PFE300-700

300 to 714W AC-DC Power Module

- Low profile, small size
- 100°C baseplate temperature
- High power density
- High Efficiency
- Suitable for conduction cooling

RoHS

Features and Benefits

Feature	Benefit
◆ Low profile	◆ Assists system integration
◆ High Efficiency	◆ Easier to cool
◆ Power Factor Corrected (PFC)	◆ Supports Global Use
◆ Operation up to 100°C baseplate	◆ Operates in harsh environments

Specifications

ITEMS \ MODEL		PFE300 PFE500	PFE700	PFE500F (Preliminary)
AC Input		VAC 85 to 265VAC, 47-63Hz (Operation to 440Hz possible(3))		
Input Current (100 / 220VAC) Model dependant	A	4.0 / 2.0 6.2 / 3.2	8.8 / 4.4	6.8 / 3.4
Inrush Current (100 /200VAC) (1)	A	20 / 40 peak		
Power Factor		0.95 minimum		
Output Voltage Setpoint Accuracy	-	±2%	±1V	±2%
Ripple and Noise (1)	-	1%	4V	1%
Over Current Protection	%	105 - 140% (Automatic Recovery)		
Over Voltage Protection	-	125 - 145%	60 - 69.6V	125 - 145%
Series Operation	-	Yes		
Parallel Operation	-	No	Yes (Droop mode)	Yes (Single wire)
Power On Signal (ENA)	-	Open collector (10mA sink current). Low (on) when output is present		
Auxilliary Supply	-	None	None	10 - 14V, 20mA
Remote On/Off (Opto isolated)	-	None	None	High = On
Overtemperature Protection		Yes		
Operating Baseplate Temp.	°C	-40 to +100°C (2)		
Storage Temperature	°C	-40 to +100°C		
Humidity (non condensing)		Operating: 20 - 95%RH, Non Operating: 10 - 95%RH		
Cooling		Conduction		
Withstand Voltage		Input to Output 3kVAC, Input to Baseplate 2.5kVAC, Output to Baseplate 1.5kVDC		
Isolation Resistance		Output to baseplate: 100M Ohm at 500VDC, 25°C ambient, 70%RH		
Vibration (non operating)		10-55Hz (1 min sweep), constant amplitude 0.825mm (max 49m/s^2), X, Y, Z 1 hour each		
Shock		196.1m/s^2		
Safety Certifications		UL60950-1, CSA60950-1 (cUL), EN60950-1, CE mark (LVD)		
Weight	g	250	250	300
Size (WxHxL)	mm in	61 x 12.7 x 116.8mm 2.4 x 0.5 x 4.6"		70 x 12.7 x 122mm 2.76 x 0.5 x 4.8"
Warranty	yrs	2 years		

Notes: (Consult Installation Manual for detailed specifications, test methods and application notes)
1) External components are required, consult Application Notes
2) PFE500-12 & PFE500F-12: -40 to 85°C. See instruction manuals for derating curves
3) Requires the use of an undervoltage relay or similar. Contact technical support

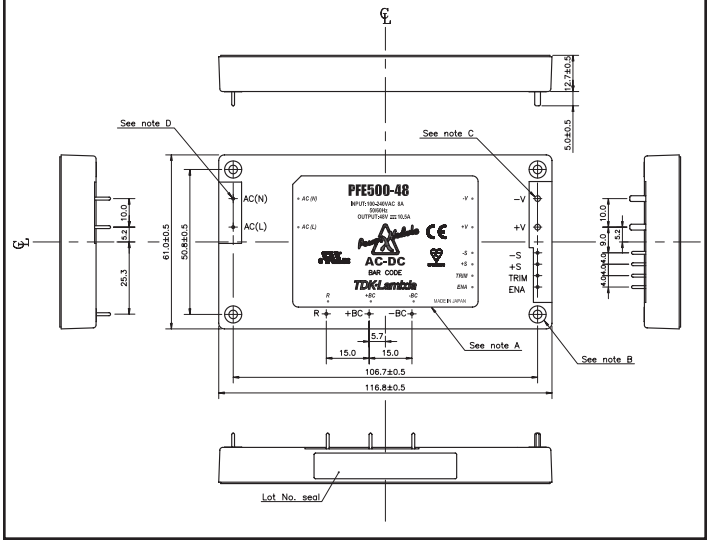
PFE300-700

Model Selector

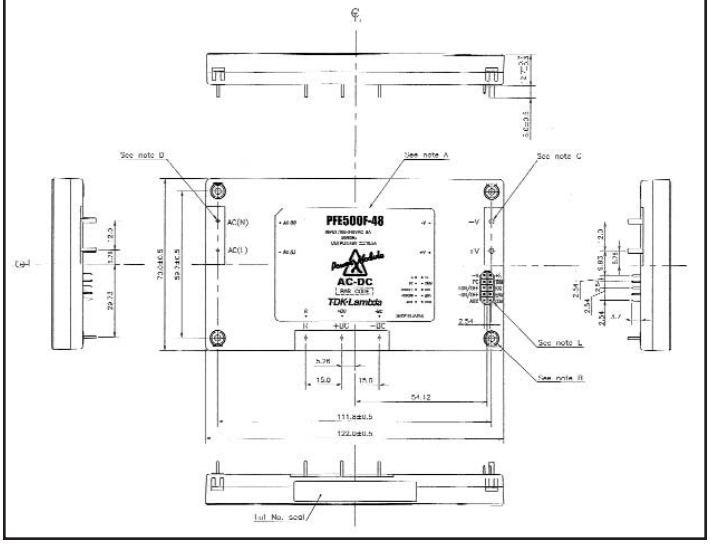
Model	Output Voltage (V)	Adjust. Range (V)	Maximum Current (A)	Maximum Wattage (W)	Load Reg. (mV)	Line Reg. (mV)	Efficiency typ (4)
PFE300-12	12	9.6 - 14.4	25	300	48	48	81 / 83
PFE500-12	12	9.6 - 14.4	33	396	48	48	82 / 83
PFE500F-12	12	9.6 - 14.4	42	504	48	48	81 / 83
PFE300-28	28	22.4 - 33.6	10.8	302	56	56	83 / 85
PFE500-28	28	22.4 - 33.6	18	504	56	56	84 / 86
PFE500F-28	28	22.4 - 33.6	18	504	56	56	84 / 86
PFE300-48	48	38.4 - 57.6	6.3	302	96	96	84 / 86
PFE500-48	48	38.4 - 57.6	10.5	504	96	96	84 / 86
PFE500F-48	48	38.4 - 57.6	10.5	504	96	96	84 / 86
PFE700-48	51	None	14	714	50 - 57V (5)		86 / 89

(4) 100 / 200VAC
(5) Total regulation range

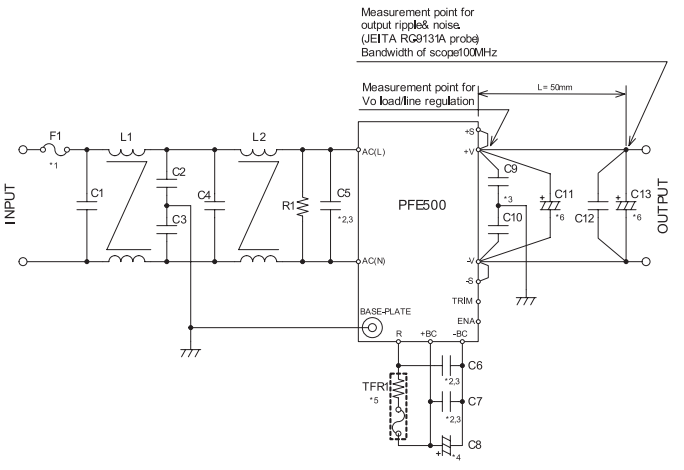
PFE500 and PFE700 Outline Drawing



PFE500F Outline Drawing



PFE500 Basic connection



Heatsink Table

Heatsink	Size (mm)	Thermal Resistance
HAF-10L	116.8 x 25.4 x 61	2.2°C/W
HAF-15L	116.8 x 38.1 x 61	1.9°C/W
HAF-15T	116.8 x 38.1 x 61	1.5°C/W

Options

Suffix	Description
Blank	M3 tapped mounting inserts (4)
/T	3.3mm non-threaded inserts (4)

Other Lambda Products

PAE, PAH, PAF	50 to 600W DC-DC converters
CC-E, PX	1.5 to 40W DC-DC converters

For Additional Information, please visit
www.lambdapower.com/products/pfe-series.htm

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