



300 to 1008W 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

MODEL		PFE300S PFE500S	PFE700S	PFE500F	PFE1000F
ITEMS					
AC Input	VAC	85 to 265VAC, 47-440Hz (Reduced PFC above 63Hz)			
Input Current (100 / 220VAC)	A	4.0 / 2.0	8.8 / 4.4	6.8 / 3.4	13.6 / 6.6
Model dependant		6.2 / 3.2			
Inrush Current (100 /200VAC) (1)	A	20 / 40 peak			
Power Factor		0.95 minimum, meets EN61000-3-2			
Output Voltage Setpoint Accuracy	-	±2%	±1V	±2%	±2%
Ripple and Noise (1)	-	1%	4V	1%	1%
Over Current Protection	%	105 - 140% (Automatic Recovery)			
Over Voltage Protection	-	125 - 145%	60 - 69.6V	125 - 145%	105 - 140% Manual reset 125 - 145%
Series Operation	-	Yes			
Parallel Operation	-	No	Yes (Droop mode)	Yes (Single wire)	Yes (Single wire)
Power On Signal (ENA)	-	Open collector (10mA sink current). Low (on) when output is present			
Auxiliary Supply	-	None	None	10 - 14V, 20mA	10 - 14V, 20mA
Remote On/Off (Opto isolated)	-	None	None	High = On	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 (1 min) (3)		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	500
Size (WxHxL)	mm	61 x 12.7 x 116.8mm		70 x 12.7 x 122mm	100 x 13.4 x 160mm
	in	2.4 x 0.5 x 4.6"		2.76 x 0.5 x 4.8"	3.94 x 0.53 x 6.3"
Warranty	yrs	2 years			

Notes: (Consult Installation Manual for detailed specifications, test methods and application notes)

3) PFE500F, PFE1000F: 500VDC Output to baseplate

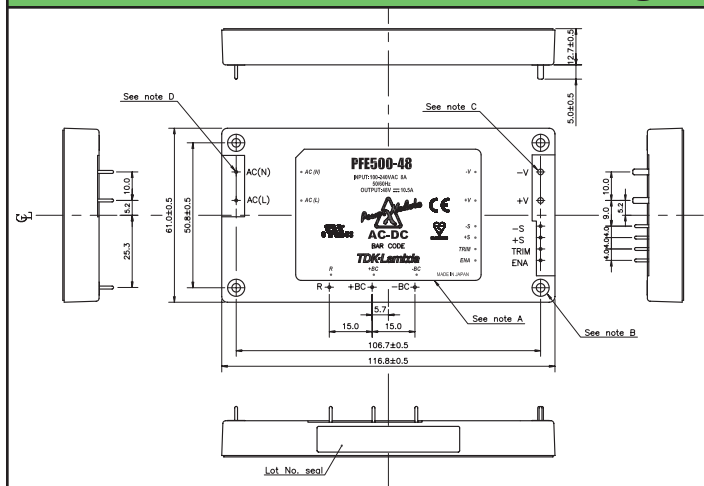
- 1) External components are required, consult Application Notes
- 2) PFE500S-12, PFE500F-12: -40 to 85°C. See instruction manuals for derating curves
PFE1000F28 & PFE1000F48: -40 to 85°C below 170VAC input voltage.
See instruction manuals for derating curves

Model Selector

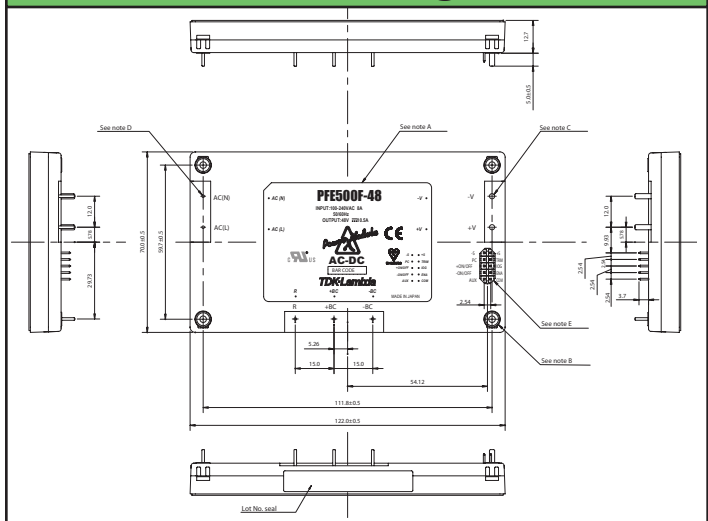
Model	Output Voltage (V)	Adjust. Range (V)	Maximum Current (A)	Maximum Wattage (W)	Load Reg. (mV)	Line Reg. (mV)	Efficiency typ (4)
PFE300S-12	12	9.6 - 14.4	25	300	48	48	81 / 83
PFE500S-12	12	9.6 - 14.4	33	396	48	48	82 / 83
PFE500F-12	12	9.6 - 14.4	42	504	48	48	81 / 83
PFE1000F-12	12	9.6 - 14.4	60	720	48	48	80 / 82
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
PFE500F-28	28	22.4 - 33.6	18	504	56	56	84 / 86
PFE1000F-28	28	22.4 - 33.6	36	1008	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
PFE500F-48	48	38.4 - 57.6	10.5	504	96	96	84 / 86
PFE1000F-48	48	38.4 - 57.6	21	1008	96	96	84 / 86
PFE700S-48	51	None	14	714	50 - 57V (5)		86 / 89

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

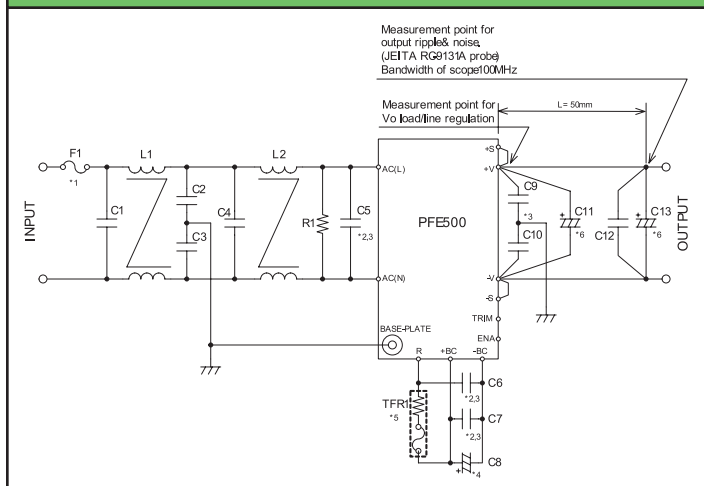
PFE500S & PFE700S Outline Drawing



PFE500F Outline Drawing



PFE500S Basic connection



Heatsink Table (PFE-S Models only)

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