

PRODUCT SHEET & SPECIFICATIONS

n.FORM™ POWER SUPPLY

MODELS G14-P320 / PS-24VDC-4A



FUNCTION

Lencore's n.FORM™ system use a 48 Volt DC power supply unit to power the OP. The G14-P320 is connected to the system's sound source (OP) using a 2 conductor, plenum rated 16 gauge wire. To install the G14-P320, mount the unit to the wall with angle brackets and screws to fasten. Keep vents exposed. A 24 Volt DC power supply unit may be used to power accessory items such as strobes. The PS-24VDC-4A is connected to the accessory item using 2 conductor, plenum rated 16 gauge wire.

FEATURES

- + Universal AC input/full range
- + Built-in active PFC function, PF>0.95
- + Protections – short circuit/over load/over voltage/over temperature
- + Forced air cooling by built-in DC Fan
- + Built-in fan speed control
- + Fixed switching frequency at 100KHz

POWER SUPPLY 48V

OUTPUT

- + DC Voltage – 48V
- + Rated Current – 6.7A
- + Current Range – 0 ~ 6.7A
- + Rated Power – 321.6W
- + Ripple & Noise (max.) – 240mVp-p (Note.2)
- + VoltageADJ. Range – 41 ~ 56V
- + Voltage Tolerance – ±1% (Note.3)
- + Line Regulation – ± 0.2%
- + Load Regulation – ± 0.5%
- + Setup, Rise Time – 800ms, 50ms/230VAC
2500ms, 50ms/115VAC at full load
- + Hold Up Time (Typ.) – 16ms/230VAC
16ms/115VAC at full load

INPUT

- + Voltage Range – 88 ~ 264VAC, 124 ~ 370VDC (Note.5)
- + Frequency Range – 47 ~ 63Hz
- + Power Factor (Typ.) – PF>0.95/230VAC, PF>0.98/115VAC at full load
- + Efficiency (Typ.) – 89%
- + AC Current (Typ.) 115VAC – 5A
- + AC Current (Typ.) 230VAC – 2.5A
- + Inrush Current (Typ.) – 20A/115VAC, 40A/230VAC

PROTECTION

- + Overload
105 ~ 135% rated output power
Protection type – Hiccup mode, recovers automatically after fault condition is removed
- + Over Voltage
57.6 ~ 67.2V
Protection type – Shut down o/p voltage, re-power on to recover
- + Over Temperature
80°C ± 5°C (70 °C ± 5°C 3.3V 5V only) (TSW1 – detect on heatsink of power transistor)
Protection type – Shut down o/p voltage, recovers automatically after temperature goes down

DIMENSIONS

- + Dimension – w 8.46" x h 4.53" x d 1.97"
- + Packing – 1.1Kg; 12pcs/14Kg/0.92CUFT

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POWER SUPPLY 48V

SAFETY & EMC

- + Safety Standards – UL60950-1, TUV EN60950-1, CCC GB4943 approved
- + Withstand Voltage – I/P-O/P:3KVAC, I/P-FG:1.5KVAC, O/P-FG:0.5KVAC
- + Isolation Resistance – I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
- + EMI Conduction & Radiation – Compliance to EN55022 (CISPR22) Class B
- + Harmonic Current – Compliance to EN 61000-3-2, -3
- + EMS Immunity – Compliance to EN 61000-4-2,3,4,5,6,8,11; ENV 50204, EN 55024, light industry level, criteria A

ENVIRONMENT

- + Working Temp. – -20 ~ +65°C (Refer to output load derating curve)
- + Working Humidity – 20 ~ 90% RH non-condensing
- + Storage Temp. Humidity – -40 ~ +85°C, 10 ~ 95% RH
- + Temp. Coefficient – 0.03%/°C (0 ~ 50°C)
- + Vibration – 10 ~ 500Hz, 2G 10min./1cycle, 60min each along X,Y, Z axes

NOTES

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.

POWER SUPPLY 24V

OUTPUT

- + DC Voltage – 24dc
- + Output Current – 4.2A
- + Output Power - 100W
- + Adjustable Output Range - $\pm 10\%$
- + Ripple & Noise - 100mV
- + Load Regulation - $\pm 0.5\%$
- + Line Regulation – $\pm 0.5\%$
- + Efficiency – 84%
- + Temperature Drift- $<0.03\%/^{\circ}\text{C}$ (10-50°C)
- + Start-up Time- 300ms max @230VAC
- + Hold Up Time (Typ.) – 20ms min, 100% Load@230 Vac
- + Rise Up Time (Typ.) – 600ms min, 100% Load@230 Vac
- + Over Current Protection – at $105\% < \text{Load} < 145\%$ @I/P:115/230Vac.
Reset by recycle AC On/OFF

POWER SUPPLY 24V

INPUT

- + Voltage Range – 88 ~ 264VAC
- + Frequency Range – 47 ~ 63Hz
- + Max. Input Current- 1.8A @ Vin (rated)
- + Max Inrush Current- 20A @110Vac, 40A @220 Vac cold start
- + Power Factor- >0.92
- + Leakage Current- $<3.5\text{A}/240\text{Vac}$

DIMENSIONS

- + Dimension – w 7" x h 4" x d 2"
- + Weight- 1.3lbs.

PROTECTION

- + Overload
105 ~ 135% rated output power
Protection type – Hiccup mode, recovers automatically after fault condition is removed
- + Over Voltage
57.6 ~ 67.2V
Protection type – Shut down o/p voltage, re-power on to recover
- + Over Temperature
80°C \pm 5°C (70 °C \pm 5°C 3.3V 5V only) (TSW1 – detect on heatsink of power transistor)
Protection type – Shut down o/p voltage, recovers automatically after temperature goes down

SAFETY & EMC

- + EMC Emissions – Conforms to EN55022, VCCI, CISPR22 Class B (conducted & radiated); IEC- 61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11 ESD Susceptibility- EN61000-4-2 (15kV/8kV)
- + Radiated Susceptibility- EN61000-4-3 (3Vm-1)
- + Fast Burst- EN61000-4-4 (2kV)
- + Surge- EN61000-4-5 (1kV/2kV)
- + Safety Approval- UL60950 (UL File No: E204980), TUV EN60950 (TUV:50058679)

ENVIRONMENT

- + Operating Temperature – -10° to 60°C
- + Operating Humidity – 20 to 90% RH non-condensing
- + Storage Temp. Humidity – -25 to 75°C, 10 to 95% RH, non-condensing
- + Vibration – 10 - 55Hz, 2G 1min./1cycle, 60min, each along X,Y, Z axes