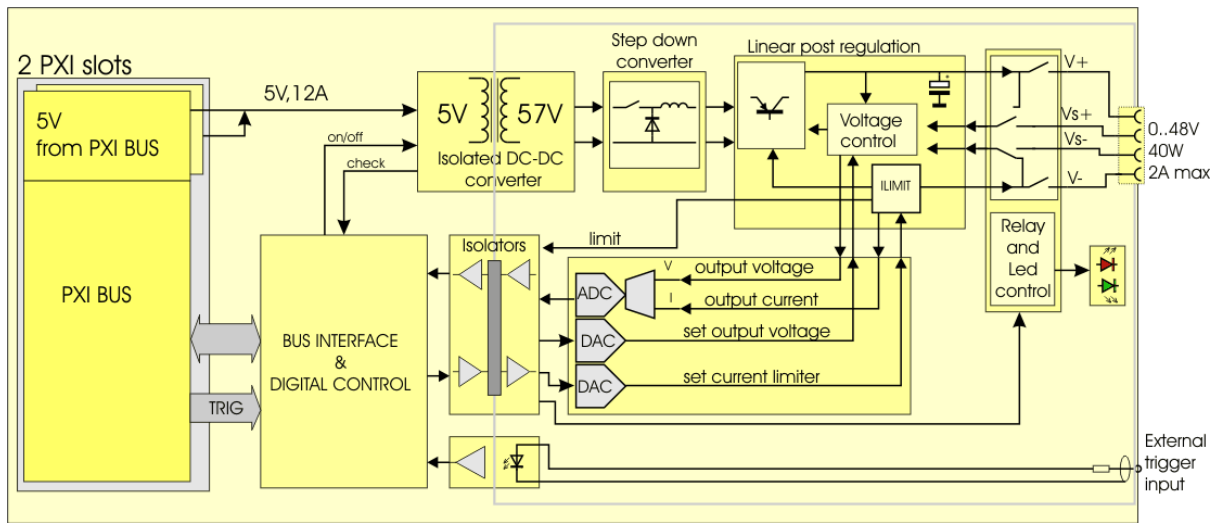
- Measure output voltage or current, software controlled.
- Measure output voltage or current, external trigger controlled.
- Update output voltage and current limit, external trigger controlled.
- Sequence above functions and store measured values into on-board memory

Output noise at 17V / 2A (BW DC-1MHz)



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Block diagram



Specifications

| | |
|---------------------------------------|--|
| Output Voltage | 0 to 48V |
| Voltage setting resolution | 0.74mV |
| Voltage setting accuracy | ±0.2% of programmed value ±25mV |
| Load regulation | 0.1% of programmed value + 5mV (10 to 90% load change) |
| Output current | 2A max. above 20V lineary de-rating to 0.8A (40W max.) |
| Current limit resolution | 35µA |
| Current limit accuracy | 0.5% of programmed value ±10mA |
| 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 | ±0.1%reading ±10mV |
| Current read back resolution | 35µA |
| Current read back accuracy | ±0.2%reading ±5mA |
| 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 | 20µs |
| Maximum sequencing frequency | 10kHz |
| Sequence memory depth | 16384 readings |
| Voltage to chassis (any pin) | 60VDC (safety limit, design breakdown voltage > 250VDC) |
| Insulation resistance | > 100MOhm |
| Backplane 5V under voltage lockout | 4.65V |
| Backplane 12V under volt. lockout | 11.3V |
| Operating temperature | 0°C to 50°C |