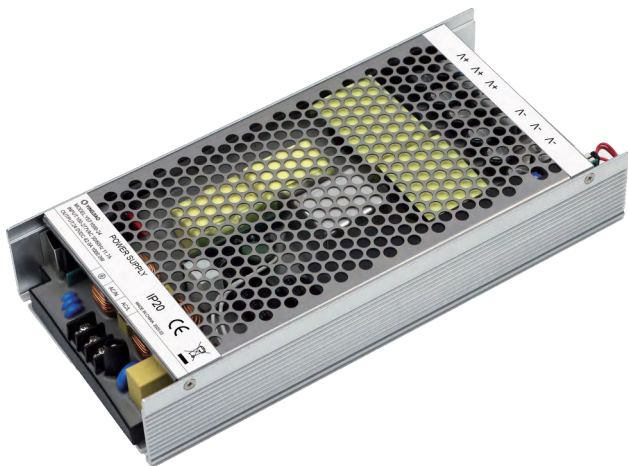


YEF1000 SERIES
1000W



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.

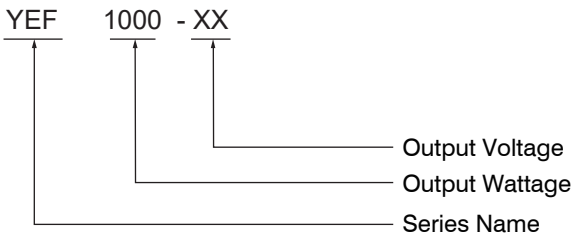
This series serves as a high performance power supply solution for various industrial applications.

RoHS UK CA CE 
Pending

Features

- Universal AC Input/ Full Range
- Built-in Active PFC Function
- Fanless design,1000W convection
- High efficiency up to 90%
- DC OK active signal
- Output voltage and constant current level programmable
- Built-in remote ON-OFF control
- Operating altitude up to 5000 meter (Note.7)
- Protections: Short circuit/Over load/Over voltage/Over temperature
- LED indicator for power on
- Three years warranty

Model Description



Model Information

Part number	DC Voltage	Rated Current(max.)	Rated Power	Average Efficiency	Ripple & Noise	Max Capacitive Load	Voltage ADJ Range (SVR)
YEF1000-12	12V	80A	960W	94%	150mVp-p	40000uF	12~14.4V
YEF1000-24	24V	42A	1008W	95%	240mVp-p	20000uF	24~28.8V
YEF1000-36	36V	28A	1008W	95.5%	240mVp-p	16000uF	36~43.2V
YEF1000-48	48V	21A	1008W	95%	300mVp-p	12000uF	48~57.6V

Specification

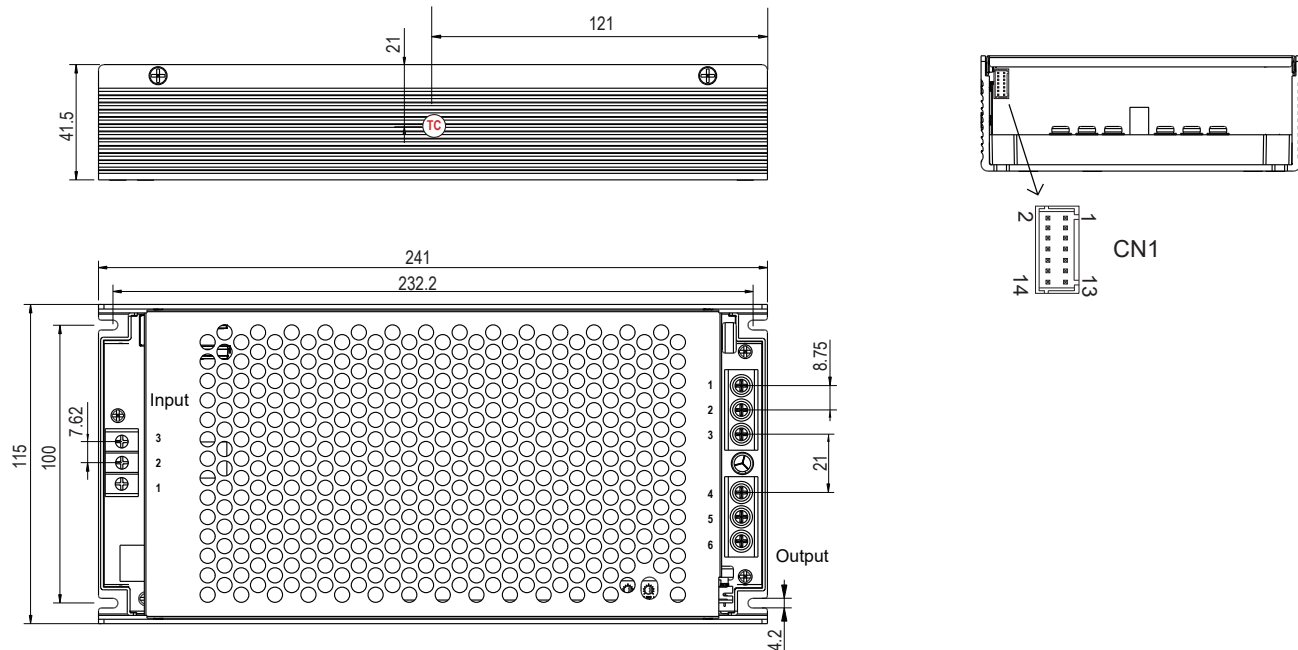
Model	Safety Model No.	YEF1000-XX□
Output	Setup,Rise,Hold up Time	1.0s,50ms,12ms/230VAC(at full load) 1.0s,50ms,12ms/115VAC(at full load)
	Voltage Tolerance	± 1.0%
	Line Regulation	± 0.5%
	Load Regulation	± 0.5%
Input	Rated Voltage Range	100-277VAC
	Voltage Range	90-305VAC/127-430VDC
	Frequency Range	50/60Hz
	AC Current	11.7A/115VAC 6A/230VAC
	Inrush Current	Cold Start 40A/200us at 230VAC 50Hz Cold Start 20A/200us at 115VAC 50Hz
	Leakage Current	<0.75mA/240VAC
	Power Factor(Typ.)	>0.95/230VAC at full load >0.99/115VAC at full load
Protection	Over Load	105~125%Rated Output Power Constant current limiting with delay shutdown after 3 seconds, re-power on to recover
	Short Circuit	Constant current limiting with delay shutdown after 3 seconds, re-power on to recover
	Over Voltage	115~145%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 ~ 90%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
Function	Output Voltage Programmable(PV) Note 6	Adjustment of output voltage is allowable to 50~120% of nominal output voltage. Please refer to the Function Manual.
	Output Current Programmable(PC) Note 6	Adjustment of constant current level is allowable to 20~ 100% of rated current. Please refer to the Function Manual.
	Remote ON/OFF Control	Power ON:"Low" <0 ~ 0.5V or Short circuit Power OFF: "Hi" >2 ~ 5V or Open circuit
	Auxiliary Power	12V@0.5A tolerance±10%,ripple 150mVp-p
	DC OK Signal	The TTL signal out, PSU turn on=4.5 ~5.5V; PSU turn off=-0.1~0.5V, Please refer to the Function Manual.
Others	Packing	1740g/pcs; 30 x 32 x 23 cm; 8pcs/carton
	Dimension (LxWxH)	241 x 115 x 41.5 mm
	MTBF	146.4Khrs min. MIL-HDBK-217F(25 ℃)
	Housing material	Aluminium / steel
Note	<p>1.All parameters NOT specially mentioned at 230VAC input, rated load and 25 ℃ of ambient temperature.</p> <p>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 ℃).</p> <p>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.</p> <p>4.Derating may be needed under low input voltage .Please check the derating curve for more details.</p> <p>5.The ambient temperature derating of 3.5 ℃/1000m for operating altitude higher than 2000m(6500ft).</p> <p>6.PV/PC functions when users do not use SVR.</p> <p>7.Tolerance :includes set up tolerance, line regulation and load regulation.</p>	

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Drawing & Label

(Unit: mm , tolerance: $\pm 1\text{mm}$)



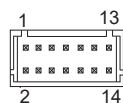
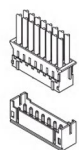
AC Input Terminal pin NO.Assignment

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
1,2,3	+V	MCN 04423-T2	9.5N-m
4,5,6	-V		

Control Pin No. Assignment (CN1) : HC-PHD-2x7A or equivalent



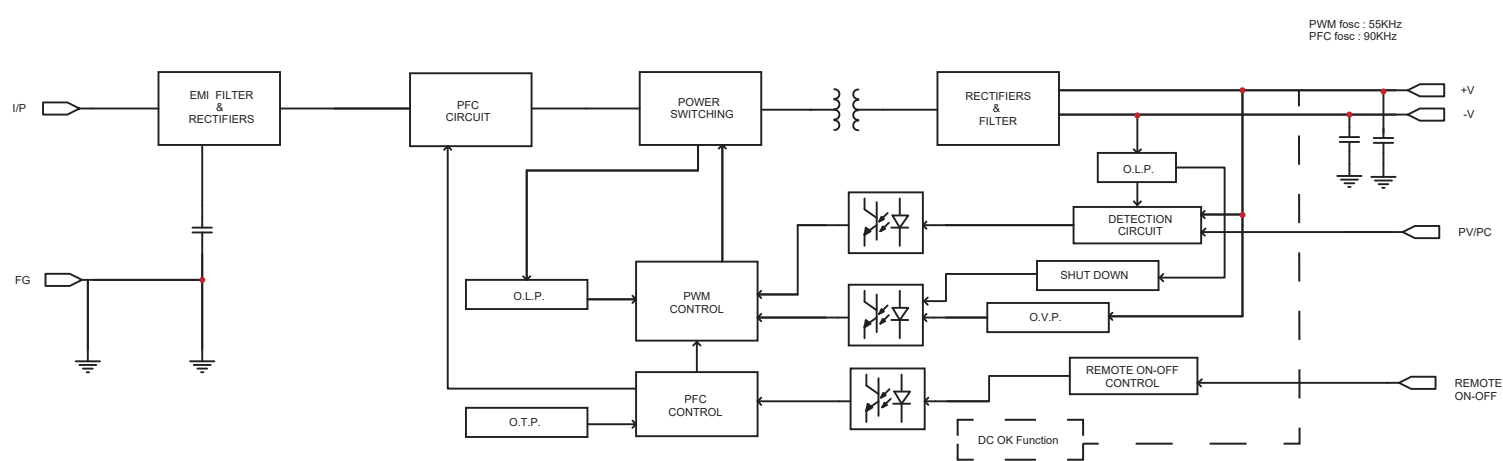
Mating Housing	HC-PHD-2x7A or equivalent
Terminal	B14B-PHDSS or equivalent

No.	Function	Description
1,3	PV	Connection for output voltage programming.
2	PV-DIS	Short connecting between PV (pin1) and PV-DIS (pin2) if output voltage programming function is not activated.
4,8,10,12	GND (Signal)	Negative output voltage signal.
5	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin6). The maximum load current is 0.5A. This output is not controlled by "Remote ON-OFF".
6	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
7	Remote ON-OFF	The unit can turn the output ON/OFF by electrical signal or dry contact between Remote ON/OFF. Short (0 ~ 0.5V): Power ON; Open (2 ~ 5V): Power OFF ; The maximum input voltage is 5.5V.
9	DC OK	Low (-0.1 ~ 0.5V): When the $V_{out} \leq 80\% \pm 5\%$. High (4.5 ~ 5.5V): When $V_{out} \geq 80\% \pm 5\%$. The maximum sink current is 10mA and only for output.
11	PC	Connection for constant current level programming.
13	Vccs	Positive output voltage signal.
14	PC-DIS	Short connecting between Vccs (pin13) and PC-DIS (pin14) if output current programming function is not activated.

YEF1000 SERIES

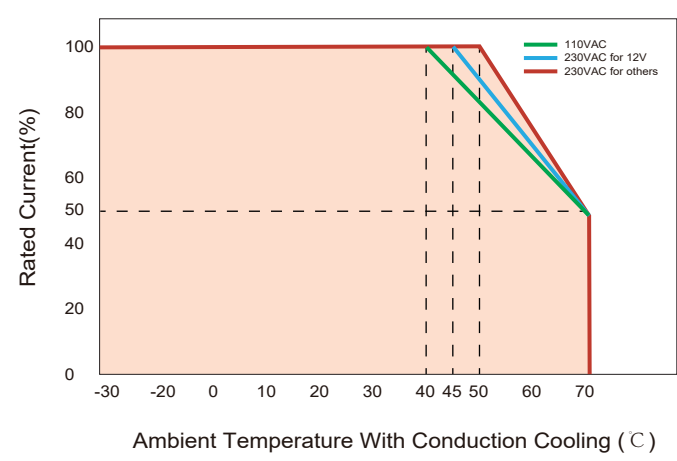
1000W

Block Diagram

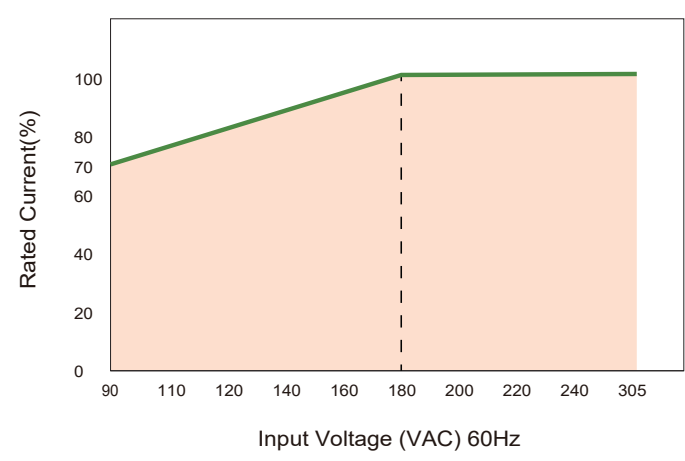


Engineering Data

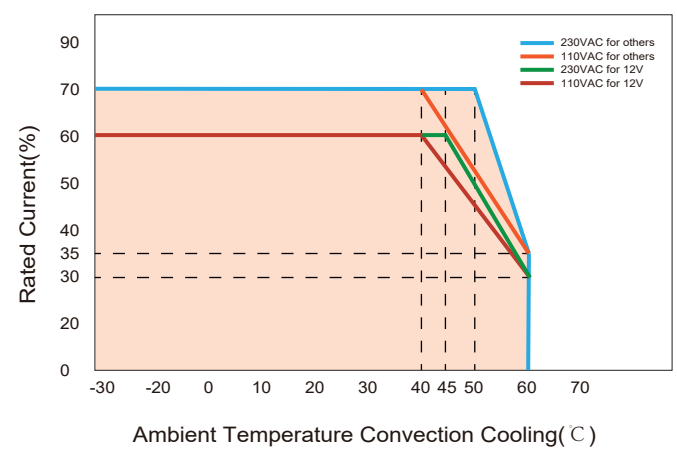
Derating Curve



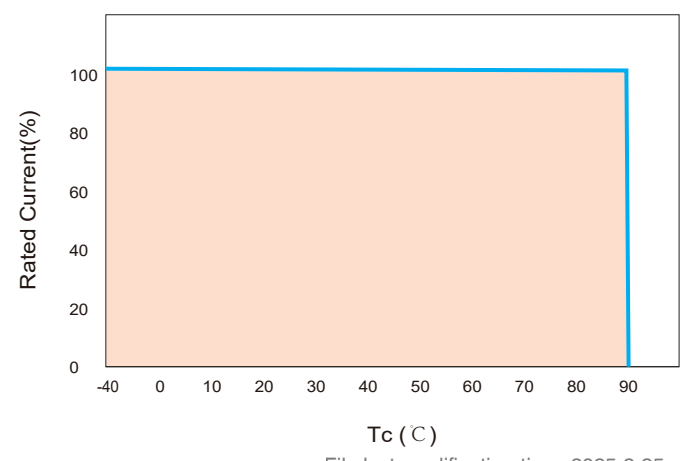
Static Characteristics



Derating Curve



Tc VS Rated Current

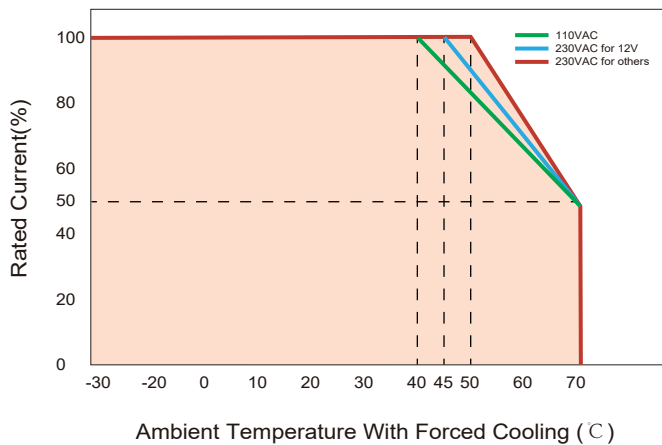


YEF1000 SERIES

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Engineering Data

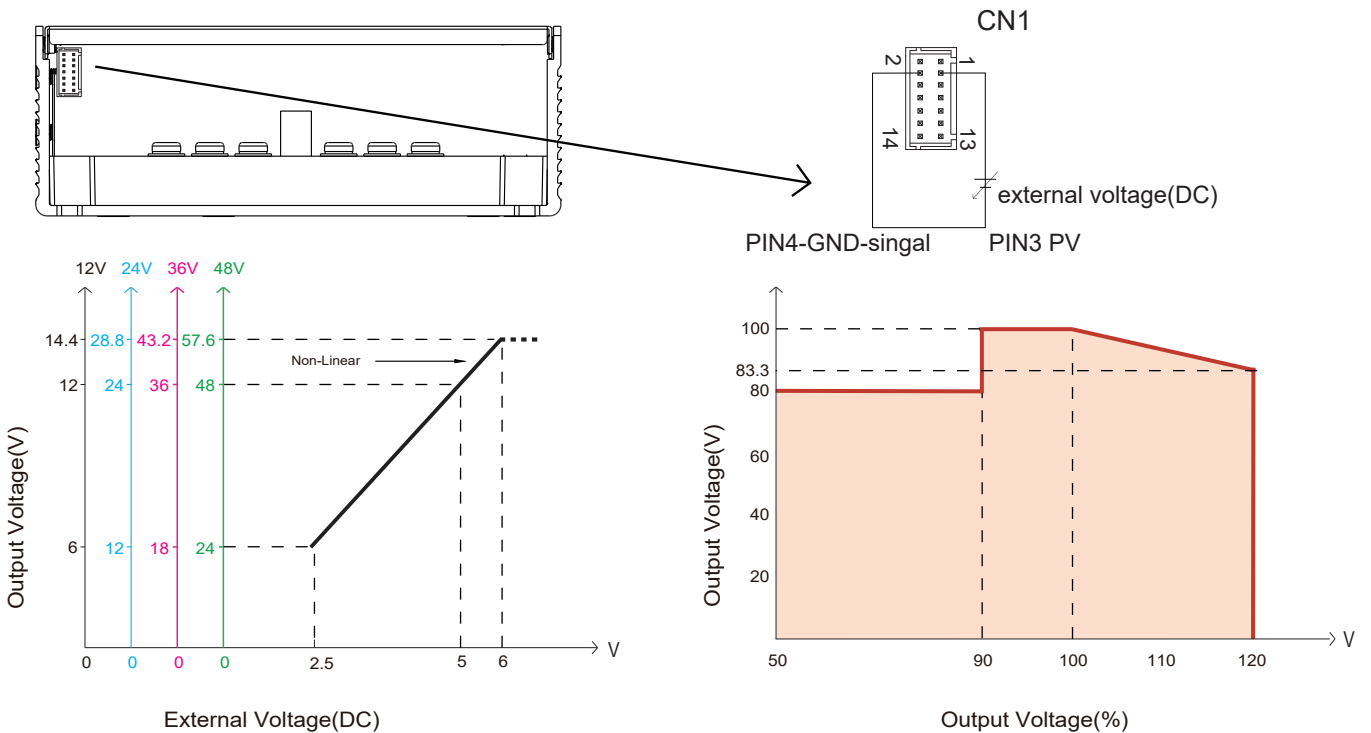
Derating Curve



Function Manual

1. Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying external voltage.



Caution: By factory default, the Output Voltage Programming is not activated, and PV(pin1) and PV-DIS(pin2) are shorted by connector. Whenever this function is not needed to activate, as assumed in other sections' diagrams, please keep PV(pin1) and PV-DIS(pin2) shorted ; otherwise the power supply will have no output.

Caution: When this function is needed to activate, please keep PV(pin1) and PV-DIS(pin2) opened.

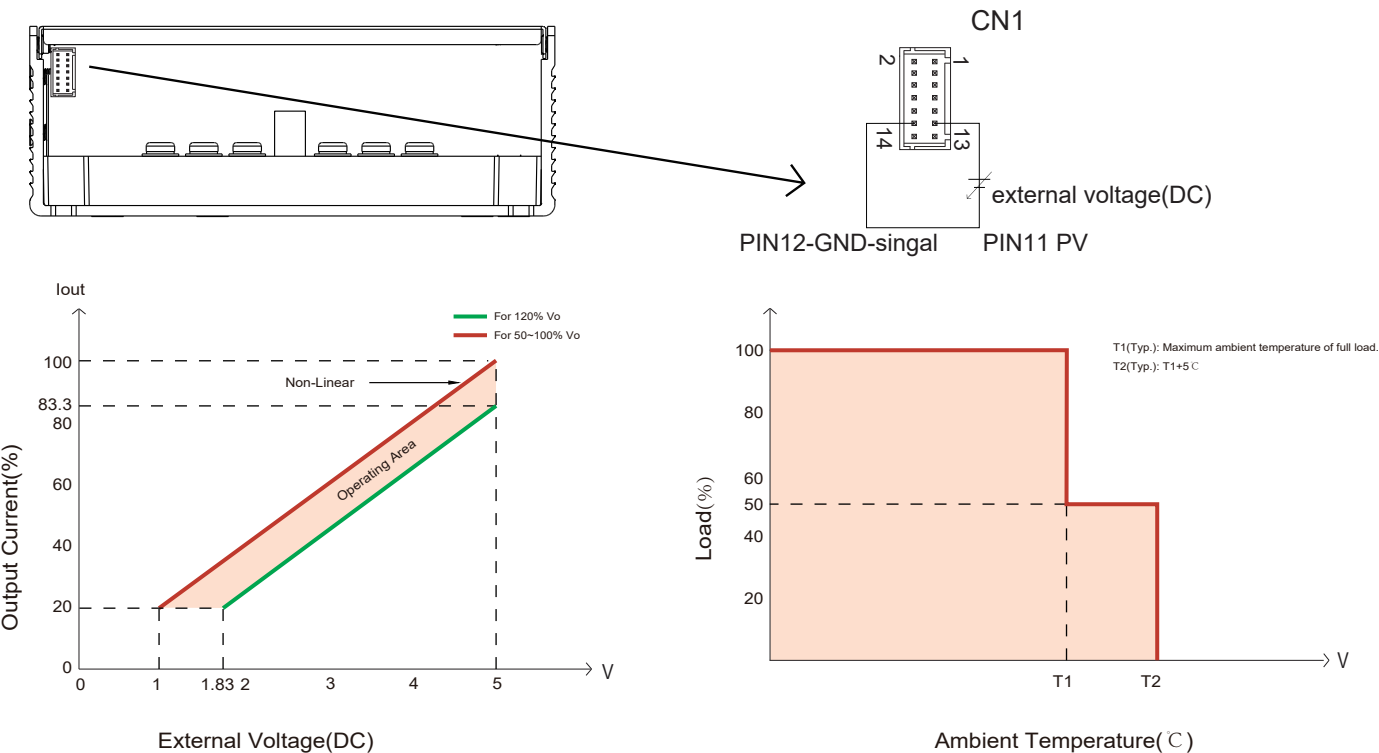
YEF1000 SERIES

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Function Manual

2.Output Current Programming (or, PC / remote current programming / dynamic current trim)

The output current can be trimmed to 20~100% of the rated current by applying external voltage.



Caution: By factory default, the Output Current Programming is not activated, and VCCS(pin13) and PC-DIS(pin14) are shorted by connector. Whenever this function is not needed to activate, as assumed in other sections' diagrams, please keep VCCS(pin13) and PC-DIS(pin14) shorted ; otherwise, the power supply will have no output.

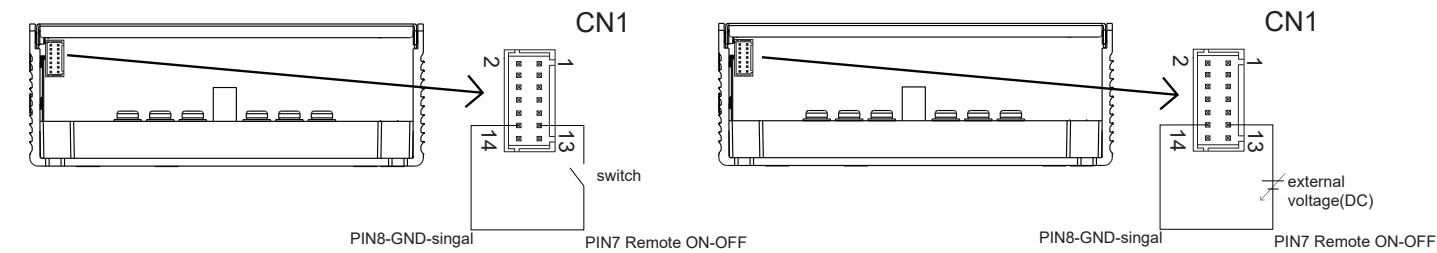
Caution: When this function is needed to activate, please keep VCCS(pin13) and PV-DIS(pin14) opened.

Covered by over temperature protection, auto de-rating function works under operation in PC mode .

Function Manual

3.Remote ON-OFF Control

The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
"Low" <0~0.5V or Short circuit	ON
"Hi" >2~5V or Open circuit	OFF

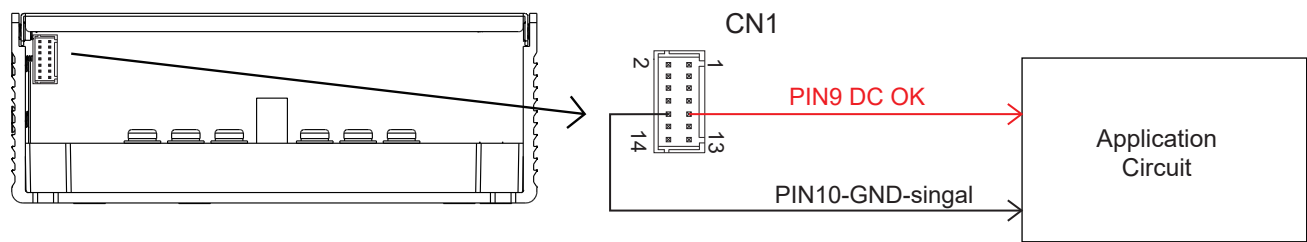
YEF1000 SERIES

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Function Manual

4.DC OK Signal

DC OK signal is a TTL level signal. The maximum sink current is 10mA and the maximum external voltage is 5.6V.



DC OK Signal	Power Supply Status
"Low" <-0.1 ~ 0.5V	OFF
"Hi" >4.5 ~ 5.5V	ON

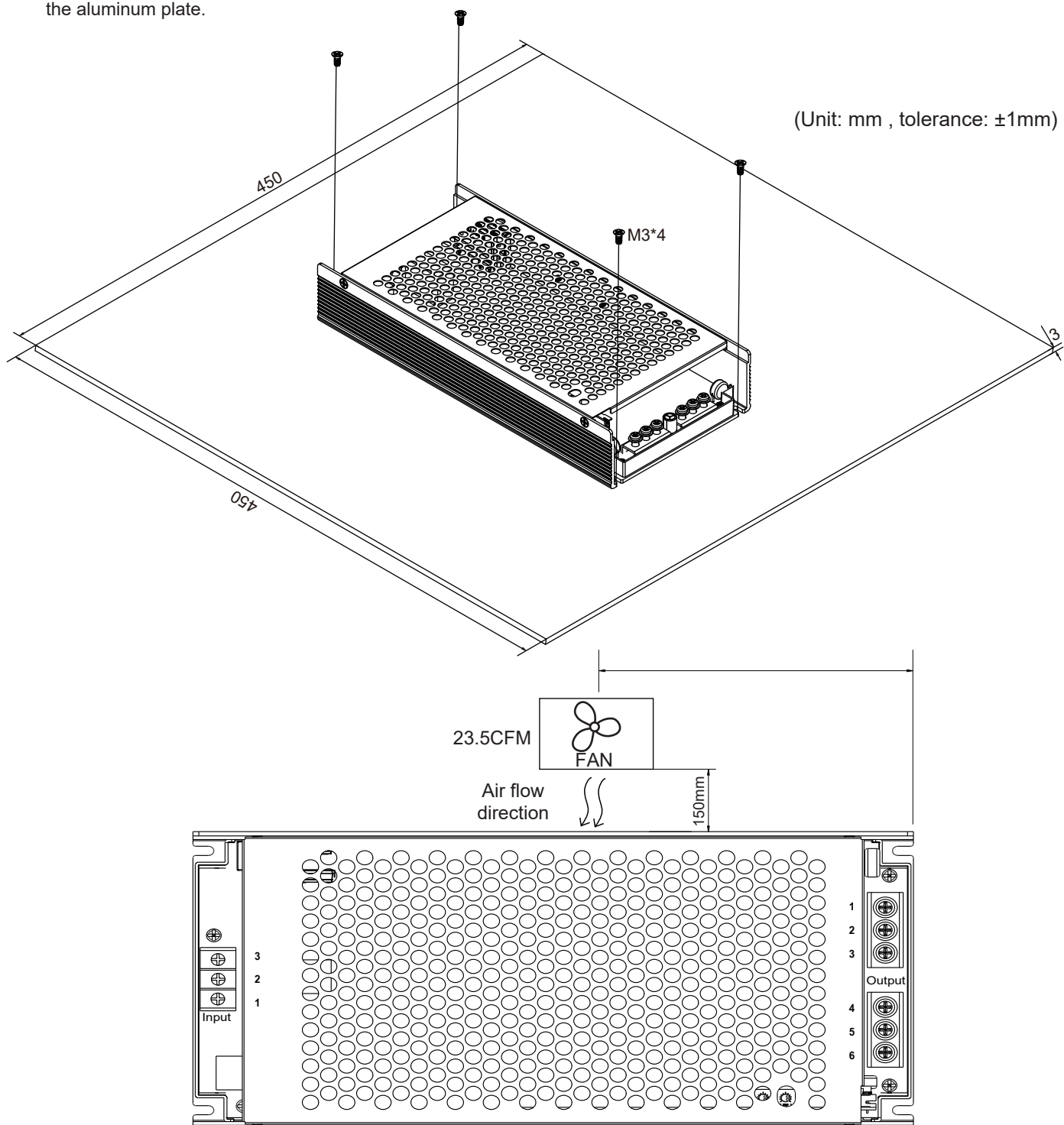
YEF1000 SERIES

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Installation

1. Operate with additional aluminum plate and fan

In order to meet the "Derating Curve" and the "static Characteristics", YEF1000 series must be installed onto an aluminum plate (or the cabinet of the same size) on the bottom or apply forced air cooled solution. The size of the suggested aluminum plate and configuration of fan are shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and YEF1000 series must be firmly mounted at the center of the aluminum plate.



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