Electronic Instrumentation for Nuclear, Astroparticle Physics and Industrial Electronics.

Desktop Power Supply

Model **DSP100/101.**

Operating Manual.

CE

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WARRANTY

NAICAM S.R.L. warrants this product to be free from defects in material and workmanship for a period of 1 year from date of shipment from headquarter in Italy.

NAICAM SRL warrants the following items for one year from the date of shipment: probes, cables, and documentation of specified equipment.

During the warranty period, we will, at our option, either repair or replace any product that proves to be defective.

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NAICAM
DPS100
OUT 1
OUT 2
OUT 3
OUT 4
+24 V
+12 V
-24 V
-12 V


NAICAM
DPS101
OUT 1
OUT 2
OUT 3
OUT 4
+6 V
+12 V
-6 V
-12 V

1. GENERAL DESCRIPTION.

1.1 DESCRIPTION.

The module **DSP100/DSP101** is desktop power supply. The module has all 4 voltages with a maximum output power 50 Watt. This module has over/under voltage, overload and overheat protection and can be adapted for a different input AC voltages 110 or 240 VAC, 50-60 Hz. On the front panel the status of power supply by GREEN/RED LED is indicated. The compact Model **DSP100/DSP101** power supply is the ideal solution where a small number of front-end electronics are located close to a measurement system.

1.2. TECHNICAL SPECIFICATIONS DSP100/DSP101.

INPUT: Input power are 110 or 220 VAC, 50 or 60 Hz. Special high-quality EMI filter cut out going noise. The rear-panel power-entry module provides a standard IEC plug (C13 type) for connecting power cords that are compatible with local ac voltage outlets. The power-entry module lets you select the required input voltage and contains the input fuse. Fuse ratings are 0,5 A.

OUTPUT POWER: Maximum rated currents for each voltage supplied to shown on the table 1 and 2. The maximum total dc output power is 50 W at 25C and 30 W up to 50C ambient air temperature.

DC REGULATION

DSP100: <±0.1% for ±12 V
<±0.1% for ±24V

DSP101: <±0.1% for ±12 V
<±0.2% for ±6 V over the combined range of zero to full load.

TEMPERATURE COEFFICIENT <0.02%/C over a range of 0–50 C.

LONG-TERM STABILITY <±0.5% after a 24-h warm-up at constant load, line voltage, and ambient temperature over a 6-month period.

NOISE AND RIPPLE

< 2 mVpp @ ±6V, ±12 V, ±24 V (Typ.)
< 5 mVpp @ ±6V, ±12 V, ±24 V (Max.)

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peak-to-peak as observed on an oscilloscope with a 20-MHz bandwidth.

VOLTAGE ADJUSTMENT (by internal trimmers) ±20% minimum range voltages.

CIRCUIT PROTECTION The input power line includes a fuse 0,5A.

OVERTEMPETATURE The power supply is automatically turned off.

OVERVOLTAGE All dc outputs include a voltage over limit and under limit to nominally of the rated value.

OVERLOAD This feature provides short-circuit and overload protection.

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COOLING The module has one FAN 40x40 mm.

ENVIRONMENTAL Temperature 0 to 50C. Indoor use. 85% maximum relative humidity, non-condensing.

Table 1. Model **DSP100**

Output Voltage	**Max. Current(A)**	**Overload Protection (A)**
+ 24 Volt	0,5	1,5
- 24 Volt	0.5	1,5
+12 Volt	1	1,5
- 12 Volt	1	1,5

Table 2. Model **DSP101**

Output Voltage	**Max. Current(A)**	**Overload Protection (A)**
+ 6 Volt	1,5	2
- 6 Volt	1,5	2
+12 Volt	1	1,5
- 12 Volt	1	1,5

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2. PERFORMANCE

2.1. Desktop power supply DSP100/DSP101.

Both modules have same dimensions and differences only in pin out output of DSUB 9 pins connectors. DPS100 provide +/-24 VDC and +/-12 VDC (see Table 3). DPS101 provide +/-6 VDC and +/-12 VDC (see Table 4). Below the tables 3 and 4 show pin out of the both modules.

The ac power input is protected with a fuse – 0,5A. A power input module with the standard IEC connector 110 (+/-10%) or 230 VAC (+/-10%) input voltages at 50 or 60 Hz makes the power supply compatible with power cords and ac power outlets in all countries.

Table 3. Model DPS100.

Pin number	Description
1	Ground
2	Ground
3	NC
4	+12 Volt
5	NC
6	-24 Volt
7	+24 Volt
8	NC
9	-12 Volt

Table 4. Model DPS101.

Pin number	Description
1	Ground
2	Ground
3	+6 Volt
4	+12 Volt
5	-6 Volt
6	NC
7	NC
8	NC
9	-12 Volt

3. OPERATING INSTUCTIONS.

The DSP100(DPS101) has a power entry connector on the rear panel. Before connecting any system components to the ac mains source and make sure if your power supply is configured for your ac line voltage.

Be careful there aren't any front panel switch on switch interrupts of the input power line. Front-panel Green LED lights when the ac mains power is supplied. If this light goes to red during operation, check conditions of your set up, to avoid overload, over temperature or short circuit.

There are additional trimmers inside of modules for regulation output voltages. The user can adjust outputs in range +/-20%.

4. DIMENSION AND WEIGHT.

WEIGHT	Net 1,6 kg.
DIMENSIONS	W 165 mm D 160 mm H 51,5 mm

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