TDK·Lambda FPS1000 Series

1000W Front End Power Supplies

Features

- 1U high
- Up to 3000W (3 units) in 19” rack
- Hotswap capable (ORing diodes built in)
- Low Cost
- PoE Option
- High efficiency
- Full array of signals

Key Market Segments & Applications

Industrial COTS Test COMM Broadcast

RoHS

Specifications

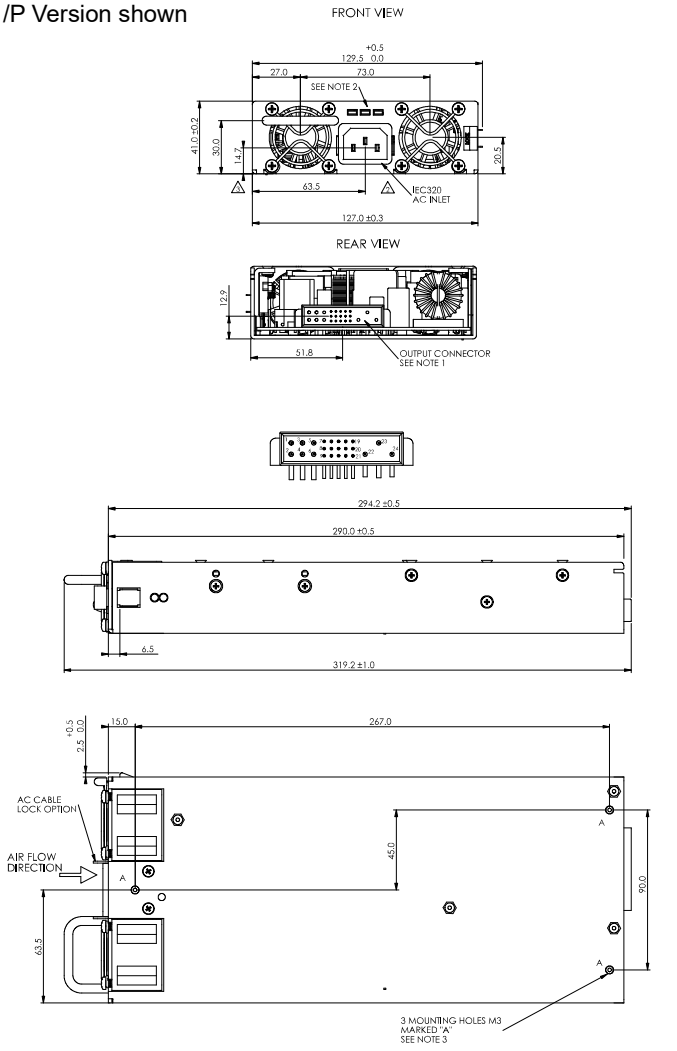
Model		12V Nominal	24V Nominal	32V Nominal	48V Nominal
Output Voltage Range (1)	V	10.5 - 13.2V	21.5 - 29V	28.8 - 38.4V	43 - 58V
Output Current	A	72A	40A	31A	21A
Line Regulation	%	<0.4%			
Load Regulation	%	<0.8%			
Output Noise	mV	150mV	200mV	250mV	300mV
Overvoltage Protection	V	14.3 to 15.7V	31 to 34V	41.5V to 45.5V	62 to 66V
Overcurrent Protection	-	105 - 125%, Constant Current type			
Load Sharing	-	Single wire current sharing, up to 8 units			
Remote Sense	-	Compenstates for 1V on each output lead			
I2C Monitoring	-	Optional (Specify /S)			
Signals (opto isolated)	-	DC OK, AC Fail, and Overtemperature warning, high on fail			
Remote On/Off	-	On: 0 - 0.6V or short, Off: 2- 15V or open			
Auxiliary Output	A	11.2-12.5VDC 0.25A			
AC Input	-	85 - 265VAC, 47 - 63Hz[2], 120-360VDC* (Derate 10% < 100VAC)			
Leakage Current	mA	<1.1mA at 230VAC input			
Inrush Current	A	<40A			
Hold up time (100VAC input)	-	20ms typical (800W loading)			
Efficiency (typ) 100/200VAC	-	80 / 83%	83 / 86%	84 / 87%	85 / 88%
Power Factor Correction	-	EN61000-3-2 class A (20-100% load), >0.98 at full load			
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -11			
EMC (conducted and radiated)	-	EN55022, level B, FCC Class B			
Operating Temperature	°C	0 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°C			
Storage Temperature	°C	-30 to +85°C			
Withstand Voltage	-	Input to Output 3kVAC, Input to Ground 2kVAC, Output to Ground 500VAC for 1 min.			
Cooling	-	Two internal fans, airflow from front to back (variable speed)			
Humidity	-	Operating: 10 - 90% RH, Storage: 10 - 95% RH (non condensing)			
Shock & Vibration	-	Meets ETS 300 019			
Safety Agency	-	UL60950-1, EN60950-1 (Ed 2), CE Mark			
Input / Output Connector	-	Positronic PCIB24W9M400A1 (Mating #PCIB24W9F400A1)			
Front panel indicators	-	AC OK, DC OK, DC Fail			
Size (WxHxD)	mm	Power supply: 127 x 41 x 290mm, Rack: 483 x 43.6 x 351mm			
Size (WxHxD)	in	Power supply: 5 x 1.61 x 11.4”, Rack: 19 x 1.72 x 13.8”			
Weight	g	2,000			
Warranty	yrs	Two Years			

(1) Via Trim pin on output connector
(2) 47-440Hz with reduced PFC (100-265VAC input)

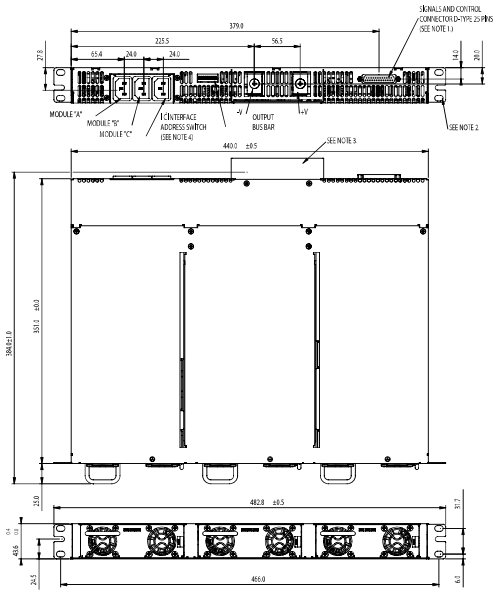
*Safety certified for AC input only

FPS1000 Outline Drawing

/P Version shown



FPSS1U Outline Drawing



Accessories

Part No.	Description
FPS/Z00016299	Module Mating Connector (Positronic PCIB24W9F400A1/AA-S1031)

Options

Suffix	Description
/POE*	1500VAC Output to Ground Isolation (Output noise 400mV)

* FPS1000-48 only.

Model Selector

Front AC Input Configuration	Output Voltage	Output Current	Maximum Power	I²C Interface
FPS1000-12/P	12V	72A	864W	No
FPS1000-12/PS	12V	72A	864W	Yes
FPS1000-24/P	24V	40A	960W	No
FPS1000-24/PS	24V	40A	960W	Yes
FPS1000-32/P	32V	31A	992W	No
FPS1000-32/PS	32V	31A	992W	Yes
FPS1000-48/P	48V	21A	1008W	No
FPS1000-48/PS	48V	21A	1008W	Yes
FPS-S1U/P	Rack (3 slot), contains two blanking panels			
FPS-T1U/P	Rack with 3 individual outputs (floating)			
Rear AC Input Configuration	**Output Voltage**	**Output Current**	**Maximum Power**	**I²C Interface**
FPS1000-12	12V	72A	864W	No
FPS1000-12/S	12V	72A	864W	Yes
FPS1000-24	24V	40A	960W	No
FPS1000-24/S	24V	40A	960W	Yes
FPS1000-32	32V	31A	992W	No
FPS1000-32/S	32V	31A	992W	Yes
FPS1000-48	48V	21A	1008W	No
FPS1000-48/S	48V	21A	1008W	Yes
FPS-S1U	Rack (3 slot), contains two blanking panels			
FPS-T1U	Rack with 3 individual outputs (floating)			

Full Systems (3 units + rack)

Front AC Input Configuration	Output Voltage	Output Current	Maximum Power	I²C Interface
FPS3000-24/P	24V	120A	2880W	No
FPS3000-24/PS	24V	120A	2880W	Yes
FPS3000-48/P	48V	63A	3000W	No
FPS3000-48/PS	48V	63A	3000W	Yes

Front AC Input configuration. Remove /P suffix for Rear AC configuration.

For Additional Information, please visit
https://product.tdk.com/info/en/products/power/index.html