

PLDA400S-10-P Power Supply (400W)

Features:

- Wide Operating Temperature (-40°C to 80°C)
- Quiet, Fan less Operation
- 1+1 Current Share Capable
- Rugged, Conformal Coated PCB
- 3yr Warranty
- Universal Input
- High Reliability Design (MTBF: 200kh)
- OPP/SCP/OTP Protection Features
- Power Good (PG) Signal



Description:

The PLDA400S is a compact, enclosed AC-DC switching power supply that offers the option for current sharing. This 9.84" x 2.36" platform offers up to 400W of continuous power across a wide range of operating temperatures, all while maintaining a low emissions profile. All models meet FCC, EN55011, CISPR11 class B emission limits, and comply with UL, CE, IEC, and more.

Model Number	Output Voltage	Output Current	Line Regulation	Output Load Regulation	Ripple & Noise (Vp-p)	Average Efficiency @220 Vac
PLDA400S-10-P	5V	80.00A	±0.5%	±2%	200mV/150mV	88%

NOTES:

1. For operation at full rated power, mounting on a 400mm square aluminum plate is recommended to improve heat dissipation. Contact our office for more details.
2. R&N Measured at 20MHz BW with 0.1µF ceramic and 100µF electrolytic capacitors in parallel with DC output at load.

Specifications	
Input	
Input Voltage	90-264VAC
Input Frequency	47-63Hz
Input Current	5A Max.
Inrush Current	<80A peak @ 220VAC, cold start
Power Factor	>0.95 @110Vac; >0.93 @220VAC full load
Efficiency	88% (220Vac input, full load)
Leakage Current	<250µA max. I/O Leakage (264Vac/63Hz) <3,500µA max. Earth Leakage (264Vac/63Hz)
Output	
Total Output Power	400W ¹ (See Derating Curves)
Output Voltage	5VDC
Output Current	80A Max. (See Derating Curves)
Voltage Adjustability	-17%, +2%
Set Point Accuracy	±2%
Line Regulation	±0.5%
Load Regulation	±2%
Hold Up Time	8ms (220Vac, 80% load)
Load Share Balance	>90%
Minimum Load	No Minimum Load
Ripple and Noise	<200mVpp2 from 0°C to 25°C <150mVpp2 from 25°C to 80°C
Protection Features	
Overpower Protection	106% - 137.5% Hiccup Mode
Overtemperature Protection	105°C ±5°C (Case temp of primary switches)
Short Circuit Protection	Auto Recovery
Environmental	
Operating Temperature	-40°C to 80°C (See Derating Curves)
Storage Temperature	-40°C to +85°C
Operating Humidity	20% - 90% non-condensing
Storage Humidity	10% - 95% non-condensing
General Specifications	
Dimensions	2.36"W x 9.84"L x 1.18"H
Weight	1.5lbs
MTBF	>200K hours per MIL-HDBK-217F at full load and 25°C ambient

Specifications Continued

Safety

Approved to USA/Canada	UL/cUL60950-1 2nd Ed IEC60950-1:2005 2nd Ed.
Approved to Europe	EN60950-1:2006
Isolation	3000VAC input to output 1500VAC input to ground
Isolation Resistance	10MΩ

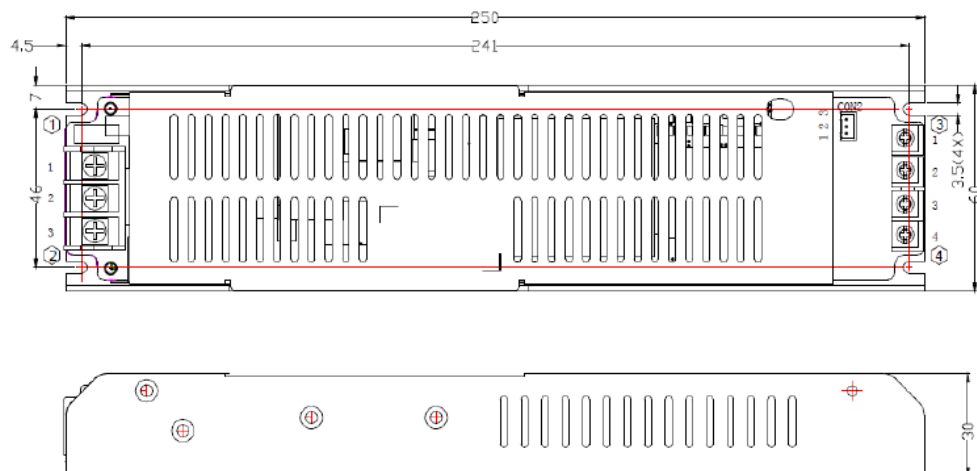
*Consult with TT Electronics for information on additional country safety approvals

EMC

EMC (IEC60601-1-2:2014)	FCC Class B Radiated & Conducted EN55022/55024 Class B Radiated & Conducted
Harmonic Currents	IEC 61000-3-2: Class D
Voltage Flicker	IEC 61000-3-3
Electrostatic Discharge	IEC 61000-4-2: 8kV Air, 4kV contact
Radiated Immunity	IEC 61000-4-3: 3V/m
EFT/Burst	IEC 61000-4-4: +/-1kV
Surge Immunity	IEC 61000-4-5: 2005 1kV differential
Conducted Immunity	IEC 61000-4-6: 3Vrms
Magnetic Field	IEC 61000-4-8: 1A/m
Dips / Interruptions	IEC 61000-4-11:

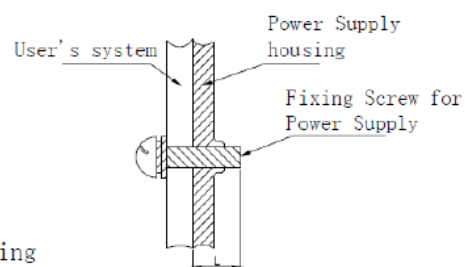
Mechanical Drawings

Diagrams



Mounting Position	Mounting Type	Mounting Position Number	Screw Type	Lmax	Mounting Torque(max)
Bottom Mounting	Fixing by screws	①—④	M3	4mm	6.5Kgf.cm (max)

Remark: For safety purpose, the screw length inside the PSU housing should follow above table. (Refer the drawing on right side.)



Instructions:

- 1, Dimension unit: mm
- 2, The unmarked tolerance of overall dimension is $\pm 1\text{mm}$
- 3, Choose the best mounting type of the module

I/O Configuration

Input

Terminal	Function	Wire Gauge	Max Torque
1	L	22-12AWG	73.5cNm
2	N	22-12AWG	73.5cNm
3	GND	22-12AWG	73.5cNm

Output

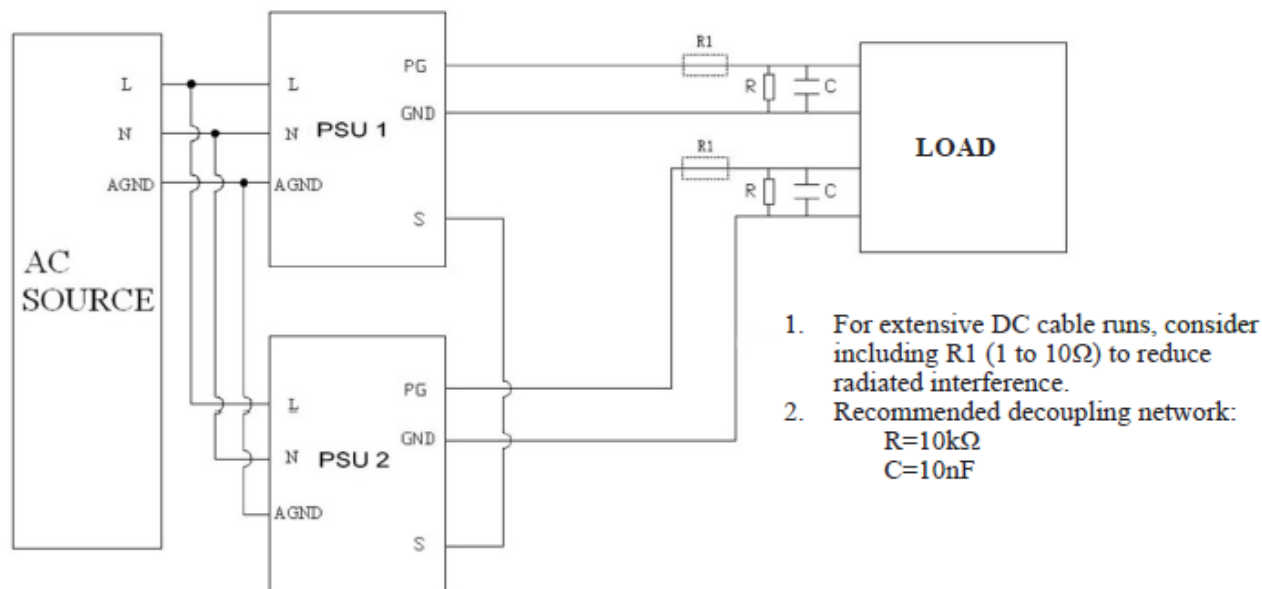
Terminal	Function	Wire Gauge	Max Torque
1	RTN	26-14AWG	73.5cNm
2	RTN	26-14AWG	73.5cNm
3	DC+	26-14AWG	73.5cNm
4	DC+	26-14AWG	73.5cNm

Signal (AW2001-WV/3P)

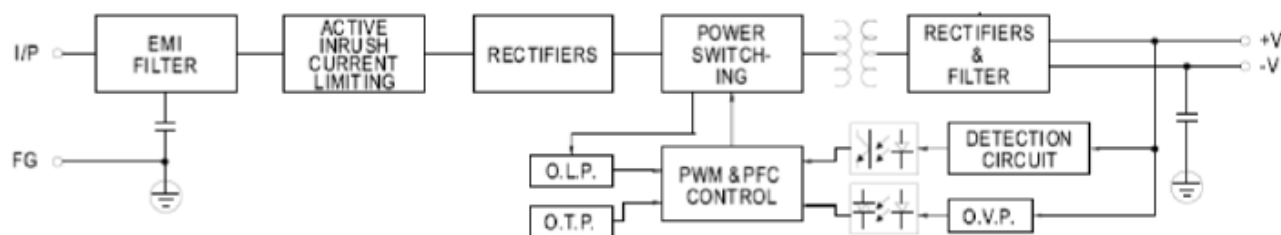
Pin	Function
1	SHARE BUS
2	RTN
3	POWER GOOD ³

3) PG=3~3.5V: Normal Operation
PG=0~0.7V: Fault

Current Share Arrangement

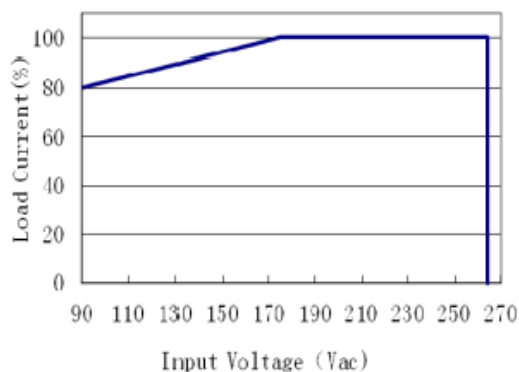


Block Diagram



Derating Curves

Low-Line Derating



Thermal Derating

