

YEF500 SERIES
500W



YEF series are single-output slim type power supply and for wide range AC input from 90VAC to 305VAC.

This series has high efficiency up to 90% and operates from -30~+70 C under air convection without fan.

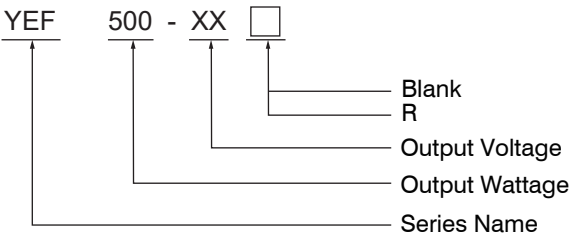
This series serves as a high performance power supply solution for various industrial applications.

RoHS UK CA CE  Pending

Features

- Universal AC Input/ Full Range
- Built-in Active PFC Function
- Fanless design,500W convection
- High efficiency up to 90%
- DC OK active signal and redundant function(option)
- Protections: Short circuit/Over load/Over voltage/Over temperature
- LED indicator for power on
- Three years warranty

Model Description



Type	Description
Blank	Enclosed
R	Buit-in DC ok active signal and redundant function

Model Information

Part number	DC Voltage	Rated Current(max.)	Rated Power	Average Efficiency	Ripple & Noise	Max Capacitive Load	Voltage ADJ Range
YEF500-4.2□	4.2V	80A	336W	89%	200mVp-p	12000uF	3.6~4.4V
YEF500-5□	5V	80A	400W	89.5%	200mVp-p	12000uF	4.5~5.5V
YEF500-12□	12V	41.7A	500.4W	93%	200mVp-p	10000uF	11.4~12.6V
YEF500-15□	15V	33.4A	501W	93.5%	200mVp-p	9000uF	14.3~15.8V
YEF500-24□	24V	20.9A	501.6W	93%	240mVp-p	8000uF	22.8~25.2V
YEF500-36□	36V	13.9A	500.4W	92.5%	360mVp-p	6000uF	34.2~37.8V
YEF500-48□	48V	10.45A	501.6W	94%	360mVp-p	4000uF	45.6~50.4V
YEF500-55□	55V	9.1A	500.5W	93.5%	500mVp-p	2000uF	45~58V

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Specification

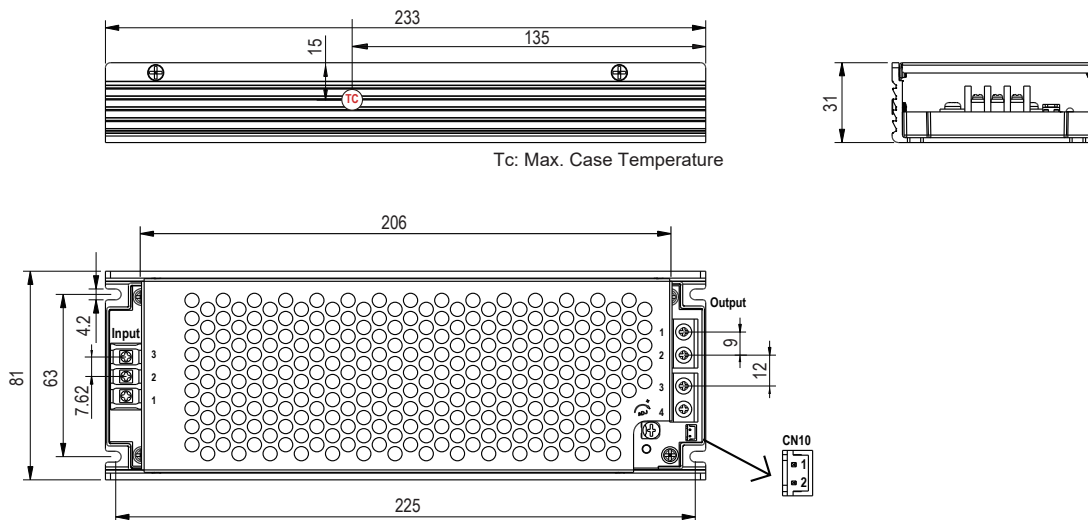
Model	Safety Model No.	YEF500-XX□	
Output	Setup,Rise,Hold up Time	1.0s,50ms,12ms/230VAC(at full load) 1.0s,50ms,12ms/115VAC(at full load); 0.55s/230VAC for 55V Setup	
	Voltage Tolerance	± 2.0% YEF500-4.2/5□	± 1.0% YEF500-12/15/24/36/48/55□
	Line Regulation	± 0.5% YEF500-4.2/5□	± 0.3% YEF500-12/15/24/36/48/55□
	Load Regulation	± 1.0% YEF500-4.2/5□	± 0.5% YEF500-12/15/24/36/48/55□
Input	Rated Voltage Range	100-277VAC	
	Voltage Range	90-305VAC/127-430VDC	
	Frequency Range	50/60Hz	
	AC Current	4.85A/115VAC	2.6A/230VAC
	Inrush Current	Cold Start 60A/200us at 230VAC 50Hz Cold Start 30A/200us at 115VAC 50Hz	
	Leakage Current	<0.75mA/240VAC	
	Power Factor(Typ.)	>0.95/230VAC at full load	>0.98/115VAC at full load
Protection	Over Load	110~140%Rated Output Power	
		Hiccup mode, recovers automatically after fault condition is removed.	
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed.	
	Over Voltage	115~135%Rated Output Voltage	
		Shut down o/p voltage, re-power on to recover.	
	Over Temperature	Shut down o/p voltage, recovers automatically after temperature goes down.	
Ambient	Working TEMP.	-30 ~ +70 ℃ (Please refer to “Derating Curve”section)	
	Working Humidity	20 ~ 95%RH Non-condensing	
	Storage TEMP. Humidity	-40 ~ +85 ℃ ,10 ~ 95%RH Non-condensing	
	TEMP. Coefficient	±0.03%/(0 ~ 50 ℃) on load output	
	Vibration	Component: 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes	
	Safety Protection	Class I	
	Over Voltage Category	OVC III / According to EN62368-1;altitude up to 2000 meters	
Safety	Safety Standards	EN62368-1 approved , design to meet :UL62368-1,BS EN62368-1,EN60335-1, EN61558-1	
	Withstand Voltage	I/P-O/P:3.75KVAC/1min I/P-FG:2KVAC/1min O/P-FG:1.25KVAC/1min	
	Isolation Resistance	I/P-O/P:100M Ohms / 500VDC / 25 ℃ / 70% RH	
EMC	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2 Class A-D,BS EN/EN61000-3-3	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-11 Criteria B, BS EN/EN61000-4-2,3,4,5,6,8 Criteria A, BS EN/EN55035	
Others	Packing	905g/pcs; 26.5 x 26.5 x 23 cm; 15pcs/carton	
	Dimension (LxWxH)	233 x 81 x 31 mm	
	MTBF	256.4Khrs min. MIL-HDBK-217F(25 ℃)	
	Housing material	Aluminium / steel	
Note	1.All parameters NOT specially mentioned at 230VAC input, rated load and 25 ℃ of ambient temperature. 2.Ripple & noise are measured from peak to peak with bandwidth limit of 20MHz (0.1uF and 47uF/50V parallel capacitor under DC output full load, AC nominal input 25 ℃). 3.The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 4.Derating may be needed under low input voltage .Please check the derating curve for more details. 5.Strongly recommended that external output capacitance should not exceed 10000uF(Only for the models with output voltage 5/12V) 6.The ambient temperature derating of 3.5 ℃ /1000m for operating altitude higher than 2000m(6500ft). 7. Only for Blank type,R type efficiency slightly less than the Blank type 8. Inrush current parameter has 10% tolerance.		

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Drawing & Label

(Unit: mm , tolerance: ± 1 mm)



AC Input Terminal pin NO.Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	BHN 1.5-XX-7.62-02-T1-C	5.2N-m
2	AC/N		
3	\perp		

DC Output Terminal pin NO.Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1,2	-V	MFR 06426-T2	9.5N-m
3,4	+V		

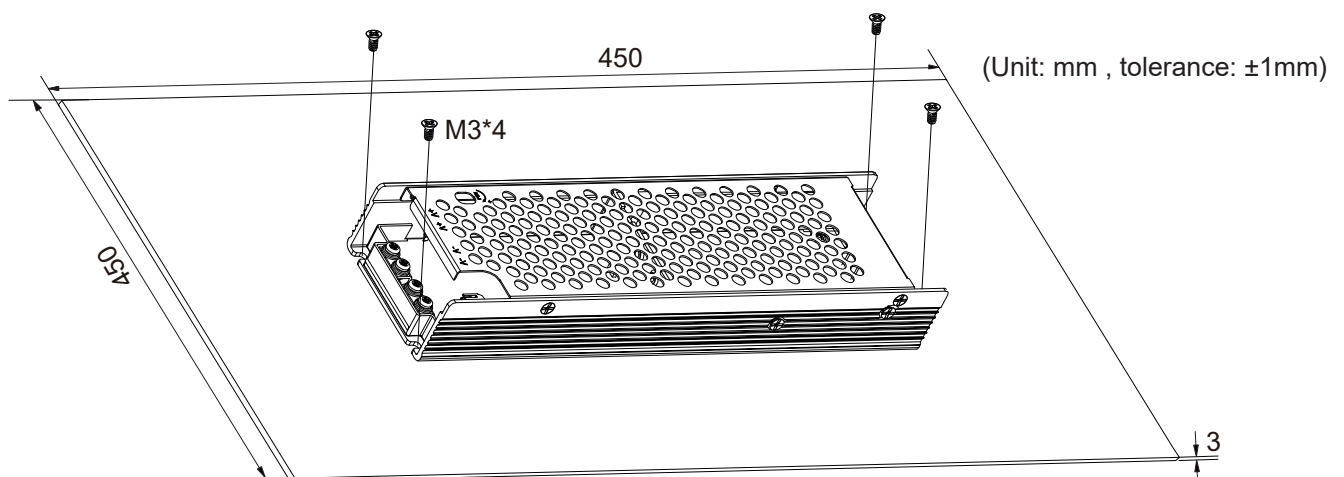
DC OK Connector(CN10): DL20001-AWD or requivalent

Pin No.	Assignment	Mating Housing	Terminal
1	DC COM	DL20001-AWD	DL20001-PH-AWD
2	DC OK+V		

Installation

1. Operate with additional aluminum plate

In order to meet the "Derating Curve" and the "static Characteristics", YEF500 series must be installed onto an aluminum plate (or the cabinet of the same size) on the bottom. The size of the suggested aluminum plate is shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and YEF500 series must be firmly mounted at the center of the aluminum plate.

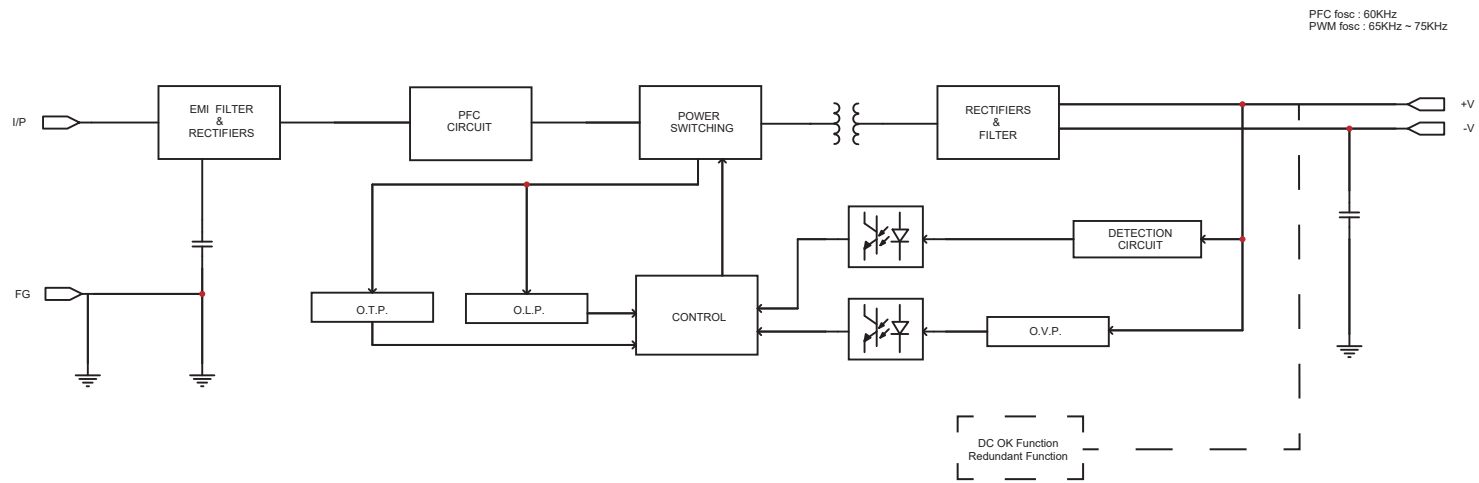


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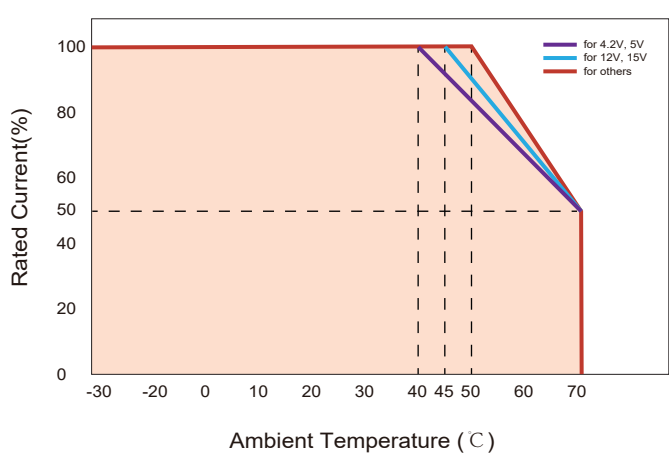
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Block Diagram

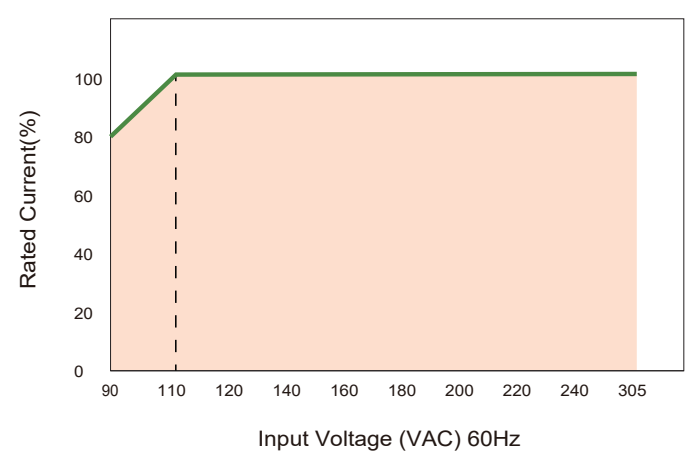


Engineering Data

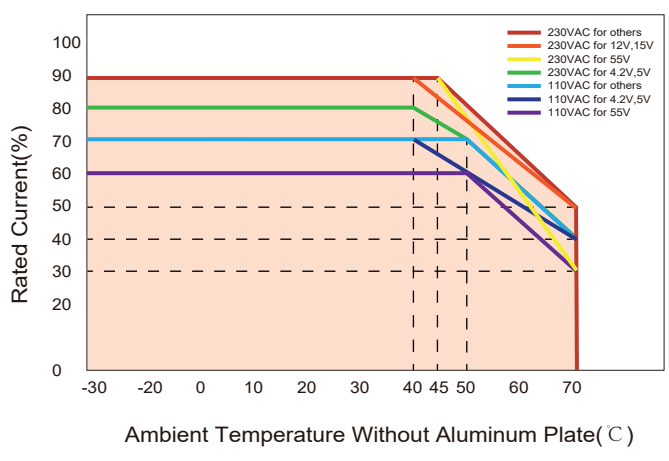
Derating Curve



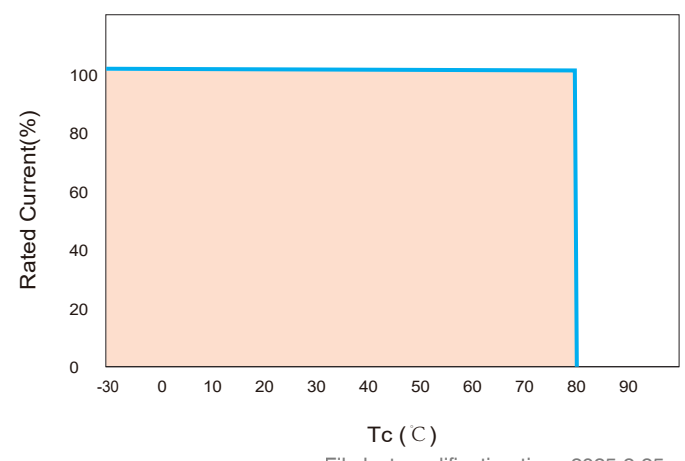
Static Characteristics



Derating Curve



Tc VS Rated Current



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Function

DC OK Signal(Optional)	Contact rating(max.): 30VDC/1A resistive load
Redundant(Optional)	For parallel connection protection:For parallel applications, when one PSU can not work , the another one will be automatically enabled. This can prevent the system crash, and provide the reliability of system

Function Manual

1. DC OK Relay Contact

Contact Close	PSU turns on / DC OK
Contact Open	PSU turns off / DC Fail
Contact Rating(Max.)	30VDC/1A resistive load

2. Redundant Function

- (1) YEF500-XXR is built-in redundant function and can be connected 2 units in parallel.
- (2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.

