



## OXYGEN High-Dynamic SAG Compensator 200-3200 kVA

### Electronic voltage stabilizer with double conversion technology

The electronic Voltage Stabilizer OXYGEN 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, semiconductor manufacturing etc ..

**The Oxygen is specially designed to eliminate Sags for one minute, which are the most common cause of equipment malfunctions in the automated industry today.**

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 OXYGEN 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  $\pm 10\%$  or  $\pm 15\%$  of the rated voltage
- SAG Compensation  $-40\%$  or  $-50\%$  up to one minute
- SAG Compensation up to 90 % of the rated voltage when  $U_n$  drops  $-60\%$  for up to 45 secs
- Digital 10" Touch Display for displaying the data and setting parameters
- Automatic thyristor bypass to protect the system
- Efficiency  $> 98\%$

**Standard Features**

<b>Voltage Regulation</b>	IGBT Control (double conversion technology)
<b>Voltage Stabilization</b>	Independent Phase Control
<b>Available Nominal Voltage*</b>	220-230-240V (L-N) / 380-400-415V (440-460-480V**) (L-L)
<b>Rating</b>	From 200kVA to 3200kVA
<b>Input Voltage Compensation</b>	±10%; ± 15%; continuously / -40%; -50% for 1 Minute
<b>Frequency</b>	50 / 60 Hz ±5%
<b>Admitted Load Variation</b>	Up to 100%
<b>Admitted Load Imbalance</b>	50 %
<b>Output Voltage Accuracy</b>	±0.5%
<b>Correction Time</b>	<3 Milliseconds
<b>Cooling</b>	Forced Ventilation
<b>Ambient Temperature</b>	0/+40°C
<b>Storage Temperature</b>	-25/+60°C
<b>Max Relative Humidity</b>	95%
<b>Admitted Overload</b>	150% for 1 Minute (at nominal input voltage)
<b>Harmonics</b>	None Introduced
<b>Color</b>	RAL 9005
<b>Protection Degree</b>	IP 21
<b>User Interface</b>	Digital 10" Touch Display
<b>Communication System</b>	MODBUS RTU (MODBUS TCP on request)
<b>Overvoltage protection</b>	<ul style="list-style-type: none"> <li>– Input class I surge arrestors</li> <li>– Output class II surge arrestors</li> </ul>
<b>Protection</b>	<ul style="list-style-type: none"> <li>– Automatic by-pass protection</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>– Input isolating transformer</li> <li>– Manual maintenance by-pass</li> <li>– Input automatic circuit breaker</li> <li>– Short circuit output protection</li> <li>– EMI/RFI Filter</li> </ul>

\* 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

### Oxygen $\pm 10\%$ -40% from 200 kVA up to 3200 kVA

$\pm 10\%$ Continuous Regulation / -40% for 1 Minute, Efficiency >98%					
Model	Rating [kVA]	max. Input Current (Peak) [A]	Output Current [A]	Cabinet BxTxH [mm]	Weight [kg]
200-10-40	200	321(481)	289	1200x800x2000	800
250-10-40	250	401(601)	361	1200x800x2000	900
320-10-40	320	513(770)	462	1200x800x2000	1150
400-10-40	400	642(962)	577	1200x800x2000	1200
500-10-40	500	802(1203)	722	1800x1000x2000	1400
630-10-40	630	1010(1516)	909	1800x1000x2000	1600
800-10-40	800	1283(1925)	1155	3000x1000x2000	1800
1000-10-40	1000	1604(2406)	1443	3600x1000x2000	2100
1250-10-40	1250	2005(3007)	1804	3600x1000x2000	2300
1600-10-40	1600	2566(3849)	2309	3600x1000x2000	3200
2000-10-40	2000	3208(4811)	2887	4200x1000x2200	3600
2500-10-40	2500	4009(6014)	3609	4200x1000x2200	4000
3200-10-40*	3200	5132(7698)	4619	4200x1000x2200	5600

\* Available only for 480V / 60Hz

### Oxygen $\pm 15\%$ -50% from 200 kVA up to 2000 kVA

$\pm 15\%$ Continuous Regulation / -40% for 1 Minute, Efficiency >98%					
Modell	Leistung [kVA]	max. Eingangsstrom (Spitze) [A]	Ausgangs-Strom [A]	Gehäuse BxTxH [mm]	Gewicht [kg]
200-15-50	200	340(577)	289	1200x800x2000	1150
250-15-50	250	425(722)	361	1200x800x2000	1200
320-15-50	320	543(924)	462	1200x800x2000	1400
400-15-50	400	679(1155)	577	1800x1000x2000	1600
500-15-50	500	849(1443)	722	1800x1000x2000	1800
630-15-50	630	1070(1819)	909	3000x1000x2000	1900
800-15-50	800	1359(2309)	1155	3600x1000x2000	2300
1000-15-50	1000	1698(2887)	1443	3600x1000x2000	3200
1250-15-50	1250	2123(3609)	1804	3600x1000x2000	3600
1600-15-50	1600	2717(4619)	2309	4200x1000x2200	4000
2000-15-50	2000	3396(5774)	2887	4200x1000x2200	5000