



**4500W**  
**Powerful**  
**16.15 W/In.<sup>3</sup>**  
**Small**  
**3kg**  
**Light**

As a new generation of industrial-grade programmable power supply, AZ4500-LV series has digital design, which makes it have ultra-high programmable accuracy, Comprehensive parameter monitoring, multi-functional analog and digital interfaces, making your power system design more accurate and efficient.

The AZ4500-LV series is designed to comply with IEC/EN62368-1, IEC60601-1, EN55032 and relevant international standards

It empowers high-end industries and medical equipment continuously.

**FEATURES:**

- Programmable output Voltage (0% ~107.5%)
- Programmable output Current (0% ~107.5%)
- Analog and digital interface control
- I<sup>2</sup>C, Modbus, CAN bus communication protocol Selectable
- Constant current function
- Built-in OR-ing FETs
- Selectable 5V,2A or 12V,0.83A auxiliary output
- Intelligent GUI to set and monitoring parameter

MODEL	AZ4500-30	AZ4500-36	AZ4500-48	AZ4500-60
DC Voltage Rated	30V	36V	48V	60V
Rated Current	150A	125A	93.75A	75A
Rated Power	4500W			
Ripple & Noise(Max.)	150mVp-p	150mVp-p	150mVp-p	240mVp-p
Efficiency(Typ.)	92.5%	93.0%	94.0%	94.0%
<small>Note</small> 1.All parameters NOT specially mentioned are measured at 230VAC input, full load,25°C of ambient temperature. 2.De-rating may apply in low input voltage. Please check the de-rating curve for more details.				

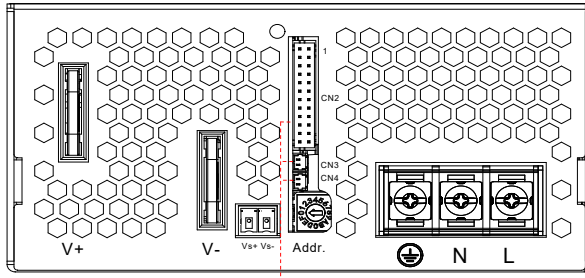


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MODEL		AZ4500-30	AZ4500-36	AZ4500-48	AZ4500-60
<b>Output Specifications</b>					
DC Voltage Rated	V	30V	36V	48V	60V
DC Current Rated	A	150A	125A	93.75A	75A
<b>Programming And Readback (I<sup>2</sup>C,RS485,CAN)</b>					
Vout programming accuracy	--	0.3% of Vset +0.2% of rated output Voltage			
Iout programming accuracy	--	0.3% of Iset +0.2% of rated output current			
Vout programming resolution (Note.1)	--	3mV			
Iout programming resolution	--	3mA			
Vout readback accuracy	--	0.3% of actual +0.2% of rated output Voltage			
Iout readback accuracy (Note.1)	--	0.3% of actual +0.2% of rated output current			
Vout readback resolution	--	1mV			
Iout readback resolution	--	1mA			
<b>Analog Programming And Monitoring (0~5V/0~5KΩ)</b>					
Vout voltage programming	--	0~107.5%, 0~5V,Accuracy and linearity: ±0.5% of rated Vout.			
Iout voltage programming (Note.1)	--	0~107.5%, 0~5V ,Accuracy and linearity: ±1% of rated Iout.			
Vout resistor programming	--	0~107.5%, 0~5Kohm . Accuracy and nonlinearity: ±1% of rated Vout.			
Iout resistor programming	--	0~107.5%, 0~5Kohm .Accuracy and nonlinearity: ±1% of rated Iout.			
Output current monitor	--	0~3.3V user selectable. Accuracy: ±1%.			
Output voltage monitor	--	0~3.3V user selectable. Accuracy: ±1%.			
<b>Constant Voltage Mode</b>					
DC Voltage Rated	V	30V	36V	48V	60V
Programming Voltage Range	V	0~32.25	0~38.7	0~51.6	0~64.5
Ripple & Noise(P-P),Full load	mVp-p	150mVp-p	150mVp-p	150mVp-p	240mVp-p
Line Regulation (Note.2) ,Full load	--	±0.2%			
Load Regulation (Note.3)	--	±0.2%			
Remote sense compensation/wire	V	Max 2.5% of rate Vout			
Hold-up time,Full load, 100%~90%	--	16ms			
<b>Constant Current Mode</b>					
DC Current Rated	A	150A	125A	93.75A	75A
Programming Current Range	A	0~161.25	0~134.37	0~100.78	0~80.62
Line regulation (Note.2)	--	±0.2%			
Load regulation	--	±0.2%			
<b>Protective &amp;Alarm Functions</b>					
Input Over-voltage protection	--	AC input over 275VAC shutdown, auto recovery below 260VAC; Reset by AC input or by EN Singal or by communication port.			
Input under-voltage protection	--	AC input under 85VAC shutdown, auto recovery above 90VAC			
AC fail Alarm	--	AC input voltage below 50V for 50ms			
Output Over-voltage protection	--	Shut down, Reset by AC input or by EN Singal or by communication port.			
Over temperature Alarm(OTA)	°C	Ambient temperature over 53°C; auto-recovery under 48°C			
Over temperature protection(OTP)	°C	Heat-sink temperature over 95°C,shut down and auto-recovery under 75°C			
Over current protection(OCP)	--	Constant Current Limit			
Short circuit protection(SCP)	--	shut down and auto-recovery after the short-circuit removed			
Note: 1.Ripple & noise are measured at 20MHz of bandwidth by using 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor 2.At 85~132Vac or 170~265VAC, constant load. 3.From No-Load to Full-Load, constant input voltage. Measured at the sensing point in Remote Sense.					
<b>Function</b>					
Local Remote control	--	By electrical Voltage: 5V/12V or dry contact			
DC-OK signal	--	Open Dragin singal, sink current ≤20mA, max drain voltage 40V			
Parallel operation	--	Possible, up to 16 units with single wire current balance connection.			
Series operation	--	Possible			
Auxiliary Power	--	Selectable +5V/2A or +12V/0.83A auxiliary output			
IOA	--	High speed I/O port (digital signal input/output)			
IOB	--	Low speed I/O port (analog singal input/output)			
Temperature measurement accuracy	°C	1			
Temperature display resolution	°C	0.1			
Note: 1.The Constant Current programming, readback and monitoring accuracy do not include the warm-up and Load regulation thermal drift.					
<b>Input Specifications</b>					
AC Input (Note.1)	Vac	90~264,Normal input 115VRMS/230VRMS			
DC Input	Vdc	127~370			
Input freq	HZ	47~63HZ,50/60HZ Typ 360~800,Contact factory for 400Hz application			
Input Current	--	230V/28A			
Input Fuse	A	Each line fused 40A Slow acting			
Inrush Current	A	50A,230VAC; 25°C cold start			
Note 1.Please check the de-rating curve for more details.					



**PIN Definition**

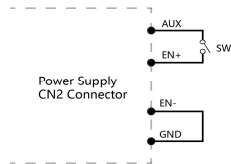


Pin	Function
L	AC Input L
N	AC Input N
±	AC Input FG
V+	DC Output (+)
V-	DC Output (-)
Addr	Address code

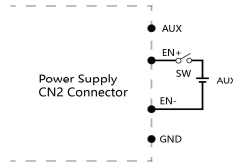


CN	Pin	Function	Description	Pin	Function	Description
CN2	2	POK	Power OK	1	VSET	Aux output setting 5V/12V
	4	GND	Ground	3	AUX	Auxiliary output positive
	6	GND	Ground	5	AUX	Auxiliary output positive
	8	EN+	Inhibit ON/OFF (+)	7	AUX	Auxiliary output positive
	10	GND	Ground	9	EN-	Inhibit ON/OFF (-)
	12	GND	Ground	11	ACI	I Program
	14	GND	Ground	13	VCI	V Program
	16	SCL	Serial Clock Line	15	SDA	Serial Data Line
	18	IOB	Low speed I/O port	17	IOA	High speed I/O port
	20	CAN-L	Controller Area Network-L	19	CAN-H	Controller Area Network-H
	22	GNDI	Isolation 5V Ground	21	+5VC	Isolation 5V positive
	24	485 B-	RS485 B-	23	485 A+	RS485 A+
Signal Connector		JST PHDR-24VS or equivalent; JST SPHD-002T-P0.5 or equivalent				
CN3/CN4	1	PAR	Parallel operation current share			
	2	GND	Ground			
Signal Connector		CJT A1251H-2P or equivalent; CJT A1251-TP or equivalent				
VS +	Remote sense(+)					
VS -	Remote sense(-)					
Signal Connector		Phoenix Contact MC 1.5/ 2-ST-3.81 Order No.: 1803578 or equivalent				

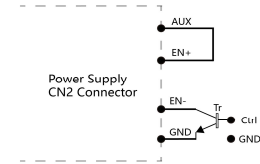
**Remote ON/OFF**



(a) Using internal 5V auxiliary source (Default Setting)



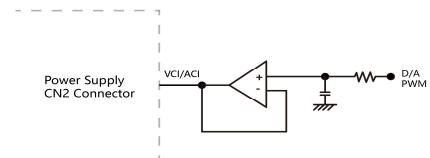
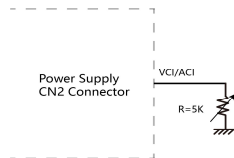
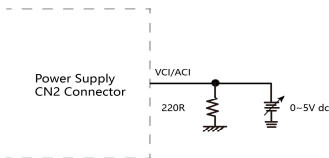
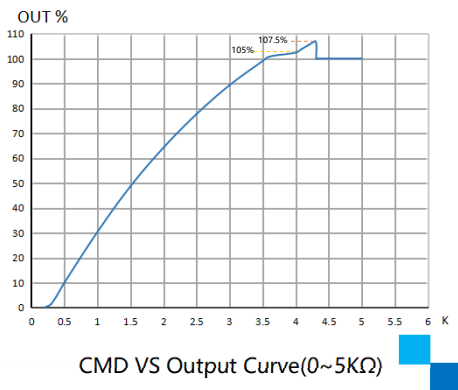
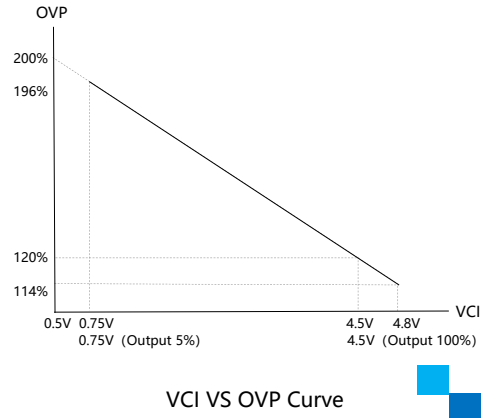
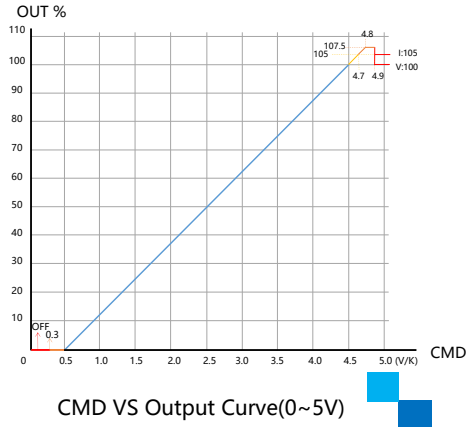
(b) Using external voltage source



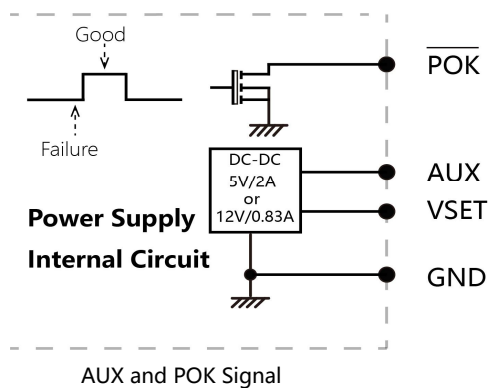
(c) ON / OFF Control by NPN transistor

Note:  
GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(V-).

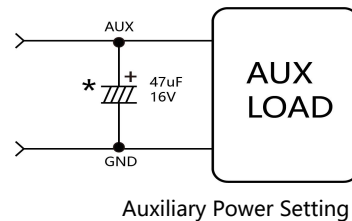
Output Voltage/Current Programming



Power OK Signal & Auxiliary Power Setting



Do not exceed 5V/2A or 12V/0.83A



The grounding of "AUX" power and P.OK signals should be connected to "GND" port. If "V-" is connected as Grounding, make sure to short the GND and V- ports.

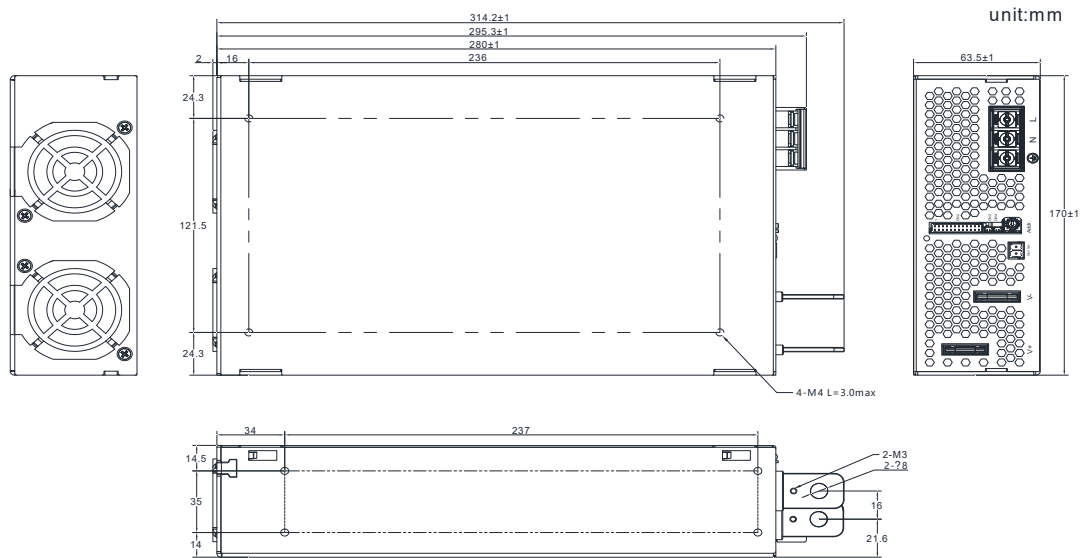
\*Place an additional capacitor to have a better performance of auxiliary power operation.

Note: GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(V-).

**LED status indication**

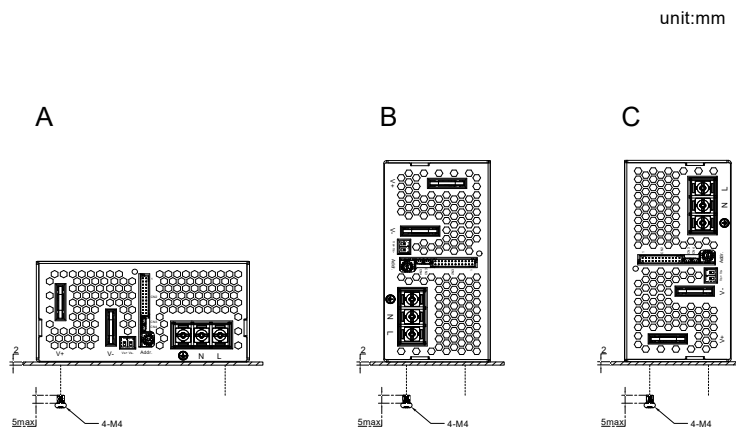
mode	Description	LED Signal	LED Slow=750ms; Fast=250ms
Local mode	Power Standby		Slow Blink (Green)
	Power OK		Solid (Green)
Remote mode	Power Standby		Slow Blink (Orange)
	Power OK		Solid (Orange)
Local/Remote mode	AC Failure		Alternating flicker (Red&Green)
	FAN Failure		
	OTA		
	AC Input Over /Under Voltage Protection		Fast Blink (Red)
	BUS Over Voltage Protection (OVP)		Intermittent Blink (Red)
	Over Load Protection ( OLP )		Interlace Blink (Red)
	Over Temperature Protection (OTP)		Slow Blink (Red)
DC Output Over Voltage Protection (OVP)		Solid (Red)	

**Mechanical Drawings**



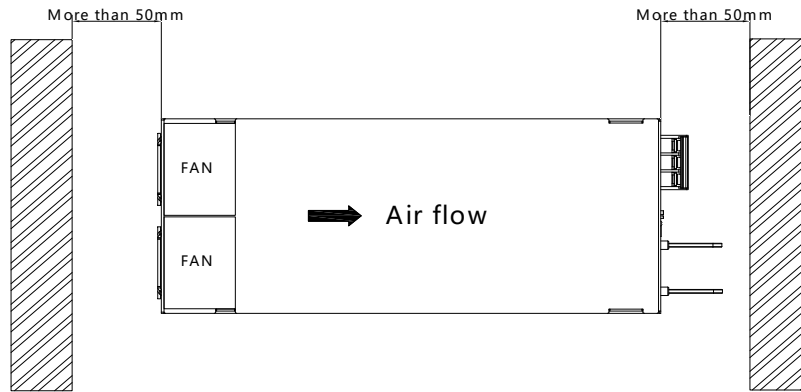
- Notes:
- 1, Input: terminal block type. M4 screw torque value of 16kgf-cm using wire gauge 18-10 (13mm centers)
  - 2, Output terminal block, M8 screw in 2 positions, torque 2.4 Nm (21.24 lb-in)

**Installation precautions**



- Notes:
- 1, Recommended standard mounting methods A, B, C
  - 2, The Maximum allowable penetration of screw is 4mm. Incomplete threading should not be penetrated

Installation precautions



Notes:  
There are ventilating holes on the front and back side panels, do not obstruct; allow 50mm at least for air flow.