



# PFE300 - 1000 Series

300 to 1008W AC-DC Power Module

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

## Key Market Segments & Applications

- Bulk DC Power for DC-DC Converters & POL Converters
- Custom Fanless Power Supplies
- LED Signs
- Traffic Signalling
- Toll Equipment

## PFE300 - 1000 Features and Benefits

### Features

- Low profile
- High Efficiency
- Power Factor Corrected (PFC)
- Operation up to 100°C baseplate

### Benefits

- Assists system integration
- Easier to cool
- Supports Global Use
- Operates in harsh environments

## Specifications

MODEL		PFE300S PFE500S	PFE700S	PFE500F	PFE1000F
ITEMS					
AC Input	VAC	85 to 265VAC, 47-63Hz (PFE-S Operation to 440Hz possible(3))			
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			
Output Voltage Setpoint Accuracy	-	±2%	±1V	±2%	±2%
Ripple and Noise (1)	-	1%	4V	1%	1%
Over Current Protection	%	105 - 140% (Automatic Recovery)			105 - 140% Manual reset
Over Voltage Protection	-	125 - 145%	60 - 69.6V	125 - 145%	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			
Auxilliary 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) (4)		Input to Output 3kVAC, Input to Baseplate 2.5kVAC, Output to Baseplate 1.5kVDC for S models, 500VDC for F models			
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 <sup>2</sup> ), X, Y, Z 1 hour each			
Shock		196.1m/s <sup>2</sup>			
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)

1) External components are required, consult Application Notes

2) PFE500-12, 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

3) Requires the use of an undervoltage relay or similar. See website Q&A for details

4) PFE500F, PFE1000F: 500VDC Output to baseplate

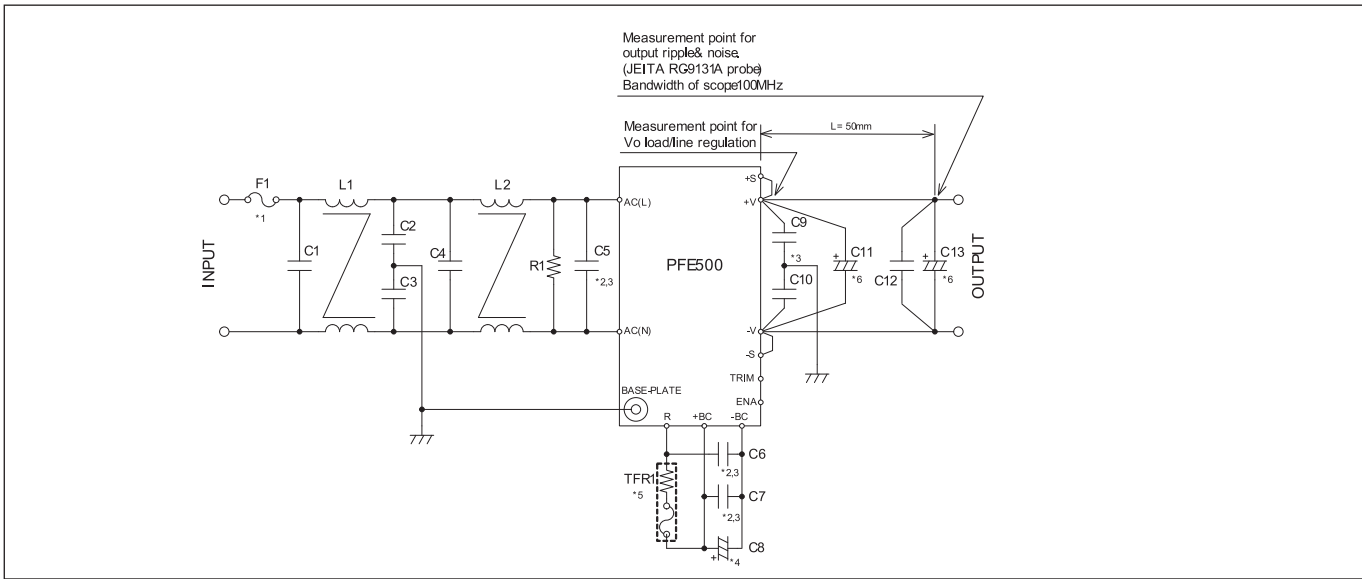


Model Selector

Model	Output Voltage (V)	Adjust. Range (V)	Maximum Current (A)	Maximum Wattage (W)	Load Reg. (mV)	Line Reg. (mV)	Efficiency typ (5)
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 (6)		86 / 89

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

PFE500S Basic connection



Heatsink Table (PFE-S Models only)		
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

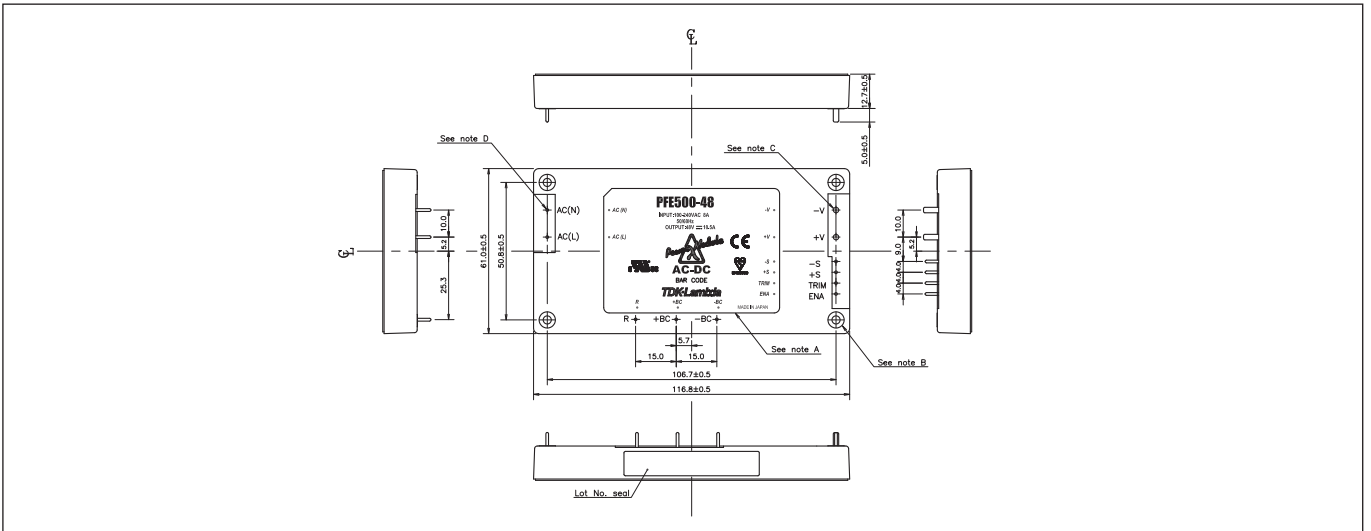
  

Heatsink Table (PFE-F Models only)		
PFE500-F		
Model	Size (mm)	Thermal Resistance
HAL-F12T	122 x 35 x 69.9	0.97°C/W
PFE1000-F		
Model	Size (mm)	Thermal Resistance
HAM-F10T	160 x 33.4 x 100	0.78°C/W

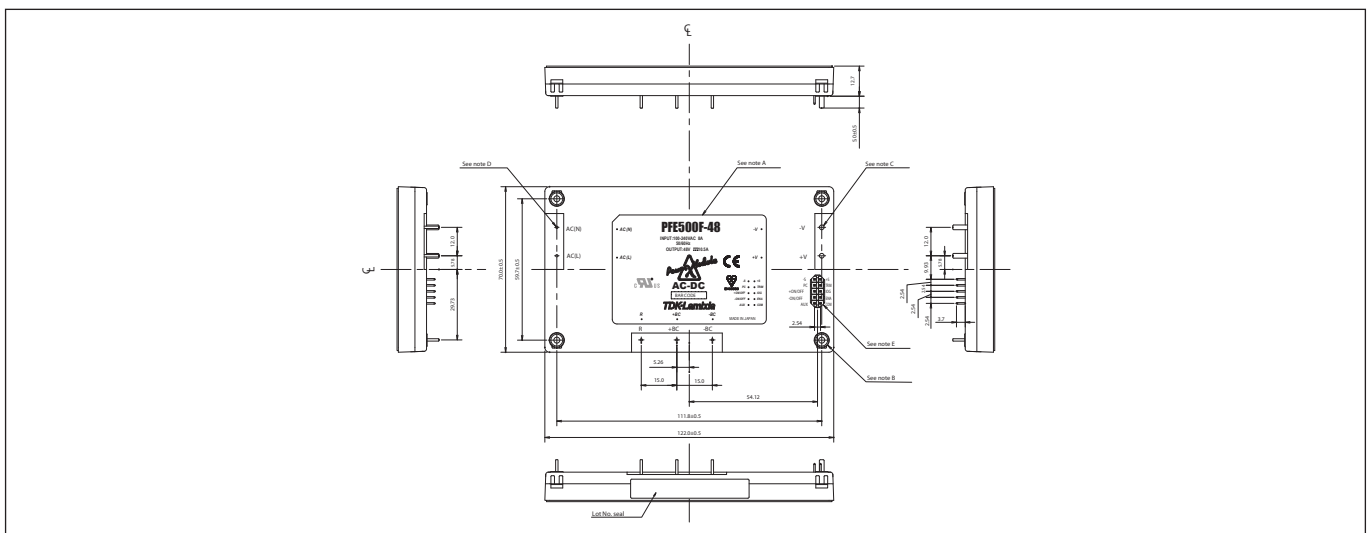
Options	
Suffix	Description
Blank	M3 tapped mounting inserts (4)
/T	3.3mm non-threaded inserts (4)



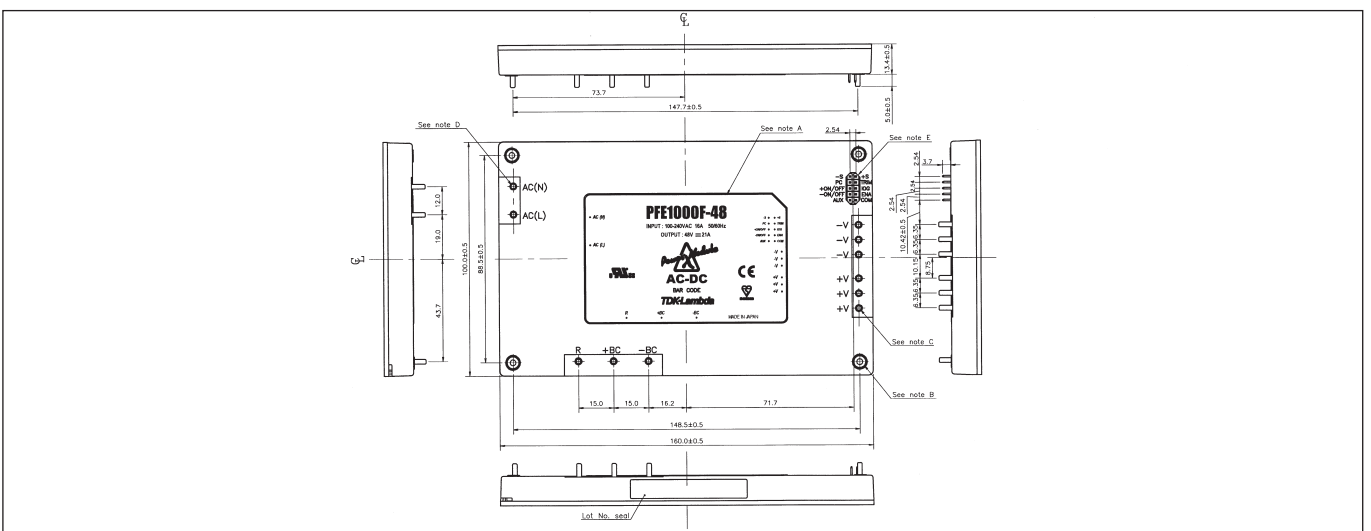
Outline Drawing PFE500S & PFE700S



Outline Drawing PFE500F



Outline Drawing PFE1000F



Please refer to website for outline drawings and additional data for full range  
[www.emea.tdk-lambda/www/pfe](http://www.emea.tdk-lambda/www/pfe)



TDK-LAMBDA EMEA

www.emea-tdk-lambda.com



TDK-Lambda France SAS
ZAC des Delaches
BP 1077-Gometz-le-Chatel
91940 LES ULIS
France
Tel: +33 1 60 12 71 65
Fax: +33 1 60 12 71 66
www.fr.tdk-lambda.com



TDK-Lambda Germany GmbH
Karl-Bold-Strasse 40
D-77855 Achern
Tel: +49 7841 666 0
Fax: +49 7841 5000
info.germany@de.tdk-lambda.com
www.emea.tdk-lambda.com



TDK-Lambda Italy S.r.l.
Via dei Lavoratori 128/130
20092 Cinisello Balsamo (MI)
Italy
Tel: +39 02 61 29 38 63
Fax: +39 02 02 61 29 09 00
info.italia@lambda-europe.com
www.it.tdk-lambda.com



TDK-Lambda Austria Sales Office
Aredstrasse 22
2544 Leobersdorf
Tel: +43 2256 655 84
Fax: +43 2256 645 12
info.germany@de.tdk-lambda.com
www.emea.tdk-lambda.com



TDK-Lambda Scandinavia Sales Office
PO Box 546
Rallarvägen 41
184 40 Åkersberga
Sweden
Tel: +46 854 084 990
Fax: +46 854 066 096
info.germany@de.tdk-lambda.com
www.emea.tdk-lambda.com



TDK-Lambda UK Ltd.
Kingsley Avenue
Ilfracombe
Devon EX34 8ES
United Kingdom
Tel: +44 (0) 12 71 85 66 66
Fax: +44 (0) 12 71 86 48 94
www.uk.tdk-lambda.com



Nemic Lambda Ltd.
Kibbutz Givat
Hashlosha 48800
Israel
Tel: +9 723 902 4333
Fax: +9 723 902 4777
www.nemic.co.il



TDK-Lambda Americas Inc.
Low Power
3055 Del Sol Blvd
San Diego CA 92154
USA
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
Tel: +1 619-575-4400
Fax: +1 619-429-1011
www.us.tdk-lambda.com/lp/



TDK-Lambda Corporation
5F Dempa Bldg. 1-11-15
Higashigotanda
Shinagawa-Ku
Tokyo 141-0022
Japan
Tel: +81 3 3447 4693
Fax: +81 3 3447 4750
www.jp.tdk-lambda.com

High Power
405 Essex Road Neptune NJ 07753
USA
Tel: +1 732 922 9300
Fax: +1 732 922 1441
www.us.tdk-lambda.com/hp/

LOCAL DISTRIBUTION

