K-FACTOR
THE VOLTAGE YOU NEED

# VSA1-WF

## SINGLE PHASE 5KVA : 50kVA

## Single phase electromechanical stabilizers
## Wi-Fi control
## TECHNICAL SPECIFICATION



wi-fi
technology

# SINGLE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS VSA1 5KVA to 50KVA

**We designed a new product** that makes life easier for the **user. The Wi-Fi network feature is absolutely the biggest advantage of this device over similar devices.**

**With the Wi-Fi module on the voltage regulator, many parameters of the voltage regulator can be monitored, controlled or modified by connecting to a Wi-Fi network using any browser on a computer, tablet or smartphone.**

VSA stabilizers deliver a constant voltage by correcting voltage drops and increases occurring on the grid or in the internal structure of the electrical system.

Our voltage regulators operate automatically to adjust the voltage without any user intervention.

Once the regulator is on, network voltage is measured continuously and the necessary raising/lowering operations are performed automatically, providing the system with the constant voltage required for proper operation.

The servo regulators consist of a variable transformer, a servo motor that controls the variac, a multimeter with electronic management that controls the motor and the buck-boost transformer.

The high torque of the motor quickly corrects thanks to the DC servo motor and the control system that can respond quickly to any voltage changes.

When the regulation has been completed, the servo motor is de-energized with an electronic braking circuit.

Electrical and transient disturbances do not disturb the regulation

It is possible to safely power every area that needs regular electricity supply without problems.


Fig.1: WF version

## The new VSA1 stabilizers offer features such as:

Undisturbed pure sinusoidal voltage regulation

AC voltage balancing with extremely high accuracy.

Producing intensely, keeping the output voltage stable within ±1% (227.7V -232.3V) while the input voltage is between 172V – 264V.

Run smoothly on all loads from 0% to 100%.

Long-term overload protection and short-term protection.

When protections are activated, record the number of protection trips and the reason for each parameter separately.

Record mains input voltage limits and load current values.

Protection of the user from negative voltages.

Protection of the user and the device from excessive current.

Static, not gradual, dynamically correct output voltage too quickly without user notice.

Display all values against the probabilities in the bypass regime.

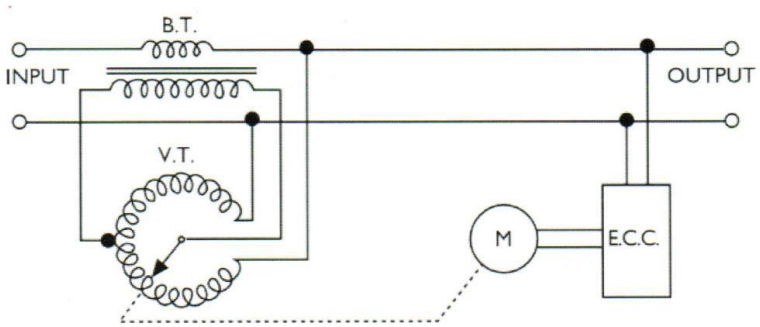
Manual transfer to bypass regime without regulating.

Control system by **Wi-Fi** network.

# SINGLE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS VSA1 5KVA to 50KVA


*Fig.3: structure of models from 15kVA*

## SINGLE-PHASE ELECTROMECHANICAL STABILIZERS– PRINCIPLE OF OPERATION




**ATTENTION: THE STANDARD MODEL IS NOT TESTED FOR OPERATION IN SYSTEMS WHERE THE PRESENCE OF PHOTOVOLTAIC SYSTEMS CAUSES CURRENT TO FLOW FROM THE OUTPUT TO THE STABILIZER INPUT (BIDIRECTIONAL OPERATION).**
**A (BD) VERSION IS AVAILABLE WITH CURRENT CONTROL DISABLED AND THE INSERTION OF A PROTECTION CIRCUIT BREAKER OR OUTPUT FUSE TO ENSURE CORRECT OPERATION IN THE PRESENCE OF A PHOTOVOLTAIC SYSTEM.**
**THE RANGE OF ELECTRONIC PRODUCTS (IMP) IS TESTED FOR BIDIRECTIONAL OPERATION.**

| MODEL VSAxxxWF | 105 | 107 | 110 | 115 | 120 | 130 | 140 | 150 |
|---|---|---|---|---|---|---|---|---|
| KVA power | 5 | 7.5 | 10 | 15 | 20 | 30 | 40 | 50 |
| Input | | | | | | | | |
| Input voltage | 230Vac 1ph +N | | | | | | | |
| VOLTAGE range | 172Vac ~ 264Vac (-25%+15%) [other ranges available on request, such as 110-240 and 180-280] | | | | | | | |
| Input frequency | 47 : 64 Hz | | | | | | | |
| Output | | | | | | | | |
| Output voltage | 230Vac (adjustable 200:250V) | | | | | | | |
| Output accuracy | ± 1% | | | | | | | |
| Output Current A | 22 | 32 | 43 | 65 | 86 | 130 | 173 | 217 |
| Power factor | 1 | | | | | | | |
| Overload capacity | 200% load 10" – 101:150% load 2’ | | | | | | | |
| Output frequency | 47 : 64 Hz (as input frequency) | | | | | | | |
| Response speed | < 1.5/1000 sec | | | | | | | |
| Adjustment speed | 80V / sec | | | | | | | |
| Efficiency | Min. 95% | | | | | | | |
| Display | Digital meter with voltage/output current reading and status reports (mains and bypass) | | | | | | | |
| Protections | | | | | | | | |
| Input protection | Automatic Circuit breaker | | | | | | | |
| Output protections | Short circuit, overcurrent, low-high voltage, through output contactor | | | | | | | |
| By-Pass | Manual By-pass included | | | | | | | |
| MCB output | Optional | | | | | | | |
| OTHER DATA | | | | | | | | |
| Cooling | Natural air cooling | | | | | | | |
| Protection class | IP20 (other degrees of protection available on demand) | | | | | | | |
| Temp. environment max. | -10° C ~ +50°C | | | | | | | |
| Altitude | Up to 1000 m without derating | | | | | | | |
| Relative humidity | 96% (without condensation) | | | | | | | |
| Sound level | < 30dB | | | | < 50dB | | | |
| Color | RAL7035 | | | | | | | |
| Dimensions WxDxH cm | 33x35x56 | | 38x40x61 | 50x51x86 | | | 50x61x86 | 60x124x115 |
| Weight kg. | 35 | 38 | 50 | 55 | 110 | 140 | 150 | 260 |

Technical data and images may be subject to a change without notice