

## SIRIUS ADVANCE

three-phase  
60-4000kVA

Sirius Advance voltage stabilizers derive from the SIRIUS type, of which they maintain the main technical characteristics.

The standard integration of some functions and accessories usually offered as optional, complete and enrich the equipment.

The additional features are:

- Input automatic circuit breaker;
- Bypass switch via an interlocked automatic circuit breaker;
- Output interlocked motorized automatic circuit breaker;
- Integrated automatic power factor correction system.



The input automatic circuit breaker (QF1) ensures protection against failure and/or short-circuits inside the unit. The bypass automatic circuit breaker (QF2) protects the line supplying the load against overload and short circuits in bypass condition.

The output motorized automatic circuit breaker (QF3), interlocked with the bypass switch, protects against overload, short-circuit, over voltage, undervoltage, phase sequence error and phase failure.

The integrated automatic Power Factor Correction system maintains the power factor value ( $\cos \varphi$ ) to a high level ensuring the known advantages for the users but also affecting the sizing of the stabilizer. The PFC system exploits high energy density metallize polypropylene three-phase capacitors ( $U_n=525V$ ) exclusively thus guaranteeing robustness and reliability. The addition of blocking reactors (detuned filters) eliminates undesired harmonics and protects the capacitors.

The reactive power controller is mounted on the external control synoptic panel.

### Accessories - available on request

Input isolating transformer
EMI/RFI filters
Neutral point reactor
IP54 protection degree for indoor and outdoor installation

All the stabilizers are designed and built in compliance with the Low Voltage and Electromagnetic Compatibility European Directives with regard to the CE marking requirements. The products are built with suitable quality components and that the manufacturing process is constantly verified in accordance with the Quality Control Plans which the manufacturer applies in compliance with the ISO 9001:2008 Standards. The commitment towards environmental issues and safety at work matters is guaranteed by the certification of the Management System according to the ISO14001:2004 and OHSAS18001:2007 Standards. In order to obtain better performance, the products described in the present document can be altered by the manufacturer at any date and without prior notice. Technical data and descriptions do hold therefore any contractual value.

Voltage stabilisation	Independent phase control
Output voltage selectable via display, PC and/or Ethernet*	from 210 to 255V (L-N) from 360 to 440V (L-L)
Frequency	50/60Hz $\pm$ 5%
Admitted load variation	Up to 100%
Admitted load imbalance	100%
Cooling	Natural air ventilation. Up to 35°C aided with fans
Ambient temperature	-25/+45°C
Storage temperature	-25/+60°C
Max relative humidity	95%
Admitted overload	200% 2 min.
Harmonic distortion	None introduced
Colour	RAL 7035
Protection degree	IP21
Instrumentation	<ul style="list-style-type: none"> <li>- Input &amp; output digital multimeter with RS485 port</li> <li>- LCD display</li> <li>- Reactive powerregulator</li> </ul>
Installation	Indoor
Regulator overload protection	Digital control
Communication system	Ethernet / GPRS / USB / MODBUS TCP/IP
Overvoltage protection	<ul style="list-style-type: none"> <li>- Class I input surge arrester</li> <li>- Class II output surgearrester</li> <li>- Optimal voltage return through supercapacitors in case of blackout</li> </ul>
Total protection and by-pass kit	<ul style="list-style-type: none"> <li>- Input automatic circuit breaker</li> <li>- By-pass switch made of an interlocked automatic circuit breaker</li> <li>- Output interlocked motorized automatic circuit breaker with protection against overload, overvoltage, undervoltage, phase sequence error and phase failure</li> </ul>
Integrated automatic power factor correction system	<ul style="list-style-type: none"> <li>- Based on high energy density metallised polypropylene three-phase capacitors (<math>U_n = 525V</math>)</li> <li>- Three-phase blocking reactor (tuning frequency 180Hz)</li> </ul>

\* The 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.

## Input voltage variation $\pm 10\%$ , Rated power 200 to 6000 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V  $\pm 0,5\%$ )

Rated Power [kVA]	Type	Input Variation	Max. Input Current [A]	Output Current [A]	Adjust. Speed [ms/V]	Dimension WxDxH [mm]	Weight [kg]
100	100-20	$\pm 20\%$	180	144	15	1600x800x1800	880
125	125-15	$\pm 15\%$	213	181	20		
125	125-20	$\pm 20\%$	226	181	15	1600x800x1800	900
160	160-15	$\pm 15\%$	272	231	20		
160	160-20	$\pm 20\%$	289	231	15	2200x800x1800	1150
200	200-15	$\pm 15\%$	340	289	20		
200	200-20	$\pm 20\%$	361	289	15	2200x800x1800	1220
250	250-15	$\pm 15\%$	425	361	20		
250	250-20	$\pm 20\%$	452	361	15	2200x800x1800	1450
320	320-15	$\pm 15\%$	544	462	20		
320	320-20	$\pm 20\%$	578	462	20	2400x800x1800	1700
400	400-15	$\pm 15\%$	680	578	20		
400	400-20	$\pm 20\%$	722	578	15	2400x800x2000	1880
500	500-15	$\pm 15\%$	851	723	20		
500	500-20	$\pm 20\%$	903	723	15	3000x1000x2000	2200
630	630-15	$\pm 15\%$	1071	910	20		
630	630-20	$\pm 20\%$	1138	910	18	3000x1000x2000	2720
800	800-15	$\pm 15\%$	1360	1156	24		
800	800-20	$\pm 20\%$	1445	1156	18	4800x1000x2100	2950
1000	1000-15	$\pm 15\%$	1700	1445	24		
1000	1000-20	$\pm 20\%$	1806	1445	18	5400x1000x2100	4240
1250	1250-15	$\pm 15\%$	2125	1806	24		
1250	1250-20	$\pm 20\%$	2125	1806	18	6000x1000x2100	5500
1600	1600-15	$\pm 15\%$	2720	2312	24		
1600	1600-20	$\pm 20\%$	2890	2312	18	6600x1000x2100	5980
2000	2000-15	$\pm 15\%$	3400	2890	24		
2000	2000-20	$\pm 20\%$	3613	2890	22	6600x1400x2200	7840
2500	2500-15	$\pm 15\%$	4251	3613	30		
2500	2500-20	$\pm 20\%$	4516	3613	22	7800x1400x2200	9600
3200	3200-15	$\pm 15\%$	5440	4624	30		
3200	3200-20	$\pm 20\%$	5780	4624	27	8400x2000x2400	12800
4000	4000-15	$\pm 15\%$	6800	5780	36		

## Input voltage variation $\pm 30\%$ to $\pm 25\%$ , Rated power 60 to 2500 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V  $\pm 0,5\%$ )

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
60	60-30	$\pm 30\%$	124	87	10	1600x800x1800	880
80	80-25	$\pm 25\%$	154	116	12		
80	80-30	$\pm 30\%$	165	116	10	1600x800x1800	900
100	100-25	$\pm 25\%$	193	144	12		
100	100-30	$\pm 30\%$	206	144	10	2200x800x1800	1150
125	125-25	$\pm 25\%$	241	181	12		
125	125-30	$\pm 30\%$	258	181	10	2200x800x1800	1220
160	160-25	$\pm 25\%$	308	231	12		
160	160-30	$\pm 30\%$	330	231	10	2200x800x1800	1450
200	200-25	$\pm 25\%$	385	289	12		
200	200-30	$\pm 30\%$	413	289	10	2400x800x1800	1700
250	250-25	$\pm 25\%$	482	361	12		
250	250-30	$\pm 30\%$	516	361	10	2400x800x2000	1880
320	320-25	$\pm 25\%$	617	462	12		
320	320-30	$\pm 30\%$	661	462	10	3000x1000x2000	2200
400	400-25	$\pm 25\%$	770	578	12		
400	400-30	$\pm 30\%$	826	578	12	3000x1000x2000	2720
500	500-25	$\pm 25\%$	963	723	15		
500	500-30	$\pm 30\%$	1032	723	12	4800x1000x2100	2950
630	630-25	$\pm 25\%$	1214	910	15		
630	630-30	$\pm 30\%$	1300	910	12	5400x1000x2100	4240
800	800-25	$\pm 25\%$	1541	1156	15		
800	800-30	$\pm 30\%$	1651	1156	12	6000x1000x2100	5500
1000	1000-25	$\pm 25\%$	1927	1445	15		
1000	1000-30	$\pm 30\%$	2064	1445	12	6600x1000x2100	5980
1250	1250-25	$\pm 25\%$	2408	1806	15		
1250	1250-30	$\pm 30\%$	2580	1806	15	6600x1400x2200	7840
1600	1600-25	$\pm 25\%$	3083	2312	18		
1600	1600-30	$\pm 30\%$	3303	2312	15	7800x1400x2200	9600
2000	2000-30	$\pm 30\%$	4130	2892	18		
2000	2000-25	$\pm 25\%$	3853	2890	18	8400x2000x2400	12800
2500	2500-25	$\pm 25\%$	4817	3613	22		

**Input voltage variation +15% to -35%, Rated power 80 to 2500 kVA**

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
80	80-15/35	+15% -35%	178	116	12	1600x800x1800	1000
100	100-15/35	+15% -35%	222	144	12	1600x800x1800	1030
125	125-15/35	+15% -35%	278	181	12	2200x800x1800	1300
160	160-15/35	+15% -35%	356	231	12	2200x800x1800	1420
200	200-15/35	+15% -35%	444	289	12	2200x800x1800	1650
250	250-15/35	+15% -35%	556	361	12	3000x800x2000	2100
320	320-15/35	+15% -35%	711	462	12	3000x800x2000	2220
400	400-15/35	+15% -35%	889	578	12	3600x1000x2000	2600
500	500-15/35	+15% -35%	1111	723	15	3600x1000x2000	3420
630	630-15/35	+15% -35%	1400	910	15	4200x1000x2100	3700
800	800-15/35	+15% -35%	1778	1156	15	5400x1000x2100	5040
1000	1000-15/35	+15% -35%	2223	1445	15	6000x1000x2100	5950
1250	1250-15/35	+15% -35%	2779	1806	15	7200x1000x2100	6480
1600	1600-15/35	+15% -35%	3557	2312	18	7200x1400x2200	9540
2000	2000-15/35	+15% -35%	4446	2890	18	8400x2000x2400	11350
2500	2500-15/35	+15% -35%	5558	3613	22	9000x2400x2400	15500

**Input voltage variation +15% to -45%, Rated power 60 to 2000 kVA**

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)

Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
60	60-15/45	+15% -45%	158	87	10	1600x800x1800	1080
80	80-15/45	+15% -45%	211	116	10	1600x800x1800	1130
100	100-15/45	+15% -45%	262	144	10	2200x800x1800	1450
125	125-15/45	+15% -45%	329	181	10	2200x800x1800	1520
160	160-15/45	+15% -45%	420	231	10	2200x800x1800	1800
200	200-15/45	+15% -45%	525	289	10	3000x800x2000	2300
250	250-15/45	+15% -45%	656	361	10	3000x800x2000	2420
320	320-15/45	+15% -45%	840	462	10	3600x1000x2000	2800
400	400-15/45	+15% -45%	1051	578	12	3600x1000x2000	3720
500	500-15/45	+15% -45%	1315	723	12	4200x1000x2100	4050
630	630-15/45	+15% -45%	1655	910	12	5400x1000x2100	5440
800	800-15/45	+15% -45%	2102	1156	12	6000x1000x2100	6400
1000	1000-15/45	+15% -45%	2627	1445	12	7200x1000x2100	6980
1250	1250-15/45	+15% -45%	3284	1806	15	6600x1400x2200	10540
1600	1600-15/45	+15% -45%	4204	2312	15	9000x2400x2400	12400
2000	2000-15/45	+15% -45%	5254	2890	18	9000x2400x2400	16800