

VSA3

THREE PHASE 10.5-2500KVA

Three phase electromechanical voltage
stabilizer

Independent regulation on each phase

TECHNICAL SPECIFICATION



ELECTROMECHANICAL VOLTAGE STABILIZERS VSA range from 10 to 2500KVA

Electromechanical voltage stabilizers use a variable toroidal transformer, a BUCK-BOOST transformer, and an electronic circuit that controls the rotation of the variable transformer, thus regulating the output voltage. With the control system, in a very fast response time, the high-torque regulation motor regulates small voltage changes very quickly. The servomotor is put out of service by the limit switches when it is outside its operating limits and by the control circuit when the output voltage is automatically adjusted to the set value. When the regulation is complete, the motor's energy is cut with the help of an electronic opening circuit, operating in complete silence.

Regulation occurs independently on each phase. The system is equipped with a bypass switch that allows the load to be powered with mains voltage in the event of a malfunction or need. Using the setting buttons you can adjust the output voltage, precision range, regulation speed, and high-low voltage limits. It is then possible to adjust the maximum current control and the relative hysteresis time. A display shows the input and output voltage, and the current delivered, on each phase



Figure 1 The products shown in the images contain optional accessories

The new VSA3 stabilizers offer features such as:

- Protection from voltages that are not adequate for the users.
- Protection of user and device from excessive currents.
- Pure sinus voltage regulation.
- Long-term overload protection and instant protection.
- AC voltage balancing with extreme precision.
- It runs smoothly on all loads from 0% to 100%.
- Manual change to bypass mode without adjustment.
- Displays all values in the bypass regime.
- Records input voltage and load current limits.
- Static, non-gradual, dynamically corrected output voltage.
- When protections are activated, it records the number of protection trips and the reason for each trip.
- Standard regulation is $\pm 1\%$ (396V -404V) stable when input voltage is within range

ATTENTION: THIS PRODUCT HAS NOT BEEN TESTED FOR OPERATION IN SYSTEMS WHERE THE PRESENCE OF PHOTOVOLTAIC SYSTEMS RESULTS IN CURRENT FLOWING FROM THE OUTPUT TO THE INPUT OF THE STABILIZER (BIDIRECTIONAL OPERATION). ONLY THE RANGE OF ELECTRONIC PRODUCTS (IMP) IS TESTED FOR BIDIRECTIONAL OPERATION.

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

THREE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS VSA range from 10 to 2500KVA



10:30KVA



45:60kVA



100:150kVA

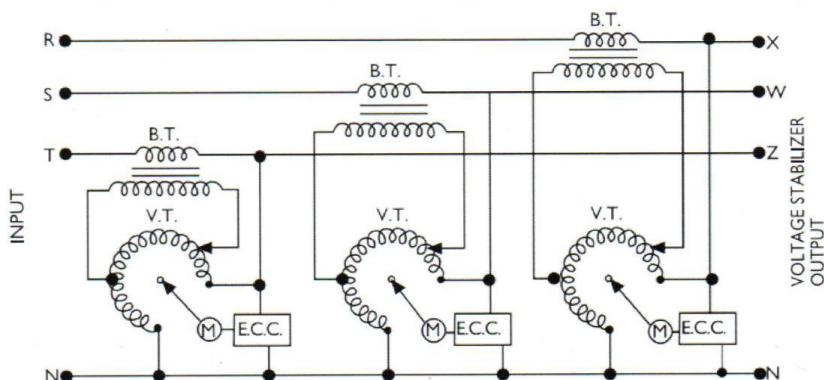


200:400kVA



>400kVA

**THREE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS
REGULATION PRINCIPLE**



IP54 version available on request

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THREE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS VSA range from 10 to 2500KVA

CODE VSA3XXX	010	015	022	030	045	060	075	100	120	150
Power KVA	10.5	15	22.5	30	45	60	75	100	120	150
INPUT										
Input voltage	400Vac 3ph + N									
Voltage range	-25%+15% (300Vac ~ 460Vac) [other ranges available on request, like 190-415 and 310-485]									
Input frequency	47 : 64 Hz									
OUTPUT										
Output voltage	400Vac (adjustable 380:415V)									
Output accuracy	± 1%									
Output current A	15	21	32	43	65	86	108	144	173	217
Overload capacity	200% carico 10'' / 150% carico per 2'									
Output frequency	47 : 64 Hz (same as input frequency)									
Regulation Speed	90V / sec									
Efficiency	min. 97%									
Load max unbalance	100%									
Display	digital meter with output current/phase and line voltage reading, power input digital v-meters									
PROTECTIONS										
Input protections	Automatic circuit breaker									
Output protections	Short circuit, overload, low load, high-low voltage, high-low frequency, phase sequence failure by output contactor									
By-Pass	Manual By-pass included									
MCB output	Optional									
MCB input	Included									
OTHER DATA										
Cooling	Forced cooling by thermostat									
Protection class	IP20 (higher protections available on request)									
Max ambient temp.	-10° C ~ +40° C									
Altitude	1000 m									
Relative humidity	95% (without condensation)									
Acoustic pressure	< 50dB									
Colour	RAL7035									
Dimensions WxDxH cm	40x63x116		40x63x127		60x88x139			66x94x165		120x84x185
Weight kg.	115	125	140	165	228	285	345	410	450	575

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THREE PHASE ELECTROMECHANICAL VOLTAGE STABILIZERS VSA range from 10 to 2500KVA

CODE VSA3XXX	200	250	300	400	500	600	800	1000	1250	1600	2000	2500
Power KVA	200	250	300	400	500	600	800	1000	1250	1600	2000	2500
INPUT												
Input voltage	400Vac 3ph + N											
Voltage range	-25%+15% (300Vac ~ 460Vac) [other ranges available on request, like 190-415 and 310-485]											
Input frequency	47 : 64 Hz											
OUTPUT												
Output voltage	400Vac (adjustable 380:415V)											
Output accuracy	± 1%											
Output current A	289	362	434	578	724	869	1159	1449	1816	2318	2898	3623
Overload capacity	200% load 10"											
Output frequency	47 : 64 Hz (as input frequency)											
Regulation Speed	90V / sec											
Efficiency	min. 97%											
Load max unbalance	100%											
Display	digital meter with output current/phase and line voltage reading, power input digital v-meters											
PROTECTIONS												
Input protections	Input circuit breaker, mains lamps, Emergency power off											
Output protections	Short circuit, overload, low load, high-low voltage, high-low frequency, phase sequence failure by output contactor											
By-Pass	Manual By-pass included by change-over switch											
MCB output	Optional											
MCB input	Optional											
OTHER DATA												
Cooling	Forced cooling by thermostat											
Protection class	IP20 (higher protections available on request)											
Max ambient temp.	-10° C ~ +40° C											
Altitude	1000 m											
Relative humidity	95% (without condensation)											
Acoustic pressure	< 50dB											
Colour	RAL7035											
Dimensioni LxPxH cm	120x84x185			175x84x185	180X124X175		180X124X210	210X214X185	T.B.A.			
Peso kg.	585	610	1200	1350	1795	2700	1200	1350	1795	2700		

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