DALTON

Three Phase Full Automatic Voltage Regulator
Servomotor Technology

SRV33 PLUS

(10-400KVA)

- Dalton SRV33PLUS full-automation three-phase high-power voltage stabilizer (hereinafter referred to as voltage stabilizer), is made up of post type variable voltage transformer, compensation transformer, sampling control circuit, protective control circuit, low-speed synchronous motor mechanism, etc., when the fluctuation is produced by unstable voltage or variation of user's load, the sampling circuit will process the voltage signal and transmit it to synchronous motor, This series of voltage stabilizers has been applied to electronic computer, precise machine tool, precise machine, testing equipment, elevator, importing equipment and process line in the following realms: industrial and mining enterprise, post & telecom, oil field, railway road, construction site, school, hospital, national defense, science research and so on.

- 3 phase input 3 phase output
- High Efficiency
- Compact Design with High Quality Materials
- Overcurrent and short circuit protection
- Precise Output Voltage Correction Accuracy ±1%
- CE Certified
- Microprocessor Controlled
- AC voltage balancing with extremely high accuracy.
- LCD display with advanced Alarm Menu
- Fan Cooling System
- Fast Regulation
- Spare part providing guarantee for 10 years

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DISPLAY LCD

Dalton SRV33 PLUS LCD operation mode high precision Multi indicators full automatic clear voltage stabilizer shown in figure ,

1– Input voltage

2– Output voltage

3– load display bar

4–Over temperature display

5– Output protection

6– Output undervoltage display

7– Output overvoltage display

FEATURES

This product is composed of column contact voltage regulator, sampling, protection, control circuit, low-speed synchronous motor mechanism, compensation transformer and other major components.

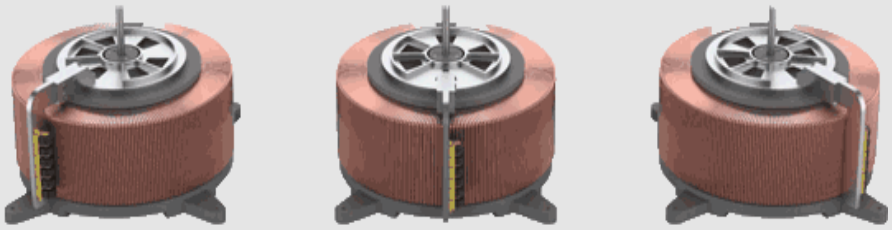
When the mains voltage is unstable or the user load changes, the sampling circuit sends the voltage signal to the synchronous motor to drive the cylindrical contact regulator carbon brush up and down to ensure the stability of the output voltage.

It has large capacity, low loss, high efficiency, wide voltage regulation range, high precision, strong protection function, reliable operation, etc.

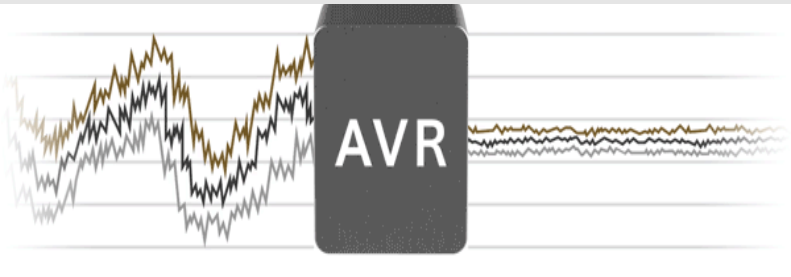
INDEPENDENT PHASE CONTROL

Independent Phase Balancing and Voltage Sensing Control

ensures the individual phase voltages remain stable, regardless of load unbalance. Should the incoming voltage on a different phase rise or drop, the Automatic Voltage Stabilizer will automatically regulate the output voltage before reaching the load end.



When the input voltage UAi changes, or the output voltage UAo changes due to load disturbance, the detection circuit will collect sampling signals from the output terminal of voltage stabilizer, then send out control orders to command the synchronous machine to drive carbon brush to slide along the coil surface to-and-fro, thus to regulate the output voltage, and finally change the direction and magnitude of compensation voltage U of the correction transformer, and realize the aim of keeping the output voltage UAo stable automatically



STEP-LESS VOLTAGE REGULATION

Automatic and Continuous Incoming Voltage Monitoring

Dalton Edison Servo Electronic Design (SES) Voltage Stabilizers deliver smooth and stabilized output voltage to the load, protecting operational uptime and efficiency. Precise output accuracy at +/- 0.4%, optimizing load equipment's life span.

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MAIN PARTS

1- Correction transformer (T2)

Correction transformer (T2) is a type of three-phase dry type transformer, can be used to change voltage.

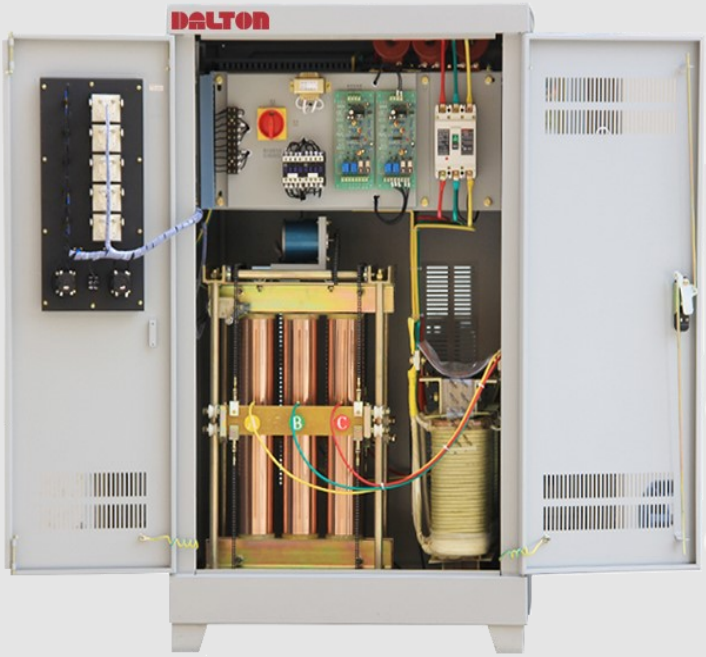
2-Regulating transformer (T1)

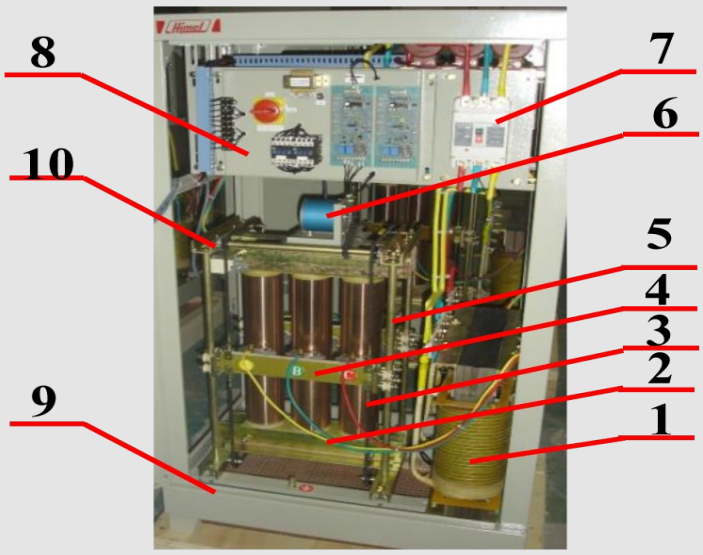
Regulating transformer (T1) is a type of three-phase autotransformer that drives three pairs of symmetrical sliding brushes with synchronous motor.

The output voltage of secondary voltage U (compensation voltage) can be regulated and kept stable through driving the carbon brush by synchronous motor with chain to slide along the bare part (slide way) of drum type winding of the autotransformer.

3- Control circuit

Voltage detection circuit is a control circuit that gives the control order to drive the synchronous motor to rotate forward, rotate inversely or stop rotation through sampling, rectifying, filtering, stabilizing voltage and comparing the voltage.





1. Compensation transformer(T2)
2. Transformer (T1)
3. Chain
4. Insulating holder of carbon brush
5. Cross shaft
6. Synchronous motor
7. Molded case circuit breaker
8. Control board
9. Frame
10. Travel switch

EASY INSTALLATION & MAINTINANCE

Dalton SRV33 PLUS Maintenance and service convenience through frontage locked shutters .

Simple structure and minimum malfunction principle by using qualified materials beside safe and economic usage.

The compact designed and manufactured in accordance with the European directives regarding the CE mark (“LVD” Low Voltage and Electromagnetic Compatibility Directives). The variac serves to provide the desired electrical energy to the laboratory facilities and to compensate for the voltage and other needs of the network.

Dalton is products are produced from suitable quality components and the production process is regularly monitored in accordance with ISO 9001standards with the quality control plans adopted by the company.

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Technical Specifications

Model	SRV33 Plus 10K	SRV33 Plus 15K	SRV33 Plus 20K	SRV33 Plus 30K	SRV33 Plus 45K	SRV33 Plus 60K	SRV33 Plus 75K	SRV33 Plus 100K	SRV33 Plus 150K	SRV33 Plus 200K	SRV33 Plus 300K	SRV33 Plus 400K
Rating Power	10KVA	15KVA	20KVA	30KVA	45KVA	60KVA	75KVA	100KVA	150KVA	200KVA	300KVA	400KVA
Input voltage range correction	274 - 430 VAC for 3 phases (Optional: 260-490 VAC)											
Output voltage	380 VAC RMS ± 2% for (3 phases)											
Output over voltage protection	322±4 (V)											
Output undervoltage protection	426±4 (V)											
Power factor	0.9											
Operation frequency	50/60Hz. ± % 5											
Fixing (control) speed	~ 80 Volts / Second											
Indicator and buttons	True RMS digital voltmeter, microprocessor											
Working technique	Full automatic servo control with microprocessor control											
Total output	> 95% (full load)									> 97% (full load)		
Monitoring measured values	LCD Load level , Volt per Phase ,Amp per phase , Over temperature											
Excessive loading	10 seconds, 200% overload											
Time of setting	~ 900 ms. (From 160 V AC to 250 VAC)											
Output upper limit adjustment (option)	40 V, 245 V, 255 V and 265 V can be selected with the DIP SWITCH.											
Output lower border shift set (option)	170 V, 180 V, 190 V and 200 V can be selected with the DIP SWITCH.											
Output delay time (optional)	1 sec, 2.5 sec, 5 sec and 10 sec can be selected with DIP SWITCH.											
Operating temperature	0°C / + 50°C											
Protection type	Overvoltage for output-Undervoltage protection for input-Undervoltage protection -for output Overload protection-Phase failure-Temperature rise protection optional-Time delay optional Inrush surge protection optional											
Cooling	Fan system											
Protection class	IP 20 / IP 25											
Withstanding voltage	1500 V/min											
Insulation resistance	≥5 MΩ											
Relative humidity	90% maximum DIN (40040)											
Working height	2000 meter											
Acoustic level	Less than 45 Db											
Mechanical by-pass	Manually controlled "Mains - Voltage regulator" selector PAKO SWITCH											
Output tolerance setting	1.5%, 2.5%, 3.5% and 5% can be selected with DIP SWITCH.											
Standards	EN 61000-6-2 / EN 61000-6-4 / EN 61558-1											
Product certifications	CE / ISO 9001											
L*W*H (mm)	390×390×825	435×435×900	470×500×919	540×500×925	640×644×1200	600×690×1370	600×690×1370	800×910×1370	1020×760×1800	1020×760×1800	1820×1220×1800	2320×1580×1800
Weight (kg)	35	57	60	78	155	170	190	250	499	600	1250	1490

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CERTIFIED ISO 9001:2015 COMPANY

CE