Product Feature

1. Full range AC input voltage: 90~264VAC
2. Built in power factor correction circuit, with a power factor of up to 0.95
3. High efficiency: up to 93%
4. Built in DC fan for forced cooling, fan temperature control design
5. Support output remote voltage compensation and output ON/OFF control
6. Working temperature: -30~+70 ℃ (refer to the derating curve for details)
7. Short circuit/overload/over voltage/over temperature protection function
8. 3-year warranty

RoHS CE 3 years Warranty 970g/Typ.

Describe

EN-500-XX-F series is a 500W single channel constant voltage output industrial control power supply, with a voltage input range of 90~264VAC and output voltages of 12V, 15V, 24V, 27V. It also has built-in output ON/OFF control and output remote voltage compensation functions, which can be applied to various industrial fields such as industrial control systems, mechanical and electrical equipment, electronic instruments and meters, industrial automation, household appliances, etc. Ultra high efficiency and good heat dissipation ensure that this series of products can work stably for a long time.

Design meet EN61000-4-2,3,4,5,6,8,11\GB17625.1\EN61000-3-2,-3\EN55032\ GB4943\UL62368-1\IEC62368-1.

Application areas

- Industrial automation machinery
- Mechanical and electrical equipment
- Industrial control system
- Electronic instruments

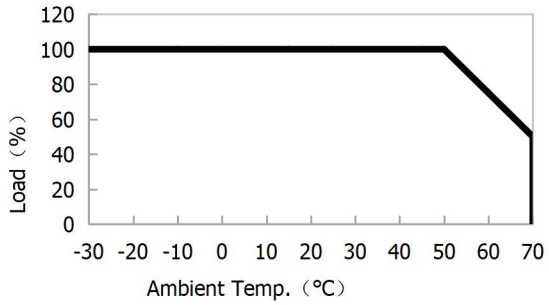
Electrical Specifications

Model		EN-500-12-F	EN-500-15-F	EN-500-24-F	EN-500-27-F	EN-500-36-F	EN-500-48-F	EN-500-55-F
Input	Voltage range	90～264VAC						
	Rated voltage range	100-240VAC						
	AC input	230VAC/2.7A						
		115VAC/5.7A						
	Efficiency	≥90%	≥90%	≥92%	≥92%	≥92%	≥93%	≥93%
	Frequency range	47～63HZ						
	Leakage current	Input to ground ≤ 3.5mA, input to output ≤ 0.25mA (input 240VAC)						
	Inrush current	Cold start 50A/230VAC						
Output	DC voltage	12V	15V	24V	27V	36V	48V	55V
	Rated current	0～41.7A	0～33.4A	0～21A	0～18.6A	0-13.8A	0-10.5A	0-9.1A
	Power	500.4W	501W	504W	502.2W	486.8W	504W	500.5W
	Voltage adjust range	10.8～13.2V	13.5～16.5V	21.6～26.4V	24.3～29.7V	32.4-39.6V	45.6-50.4V	52.2-57.8V
	Ripple and noise	200mVp-p	250mVp-p	200mVp-p	200mVp-p	320mVp-p	320mVp-p	320mVp-p
	Set up,rise	1000ms，100ms/230VAC load 100%						

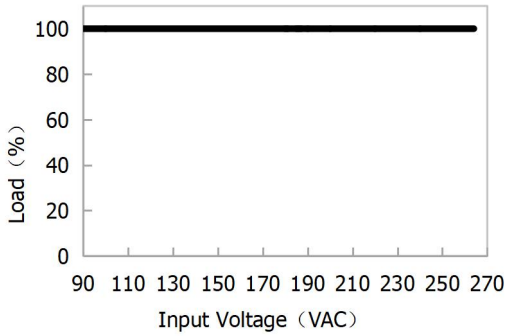
	time							
	Hold up time	8ms/230VAC load 100%						
	Line regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load regulation	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	Output Voltage accuracy	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
EMC	Electromagnetic tolerance	Reference:EN61000-4-2,3,4,5,6,8,11						
	Harmonic current	Reference:GB17625.1;EN61000-3-2,Class A						
	EMC	Reference:EN55032（CISPR32），Class B						
Safety	Safety	Reference:GB4943/UL62368-1						
	Withstand voltage	I/P-O/P:3KVac/10mA; I/P-CASE:1.8KVac/10mA; O/P-CASE:0.5KVAC/10mA Each test lasts for 1 minute						
	Insulation	I/P-O/P: 100M ohms; I/P-Case:100M ohms; O/P-Case:100M ohms						
Protection	Over voltage	13.8～16.2V	18.75-21.75V	28.8～33.6V	32.9～38.3V	39.6～54V	52.8～72V	60.5～82.5V
		Turn off the output voltage and restore normal operation after the fault is eliminated						
	Over load	110-150% rated current, hiccup mode, can automatically resume normal operation after eliminating overload						
	Over temperature	When the power supply is over temperature protected, the power supply shuts off the output; After the temperature drops, the output automatically returns to normal						
	Short circuit	Power protection after short circuit at the output end, automatically restoring output after eliminating the short circuit						
Function	ON/OFF control	C+/C-； 0-1V power on, 4-10V power off (optional)						
	Remote voltage compensation	S+/S-； S+and S - are connected to the positive and negative terminals of the load respectively, and the maximum line voltage drop can be compensated to 0.2V (optional)						
	Fan control	RTH2 ≥ 50 °C± 10 °C, fan on; RTH2 ≤ 40 °C± 10 °C Fan shutdown						
Environment	Working	-30~70°C 20%~95%RH No condensation (reduced to 75% at 60 °C and 50% at 70 °C)						
	Storage	-40°C~80°C; 10%~95%RH No condensation						
	Vibration	10~500Hz,2G， 10min/1 cycle,60min.each along X,Y, Z axes						
	Impact	20G ，last 11mS， 3 impacts along X, y and Z axes						
	Altitude	5000mtrs（Above 2000m, for every 100m increase, the ambient temperature decreases by 0.5 °C）						
Reliability	MTBF	Under 25°C:100000Hrs, MIL-217 Method						
Other requirements	Dimension	230*127*40.5 mm（L*W*H）						
	Package	0.97Kg/PCS, 12PCS/CTN						
	Cooling method	□ Free air convection ☑ Fan						
	More options	☑ PCB double side conformal coating ☑ Terminal with cover						

		☑ low temp start （ -40°C) □ Other
Notes	*In order to extend the service life, it is recommended to leave 30% more allowance when loading. For example, if the equipment needs 100W power, please choose the power supply over 130W.	
	*Ripple&noise are measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.	
	*All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25°C of ambient temperature。	
	*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.All our EMC tests are carried out by mounting samples on metal plates.	

Derating Curve

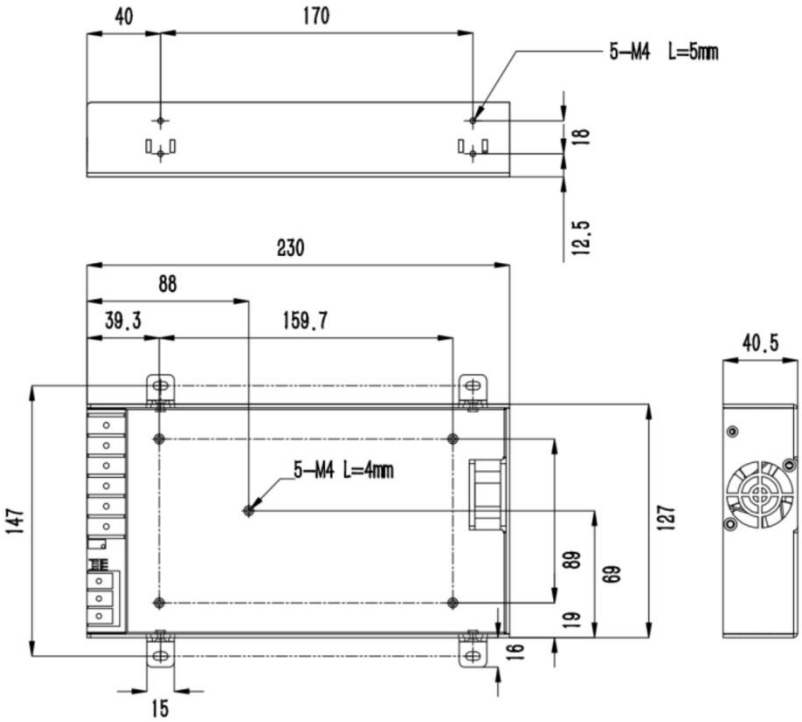


Output Derating VS Input Voltage



Mechanical Specification

Unit:mm



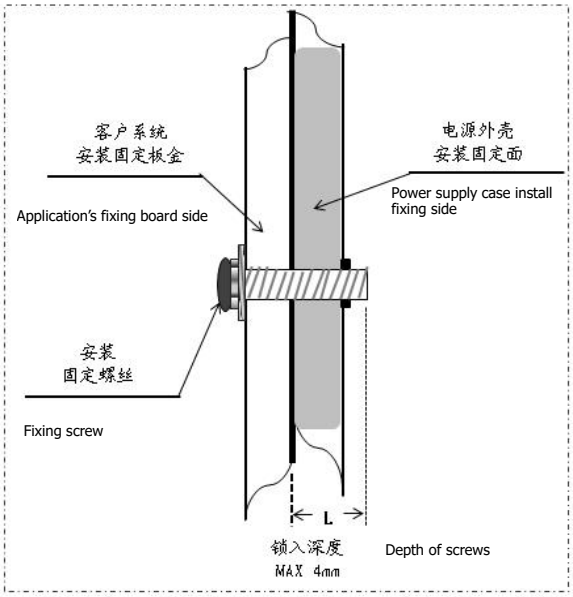
Input and Output Terminals Description

Pin number	Pin function	Pin number	Pin function
⏚	EARTH	++	DC Vo+
N	AC NETURAL	--	DC Vo-
L	AC LINE	S+	Inductive signal+
		S-	Inductive signal-
		C+	Control signal+
		C-	Control signal-

Installation

Warning

- ✓ Use mounting screws by M4mm,
- ✓ Max depth of screws into housing is 4mm
- ✓ Right picture with more details.



Instructions

1、please follow the installation instructions when use the power supply.

2、Before power on test run after installation, please check and proofread the wiring on each terminal, make sure that the input and output, AC and DC, positive and negative, voltage and current values are correct, prevent the occurrence of wrong connection, and avoid damaging the power supply and user equipment。

3、Before power on, please use a multi meter to measure whether the live wire, zero wire and ground wire are short circuited, and whether the output terminal is short circuited; it is better to start without load when power on.

4、Do not exceed the nominal value of the power supply when using, so as not to affect the reliability of the product. If you need to change the output parameters of the power supply, please consult our technical department before using.

5、In order to ensure the safety of use and reduce interference, please ensure that the grounding terminal is reliably grounded（ground wire please thicker than AWG18#）。

6、If the power supply fails, please do not repair it without permission.

Transport、storage：

1、Transport:

The package is suitable for shipping by automobiles, ships, airs, trains, etc. During transportation, it shall be rain proof,loaded and unloaded gently.

2、Storage：

When the product is not in use, it shall be placed in the packing box. The storage environment temperature and relative humidity shall meet the requirements of the product. No corrosive gas or product in the warehouse, and no strong mechanical vibration, impact and strong magnetic field. The packing box shall be padded at least 20cm above the ground, and not be soaked. If the storage time is too long (more than 1 year), it shall be rechecked by professionals before use.