

**Nooyi**<sup>®</sup> 诺易

Provide Power Solutions



## ZBW 无触点交流稳压器

ZBW Non-contact AC Voltage Regulator



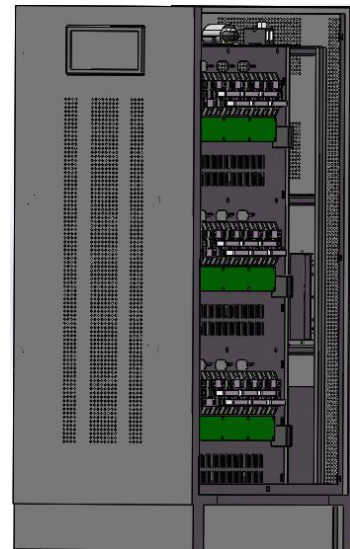
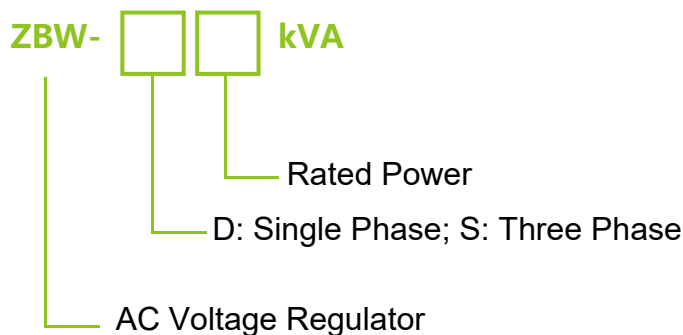
## Introduction

ZBW non-contact AC voltage regulator is a regulated power supply with ARM's new generation 32-bit processor as the core, SCR thyristor as the executive element, and compensation transformer as the voltage compensation method.

ZBW non-contact AC voltage stabilizer is mainly to solve the voltage problems such as large grid voltage fluctuation, unbalanced three-phase voltage, and voltage drop caused by frequent load startup.

Optional: isolation transformer, LC filter, ATS dual power input, SPD lightning protection module, multi-channel power distribution output.

## Type Designation



## Features

- Bidirectional voltage compensation to solve the problem of too high and too low voltage
- Non contact, no carbon brush, no machinery, no motor, maintenance free
- Fast dynamic response and stabilization
- High power factor
- High efficiency
- LCD parameter display, easy to understand
- RS485 communication interface, standard MODBUS-RTU protocol, optional TCP/IP interface, remote monitor through mobile APP

## Application

- Machining center: laser cutting machine, various machine tools
- Medical equipment: CT, MRI, accelerator
- Radio and television communications: radio and television transmitting stations, communication base stations
- Manor Brewing Equipment
- Remote rural power supply
- Protection of imported equipment and high-precision equipment

## Input Parameter

Parameter	Index	Note
Rated voltage	3Φ 380V/400V 1Φ 220V/230V (can customize any voltage)	3Φ3W (L1, L2, L3) + ground (PE) 1Φ2W (L, N) + ground (PE)
Input frequency	±20% (can customize other range)	
Input frequency	40-70Hz	
Isolated transformer	△/Y	Optional, not standard
Dual power input function	ATS dual power input function, with oil engine start interface	Optional, not standard
Efficiency	>98%	

## Output Parameter

Parameter	Index	Note
Output rated voltage	3Φ 380V/400V (±7% can be set) 1Φ 220V/230V (±7% can be set)	3Φ3W (L1, L2, L3, N)+ ground (PE) 1Φ2W (L, N) + ground wire (PE)
Output voltage accuracy	±1-5% (standard series 2-5%)	
Output additional voltage harmonic THDv	No additional waveform distortion (static)	
Three phase balance	Three phase voltage automatic balance	
Load	Any load	
Overload capacity	120%10 minute 150%1 minute	
Bypass function	With uninterrupted automatic bypass	Optional double bypass function, additional manual bypass

## Control Parameter

Parameter	Index	Note
Main control	The main measurement and control chip adopts ARM 32-bit processor, and the voltage compensation actuator adopts thyristor	
Control sampling rate	> 8K/S	
Response speed	Fastest 100ms (can be set)	
Control voltage and current acquisition method	Digital Compute True RMS	Including input voltage fluctuation and load power 0-100% or 100%-0 change
Control mode	Voltage closed loop control	
Communication interface	RS485, MODBUS-RTU 协议	Optional TCP/IP, GPRS

## Display Parameters

Parameter	Index	Note
Display screen	192*64 (LCD)	
Rated parameters	Output phase voltage, output current, frequency, power, average value of line voltage, percentage of load rate	
Alarm	Fuse break, output overvoltage, output undervoltage, output overload, phase sequence error, phase loss, surge protection module failure	
Display accuracy of rated parameters	1.0 grade	
voltage parameter resolution	0.1V	Can customize higher resolution
Current parameter resolution	0.1A	Can customize higher resolution

## Protection Parameters

Parameter	Index	Note
Protection type	Input phase sequence error, phase loss, output overvoltage, output undervoltage, fuse break, lightning surge failure, output overload and short circuit	
Protection mode Four settings are optional	1.Cut off the output in case of fault and recover after normal operation; 2.Cut off the output; 3. Uninterrupted bypass; 4.No action.	

## Physical Parameters

Parameter	Index	Note
Cooling method	Free cooling or forced air cooling	
Protection grade	Indoor IP20; outdoor IP33 or higher	

## Products

- DC power supply 交流稳压电源
- Grid connected inverter 并网逆变器
- DC voltage regulator 直流稳压电源
- Static var generator 无功补偿
- UPS 不间断电源
- Dynamic voltage restorer 电源跌落补偿

## Three phase specification

Model	Rated current (A)	Voltage parameter	Size W*D*H (mm)	Note	
ZBW-S10kVA	15	Input range: $\pm 20\%$  Rated voltage: 3 $\Phi$ 4W+ground (L1+L2+L3+N+PE) 380V/400V;	350*600*750mm (with wheel)		
ZBW-S20kVA	30				
ZBW-S30kVA	46				
ZBW-S50kVA	76		390*650*870mm (with wheel)		
ZBW-S80kVA	121		460*700*1200mm		
ZBW-S100kVA	152		760*660*1600mm		
ZBW-S150kVA	228				
ZBW-S180kVA	273				
ZBW-S225kVA	342		1150*850*2200mm		
ZBW-S250kVA	380				
ZBW-S320kVA	486				
ZBW-S400kVA	608		1500*1000*2200mm		
ZBW-S500kVA	760				
ZBW-S600kVA	912				
ZBW-S800kVA	1216		1800*1000*2200mm		
ZBW-S1000kVA	1520				
ZBW-S1200kVA	1824				
ZBW-S1400kVA	2127	2400*1000*2200mm			
ZBW-S1600kVA	2431				

## Single phase specification

Model	Rated current (A)	Voltage parameter	Size W*D*H	Note
ZBW-D3kVA	13.5	Input range: $\pm 20\%$ Input voltage: 2 $\Phi$ 3W (L1+N+PE) 220V/230V;	220*500*370mm	
ZBW-D5kVA	22.5		260*600*400mm	
ZBW-D10kVA	45		350*600*400mm	
ZBW-D20kVA	90		390*650*670mm	
ZBW-D30kVA	137			
ZBW-D50kVA	228			

Note: The product is constantly being upgraded. This technical information is for reference only. The company reserves the right to modify all parameters without any prior notice.

## ■ To resolve AC power quality issues:

Instantaneous power failure, voltage swell and sag, phase loss, phase sequence error automatic correction, three-phase unbalance, voltage instability, lightning protection filter, harmonic interference, input and output full isolation

## ■ Multifunctional protection:

Phase loss, over voltage, under voltage, overload, short circuit, over temperature

## ■ Multi-function module combination (optional):

Isolation transformer, ATS dual power supply, diesel engine start interface, ACDB power distribution unit, Modbus or GPRS or TCP/IP networking

To protect intellectual property, this product is protected by one or more of the following patents

ZL 2015200233069 An AC voltage-stabilizing, current-stabilizing and power-stabilizing controller

ZL 2015203471232 Grid-connected inverter genlock circuit

ZL 201521133467X An inverter non-isolated AC voltage regulator

ZL 201521133040X A dynamic power compensator

ZL 2016201557784 An AC voltage stabilizer with surge peak absorption and anti-failure burnout functions

ZL 2016213710658 A marine constant frequency and constant voltage with electric energy storage power supply system

ZL 2017300176889 circuit board (1)

ZL 2017300176893 circuit board (2)

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