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TDK·Lambda PFE300-700S Series

300 to 700W AC-DC Power Module

Features

- Low profile, small size
- 100°C baseplate temperature
- High power density
- High Efficiency
- Suitable for conduction cooling
- Power Factor Corrected (PFC)



Key Market Segments & Applications

Industrial COTS Test COMM LED Broadcast

RoHS

Specifications

Model		PFE300S PFE500S	PFE700S
AC Input	VAC	85 to 265VAC, 47-63Hz (up to 440Hz) (3)	
Input Current (100 / 220VAC) Model dependant	A	4.0 / 2.0 6.2 / 3.2	8.8 / 4.4
Inrush Current (100 /200VAC) (1)	A	20 / 40 peak	
Power Factor	-	0.95 minimum, meets EN61000-3-2	
Output Voltage Setpoint Accuracy	-	±2%	±1V
Ripple and Noise (1)	-	1%	4V
Over Current Protection	%	105 - 140% (Automatic Recovery)	
Over Voltage Protection	-	125 - 145%	60 - 69.6V
Series Operation	-	Yes	
Parallel Operation	-	No	Yes (Droop mode)
Power On Signal (ENA)	-	Open collector (10mA sink current). Low (on) when output is present	
Auxiliary Supply	-	None	None
Remote On/Off (Opto isolated)	-	None	None
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 (1 min)	-	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
Size (WxHxL)	mm in	61 x 12.7 x 116.8mm 2.4 x 0.5 x 4.6”	
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) PFE500S-12, -40 to 85°C. See instruction manuals for derating curves

3) Reduced PFC above 63Hz. Contact technical support for 440Hz operation.

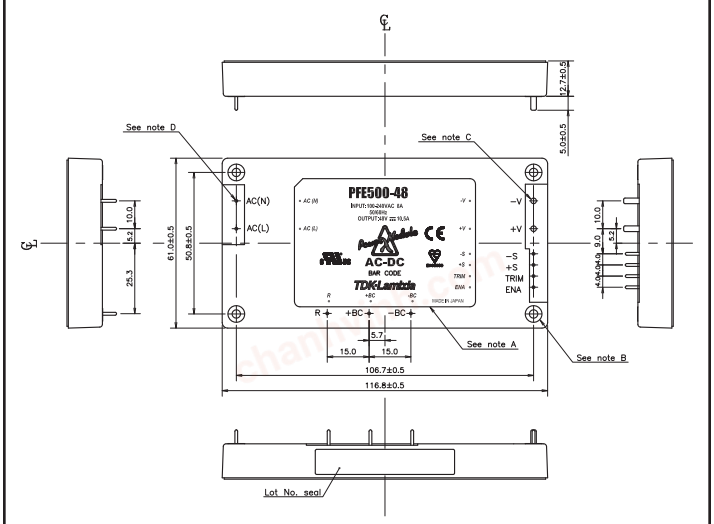
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Specifications

Model	Output Voltage (V)	Adjust. Range (V)	Maximum Current (A)	Maximum Wattage (W)	Load Reg. (mV)	Line Reg. (mV)	Efficiency typ
PFE300S-12	12	9.6 - 14.4	25	300	48	48	81 / 83
PFE500S-12	12	9.6 - 14.4	33	396	48	48	82 / 83
PFE300S-28	28	22.4 - 33.6	10.8	302	56	56	83 / 85
PFE500S-28	28	22.4 - 33.6	18	504	56	56	84 / 86
PFE300S-48	48	38.4 - 57.6	6.3	302	96	96	84 / 86
PFE500S-48	48	38.4 - 57.6	10.5	504	96	96	84 / 86
PFE700S-48	51	None	14	714	50 - 57V (4)		86 / 89

(4) Total regulation range

PFE500S Outline Drawing



Heatsink Table

Heatsink	Size (mm)	PFE Module
HAF-10L	116.8 x 25.4 x 61	PFE300/500/700S
HAF-15L	116.8 x 38.1 x 61	PFE300/500/700S
HAF-15T	116.8 x 38.1 x 61	PFE300/500/700S
HAL-F12T	122 x 35 x 69.9	PFE500F
HAM-F10T	160 x 33.4 x 100	PFE1000F

Options

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

For Additional Information, please visit
us.tdk-lambda.com/lp/products/pfe-series.htm

PFE500S Basic connection

