XPAL-3000

High Precision Programmable AC Load

At a Glance

High Precision Programmable AC Load is a program-controlled adjustable load box, which can also be manually controlled. Test by setting different power, current and resistance under fixed voltage. Intelligent operation achieves the function of constant power or constant current or resistance. 24-bit AD conversion is adopted, the sampling period is about 8000 times/s, and the voltage and current are sampled simultaneously. It can be used for power detection of battery pack, inverter, intelligent switch and other products. New power consumption components are adopted with high power density, and forced air cooling is adopted for heat dissipation.



1. Functions and Technical Indexes

1.1 Technical indicators

Model	XPAL-3000
Product name	High Precision Programmable AC Load
Working power	
Input voltage	AC220V±10% 50Hz
Rated power	60W
Communication	
RS-232	Baud rate 9600
Load function	
Input voltage	AC80 ~ 240V; Rated AC110V/AC220V
Enter the frequency	50Hz/60Hz
Rated power	3000W
Rated current	27A@105 ~ 135V 13.6A@215 ~ 240V
Power setting accuracy	20W
Current setting accuracy	0.09A
Load Return Actual Accuracy	-3% + 1.5% or ± 20W
Resistance setting range and accuracy	4.1 ~ 600Ω@110V 7 ~ 2400Ω@220V ±5%
Power factor	PF=1.0
Heat dissipation mode	Air Cooling
Other functions	Unload/short circuit
Measurement and error	
Voltage	± (0.1% of reading + 0.2% of span)
Electric current	± (0.1% of reading + 0.1% of span)
Active power	± (0.1% of reading + 0.1% of span)
Frequency	±0.1%
Power factor	±0.02
Protection function	
Overvoltage	
Overpower	
Overtemperature	
Work environment	
Temperature	0 ~ 40°C
Humidity	≤85%RH
Atmospheric pressure	86 ~ 106kPa (4000m and below)
Size L* H*D	481.8mm x 180mm x 568mm
Weight Net weight	About 17 Kg

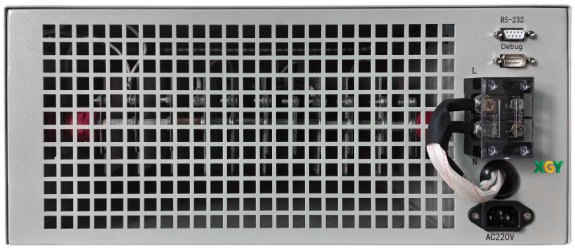
2. Instructions for Use

2.1 Front panel



2.2 Rear panel

RS-232 Debug L N AC220V



2.3 Setup and Measurement Screen

Note: Auto Compensation/No Compensation Press and hold for 3 seconds to switch.

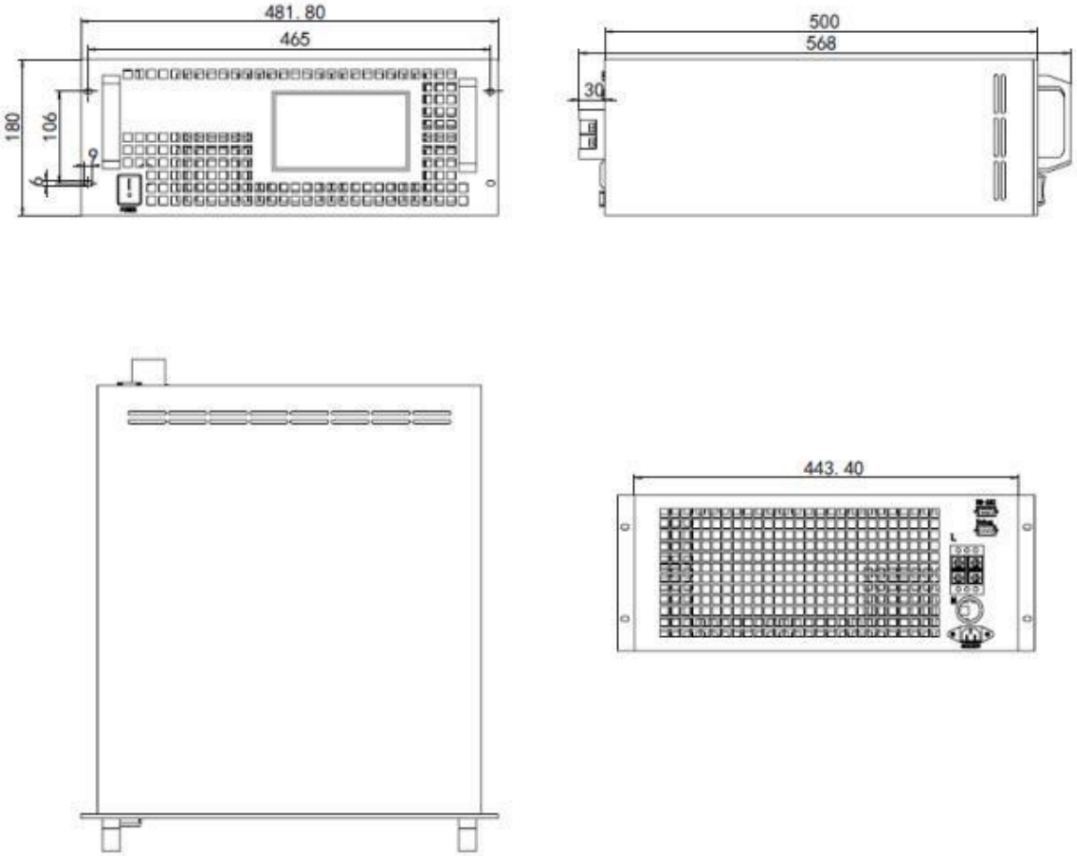
Auto compensation, adjust the load according to the actual voltage to achieve constant power/constant current function.

No compensation, test at preset voltage and load.

Virtual numeric keypad entry, allowing 2 decimal places



2.4 Dimensional drawing (unit: mm)



3. Communications

3.1 Communication interface RS-232

Use an RS-232 cable with a DB-9 interface (male to female direct connection) to connect to the serial port of the controller (such as a PC).



3.1.1 RS-232 interface description

Pin No.	Description
1	No connection
2	TXD, transmit data
3	RXD, receive data
4	No connection
5	GND
6	No connection
7	No connection
8	No connection
9	No connection

3.2 Communication parameters

Agreement	Baud rate	Digit	Stop Bit	Check
Modbus_RTU	9600	8	1	N

4. Product maintenance

1. Clean the chassis and panel regularly to prevent dust accumulation at the input and output ports.
2. Do not place heavy sundries and liquid containers on the chassis.
3. Avoid working in places with volatile flammable liquids and conductive fiber dust.

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