



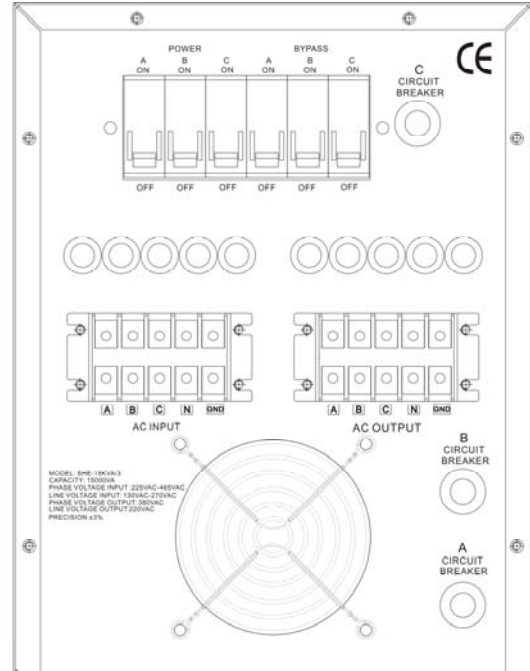
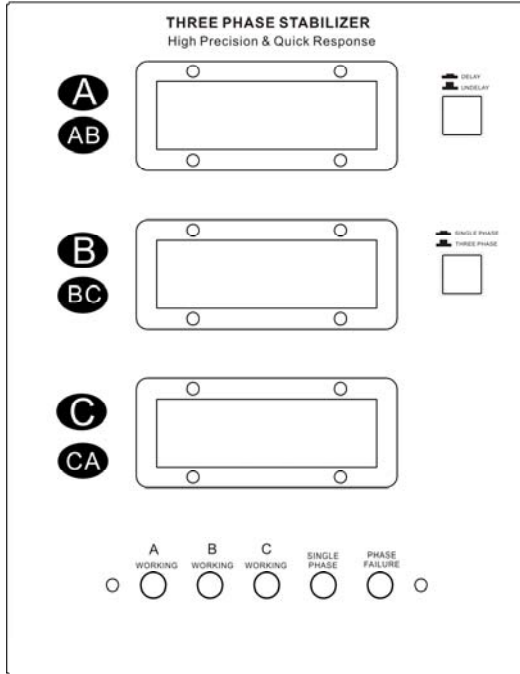
USERS MANUAL

| | |
|-------------|---|
| PRODUCT: | THREE PHASE QUICK-RESPONSE & HIGH PRECISION AVR |
| MODEL: | MEGA 33 AVR Series 9KVA/15KVA/25KVA 30KVA/45KVA/60KVA |
| ISSUE DATE: | 2015-12-02 |
| VERSION: | 1.0 |

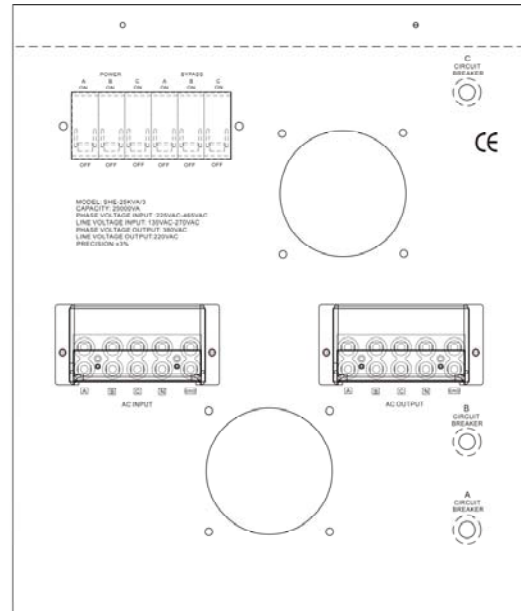
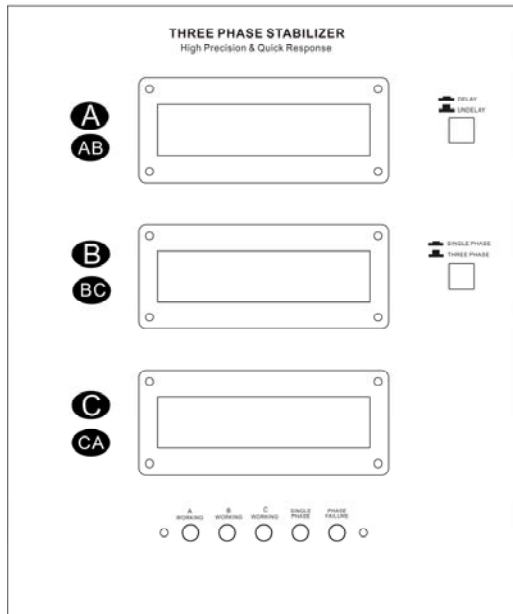
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Brief Introduction

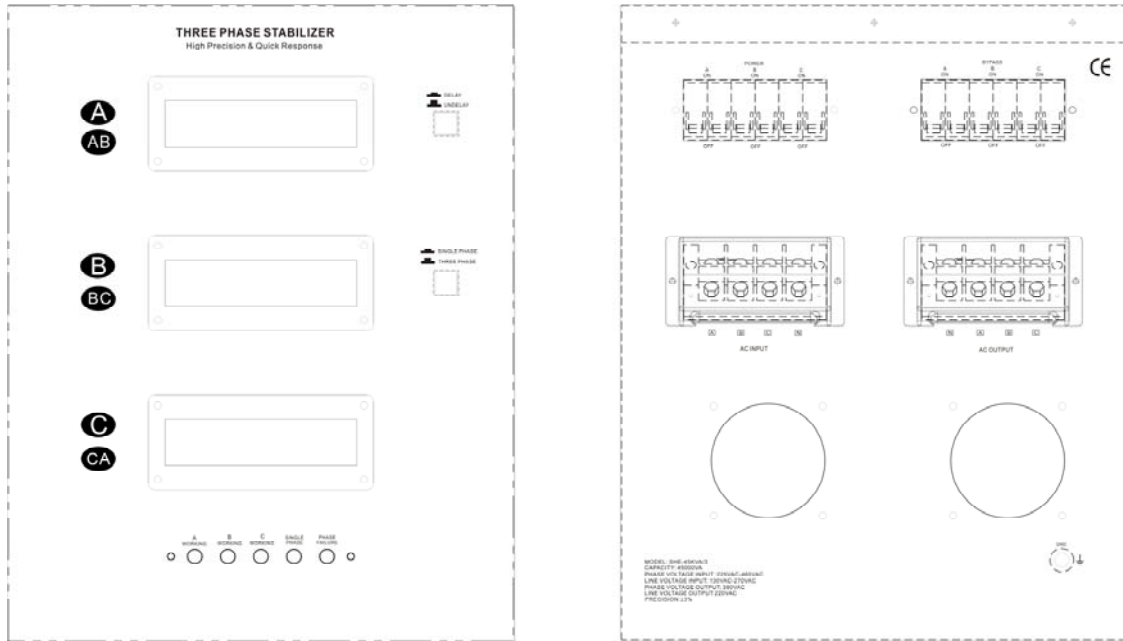
1. Appearance



9000VA/15000VA



25000VA/30000VA



45000VA/60000VA

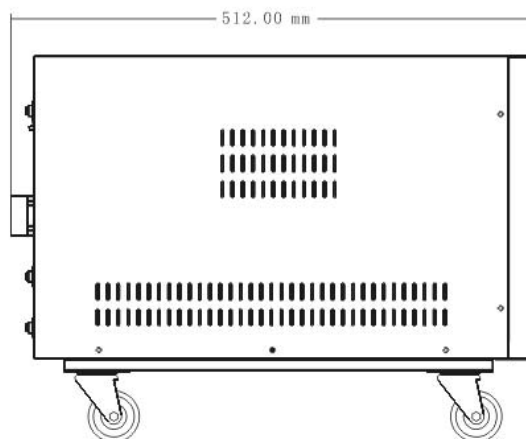
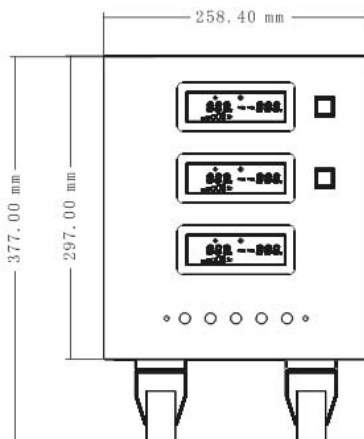
1.1 Structure & Feature

- MCU : 10 bits ADC high speed MCU
- Cabinet : Q235 cold rolled steel
- Transformer : C.R.G.O. toroidal transformer

1.1.1 Body Measure

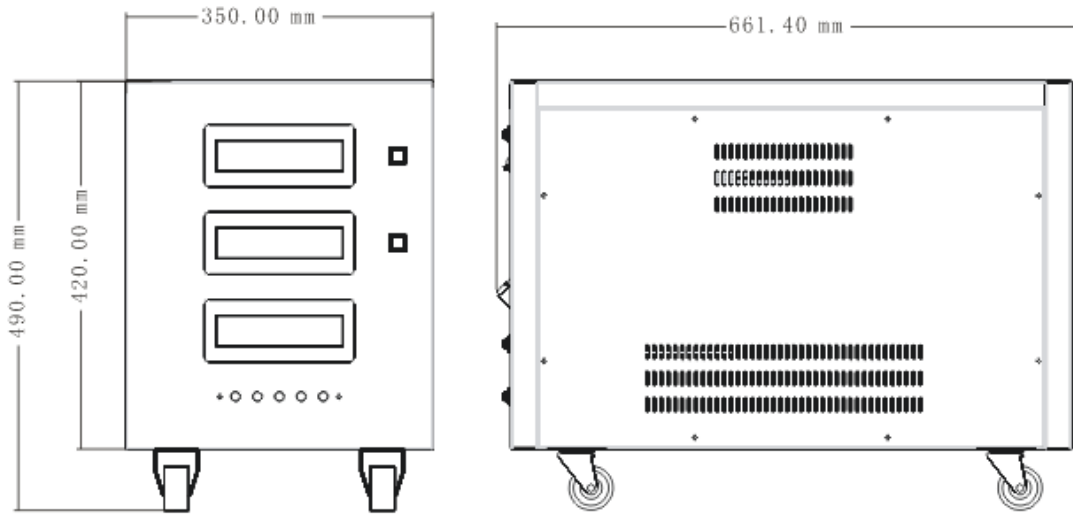
9KVA/3

15KVA/3



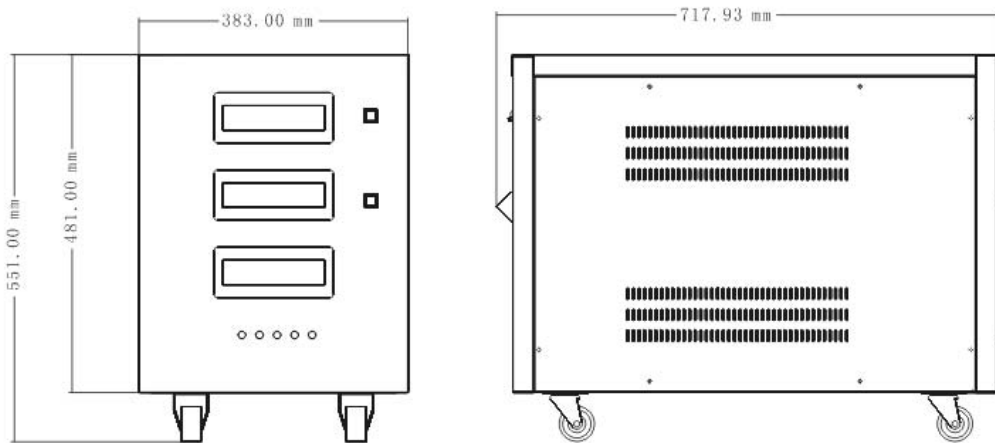
25KVA/3

30KVA/3



45KVA/3

60KVA/3

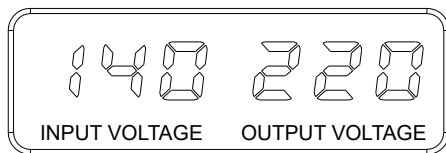


1.1.2 Specification

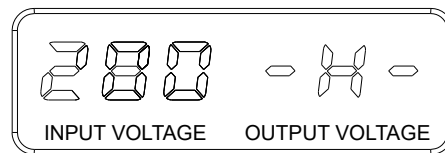
- Model : MGA-HV9K33/15K33/25K33/30K33/45K33/60K33
- Voltage adjust type : Hybrid relay & servo motor
- Phase : three phase
- Transformer : C.R.G.O. toroidal transformer
- Display : LED graphic display show input & output status
- Frequency : 50Hz
- Working voltage : 190V ~ 465V (W series) , 225V-465V (Standard series)
- Starting voltage : 190V (W series) /225V (Standard series)
- Nominal input range : 190 ~ 465V (W series) /225V-465V (Standard series)
- Nominal output precision : $\pm 3\%$
- Output precision : $\pm 3\%$ (370 ~ 391V)
- Delay function : Delay/un-delay button
- Delay time : 6s/180s selectable
- Work mode : single phase & three phase working mode optional

1.1.3 Display

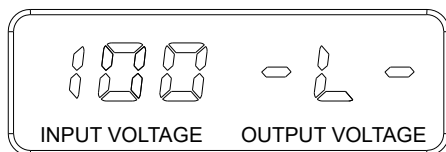
From the display screen, we can know the device working status. Belows are the 5 Status Of single phase working mode: working normal, low voltage protection, high Voltage output protection, over heating protection, delaying.



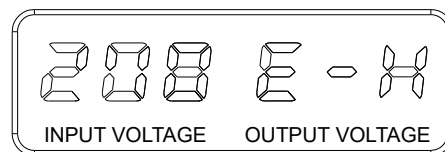
Normal working



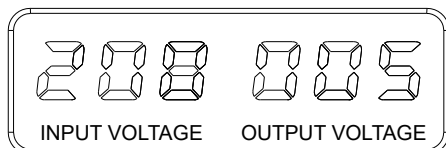
High voltage protection



Low voltage protection



Over heating protection



Delaying

1.1.4 LED lighting

Green LED: working indication. Indicates A B C three phase working normal. If it is not lighting, means the any phase is abnormal.

Yellow LED: single phase working mode/three phase working mode indication. When it works in single phase mode (only single phase L and N wire), Yellow LED is lighting; When works in three phase mode (three phase 4 wires), Yellow LED is not lighting.

Red LED: the device fault indication.

1.1.5 Button on front panel

- Delay/Undelay : 180s/6s delay selectable button
- Single phase/three phase : single phase/three phase selectable button

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1.1.6 Circuit breaker

| MODEL | CIRCUIT BREAKER |
|-------------|-----------------|
| MGA-HV9K33 | 10A/7A/250V*3 |
| MGA-HV15K33 | 15A/10A/250V*3 |
| MGA-HV25K33 | 20A/15A/250V*3 |
| MGA-HV30K33 | 20A/250V*3 |

1.1.7 Transformer

Transformer is built-in 120 °C closed thermostat, which is used to start over-heating protection.

1.1.8 Cooling system

- 9000 ~ 30000VA : 90*90*25cm fans *3PCS
- 45000 ~ 60000VA: 90*90*25cm fans *6PCS

1.2 Date sheet

| Model | MGA-HV9K33/15K33 | MGA-HV25K33/30K33 | MGA-HV45K33/60K33 |
|-------------------|------------------|-------------------|-------------------|
| Rated Capacity | 9000VA/15000VA | 25000VA/30000VA | 45000VA/60000VA |
| Machine size (mm) | 258.4×512×377 | 350×661.4×490 | 383×717.9×551 |
| N.W. (kg) | 27.2/34 | 56.1/60.5 | 71.5/77.1 |
| CTN/CTN | 1 | 1 | 1 |
| Carton Size (mm) | 365×590×595 | 455×750×705 | 490×800×745 |
| G.W. (kg) | 32.2/39 | 62.1/66.4 | 78.5/84.1 |

2 Technical

2.1 Main Technical Feature

- DELAY : 6S/180S
- STARTING VOLTAGE : 225V±5V
- FANS STARTING : ≥30% of rated power
- FANS SHUTING : ≤20% of rated power
- OUTPUT PRECISION : ±3% (typical), ±4% (Max.)
- INPUT VOLTAGE ERROR : ±3V (typical), ±5V (Max.)
- OUTPUT VOLTAGE ERROR : ±3V (typical), ±5V (Max.)
- OUTPUT LOW VOLTAGE PROTECTION POINT : 310±5V
- OUTPUT HIGH VOLTAGE DELAY PROTECTION POINT : 425±5V
- OUTPUT HIGH VOLTAGE PROTECTION POINT : 433±5V
- TRANSFORMER HIGH TEMPERATURE PROTECTION : 130±15°C
- EXECUTIVE STANDARD: SB/T10266-1996 (HOME USEAC. AUTOMATIC VOLTAGE REGULATOR)

2.2 Temperature rising

| Primary winding 1 | Input/v | Loading | Allowable temperature rising | Primary winding 1 | Input/v | Loading | Allowable temperature rising |
|--------------------|--------------------|---------|------------------------------|--------------------|--------------------|---------|------------------------------|
| Phase voltage 150V | Phase voltage 160V | 60% | ≤90K | Phase Voltage 190V | Phase voltage 195V | 90% | ≤73K |

2.3 Dielectric intensity

- INPUT L to GND: 1560VAC 1 minute (2500VAC, 3S)
- OUTPUT L to GND: 1560VAC 1 minute (2500VAC, 3S)
- N to GND: 1560VAC 1 minute (2500VAC, 3S)

2.4 Caution

- Avoid overloading
Do not use the regulator beyond its maximum power capacity.
- When connected to any appliance with built-in motor compressor, the starting power is generally several times of the appliance's listed power rating. Make sure that the total starting power capacity of all connected appliance does not exceed the listed maximum output power capacity.
- Make sure that the regulator is of the same output voltage and frequency as the appliance's it connected.
- Make sure the voltage of electrical source is within the listed input voltage range of the regulator.
- Always place the regulator in an environment that is:
 -well ventilated
 -not exposed to direct sunlight or heat source
 -out of reach of children
 -away from water, moisture, oil or grease
 -away from any flammable substance