



ODYSSEY High Dynamic Intelligent Voltage Compensator 80 - 4000 kVA

Electronic voltage stabilizer with double conversion technology

The electronic Voltage Stabilizer ODYSSEY is ideal when the correction speed (<3 ms) is the critical issue, for example with computers, laboratory devices, measuring and medical devices, filling industry, laser / water cutting, automation industry, etc ..

The operating principle is similar to the electromechanical voltage stabilizers. The difference is that the voltage compensation on the buck and boost primary winding is electronically controlled via IGBT switches instead of the variable ratio autotransformer.

The microprocessor controlled system monitors the output voltage and determines the opening or closing of the IGBT switch to ensure the best possible control. Thanks to the use of double conversion technology and the use of electrolytic capacitors, very low response times can be achieved.

The voltage stabilizer can be operated with a different input and output voltage. This setting can be made at the factory or at the customer's site following the instructions in the manual. The stabilizer operates with a load variation range for each phase from 0 to 100% and the output voltage is independent of $\cos \varphi$. The standard housing is a metal housing with IP21 protection in RAL9005 finish for indoor installation.

The ODYSSEY series has a 10" touch display for displaying the data and setting parameters. It is possible to communicate via the Mod-bus protocol with an RJ45 Ethernet connection (standard communication protocol between electronic industrial devices).

All units are designed and manufactured in accordance with European CE standards (Low Voltage and EMC Directives).

Special features

- Regulation Speed < 3 ms
- Continuous voltage compensation $\pm 15\%$; $\pm 20\%$; $\pm 25\%$; $\pm 30\%$ of the rated voltage
- Digital 10" Touch Display for displaying the data and setting parameters
- Automatic thyristor bypass to protect the system
- Efficiency > 98%

Standard Features

Voltage Regulation	IGBT control (double conversion technology)
Voltage Stabilization	Independent phase control
Available Nominal Voltage*	220-230-240V (L-N) / 380-400-415V (440-460-480V**) (L-L)
Rating	From 80 kVA to 4000 kVA
Input Voltage Compensation	±15%; ± 20%; ± 25%; ±30% continuously
Frequency	50 / 60 Hz ±5%
Admitted Load Variation	Up to 100%
Output Voltage Accuracy	±0.5%
Correction Time	<3 Milliseconds
Cooling	Forced Ventilation
Ambient Temperature	-20/+40°C
Storage Temperature	-25/+60°C
Max Relative Humidity	95%
Admitted Overload	150% for 1 Minute (at nominal input voltage)
Harmonics	none introduced
Color	RAL 9005
Protection Degree	IP 21
User Interface	Digital 10" Touch Display
Communication System	MODBUS RTU
Overvoltage protection	<ul style="list-style-type: none"> – Input class I surge arrestors – Output class II surge arrestors
Protection	– Automatic by-pass protection
Options	<ul style="list-style-type: none"> – Input isolating transformer – Manual maintenance by-pass – Input automatic circuit breaker – Short circuit output protection – EMI/RFI Filter

* Output voltage can be adjusted by choosing one of the indicated values.
 Such choice sets the new nominal value as a reference for all the stabilizer parameters.

** 60Hz only

Odyssey starting at 120 kVA up to 4000 kVA

The values listed in the table are referred to 400 V nominal voltage
 (Input Variation $\pm 15\%$, $\pm 20\%$; Output voltage 400 V $\pm 0,5\%$), Regulation Speed 3 ms

Type	Input Variation Range	Rated Power [kVA]	max. Input Current [A]	Output Current [A]	Cabinet Dimension BxTxH [mm]	Weight [kg]
120-20	$\pm 20\%$	120	217	173	1200x800x2000	650
160-15	$\pm 15\%$	160	272	231	1200x800x2000	650
160-20	$\pm 20\%$	160	289	231	1200x800x2000	700
200-15	$\pm 15\%$	200	340	289	1200x800x2000	700
200-20	$\pm 20\%$	200	361	289	1200x800x2000	750
250-15	$\pm 15\%$	250	425	361	1200x800x2000	750
250-20	$\pm 20\%$	250	451	361	1200x800x2000	850
320-15	$\pm 15\%$	320	543	462	1200x800x2000	850
320-20	$\pm 20\%$	320	577	462	1800x1000x200	1000
400-15	$\pm 15\%$	400	679	577	1800x1000x2000	1000
400-20	$\pm 20\%$	400	722	577	1800x1000x2000	1200
500-15	$\pm 15\%$	500	849	722	1800x1000x2001	1200
500-20	$\pm 20\%$	500	902	722	3000x1000x2000	1500
630-15	$\pm 15\%$	630	1070	909	3000x1000x2000	1500
630-20	$\pm 20\%$	630	1137	909	3600x1000x2000	2000
800-15	$\pm 15\%$	800	1359	1155	3600x1000x2000	2000
800-20	$\pm 20\%$	800	1443	1155	3600x1000x2000	2200
1000-15	$\pm 15\%$	1000	1698	1443	3600x1000x2000	2200
1000-20	$\pm 20\%$	1000	1804	1443	3600x1000x2000	2800
1250-15	$\pm 15\%$	1250	2123	1804	3600x1000x2000	2800
1250-20	$\pm 20\%$	1250	2255	1804	4200x1000x2200	3800
1600-15	$\pm 15\%$	1600	2717	2309	4200x1000x2200	3800
1600-20	$\pm 20\%$	1600	2887	2309	4200x1000x2200	4000
2000-15	$\pm 15\%$	2000	3396	2887	4200x1000x2200	4000
2000-20	$\pm 20\%$	2000	3609	2887	4200x1000x2200	5600
2500-15	$\pm 15\%$	2500	4245	3609	4200x1000x2200	5600
2500-20	$\pm 20\%$	2500	4511	3609	4200x1000x2200	6900
3200-15	$\pm 15\%$	3200	5434	4619	4200x1000x2200	6900
3200-20	$\pm 20\%$	3200	5774	4619	4200x1000x2201	10300
4000-15	$\pm 15\%$	4000	6793	5774	4200x1000x2200	10300

Odyssey von 80 bis 2500 kVA

The values listed in the table are referred to 400 V nominal voltage
 (Input Variation $\pm 25\%$, $\pm 30\%$; Output voltage 400 V $\pm 0,5\%$), Regulation Speed 3 ms

Type	Input Variation Range	Rated Power [kVA]	max. Input Current [A]	Output Current [A]	Cabinet Dimension BxTxH [mm]	Weight [kg]
80-30	$\pm 30\%$	80	165	115	1200x800x2000	650
95-25	$\pm 25\%$	95	183	137	1200x800x2000	650
95-30	$\pm 30\%$	95	196	137	1200x800x2000	700
120-25	$\pm 25\%$	120	231	173	1200x800x2000	700
120-30	$\pm 30\%$	120	247	173	1200x800x2001	750
160-25	$\pm 25\%$	160	308	231	1200x800x2000	750
160-30	$\pm 30\%$	160	330	231	1200x800x2000	850
200-25	$\pm 25\%$	200	385	289	1200x800x2000	850
200-30	$\pm 30\%$	200	412	289	1800x1000x2000	1000
250-25	$\pm 25\%$	250	481	361	1800x1000x2000	1000
250-30	$\pm 30\%$	250	516	361	1800x1000x2000	1200
320-25	$\pm 25\%$	320	616	462	1800x1000x2000	1200
320-30	$\pm 30\%$	320	660	462	3000x1000x2000	1500
400-25	$\pm 25\%$	400	770	577	3000x1000x2000	1500
400-30	$\pm 30\%$	400	825	577	3600x1000x2000	2000
500-25	$\pm 25\%$	500	962	722	3600x1000x2000	2000
500-30	$\pm 30\%$	500	1031	722	3600x1000x2000	2200
630-25	$\pm 25\%$	630	1212	909	3600x1000x2000	2200
630-30	$\pm 30\%$	630	1299	909	3600x1000x2000	2800
800-25	$\pm 25\%$	800	1540	1155	3600x1000x2000	2800
800-30	$\pm 30\%$	800	1650	1155	4200x1000x2000	3800
1000-25	$\pm 25\%$	1000	1925	1443	4200x1000x2000	3800
1000-30	$\pm 30\%$	1000	2062	1443	4200x1000x2000	4000
1250-25	$\pm 25\%$	1250	2406	1804	4200x1000x2000	4000
1250-30	$\pm 30\%$	1250	2578	1804	4200x1000x2200	5600
1600-25	$\pm 25\%$	1600	3079	2309	4200x1000x2200	5600
1600-30	$\pm 30\%$	1600	3299	2309	4200x1000x2200	6900
2000-25	$\pm 25\%$	2000	3849	2887	4200x1000x2200	6900
2000-30	$\pm 30\%$	2000	4124	2887	4200x1000x2200	10300
2500-25	$\pm 25\%$	2500	4811	3609	4200x1000x2200	10300