



Digital voltage stabiliser

Sirius Advance

three-phase
60-4000kVA



Standard features

Voltage stabilisation	Independent phase control
Output voltage adjustable via display, PC and/or Ethernet (at 400V rated voltage)	from 210V to 255V (L-N) from 360V to 440V (L-L)
Frequency	50/60Hz $\pm 5\%$
Admitted load variation	Up to 100%
Admitted load imbalance	100%
Cooling	Natural air ventilation (aided with fans over 45°C)
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	– Input and output digital multimeter with RS485 port – LCD display – Reactive power regulator
Installation	Indoor
Regulator overload protection	Digital control
Communication system	Ethernet / GPRS / USB / MODBUS TCP/IP
Overvoltage protection	– input class I surge arrester – Output class II surge arrester – Soft start through supercapacitors in case of blackout
Total protection by-pass kit	– Input automatic circuit breaker to protect against short-circuit – Bypass switch made of an interlocked automatic circuit breaker to protect against short-circuit – Output motorized automatic circuit breaker to protect against overload, overvoltage, phase sequence error and phase failure
Integrated automatic power factor correction system	– Based on high energy density metallised polypropylene three-phase capacitors ($U_n = 525V$) – Three-phase blocking reactor (tuning frequency: 180Hz)



APPROVED MANAGING SYSTEM



All ORTEA stabilisers are designed and built in compliance with the 2006/95/EEC (Low Voltage) and 2004/108/EEC (Electromagnetic Compatibility) European Directives with regard to the CE marking requirements. ORTEA products are built with suitable quality components and that the manufacturing process is constantly verified in accordance with the Quality Control Plans which the Company 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 ISO 14001:2004 and OHSAS 18001:2007 Standards. In order to obtain better performance, the products described in the present document can be altered by the Company at any date and without prior notice. Technical data and descriptions do hold therefore any contractual value.



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SIRIUS Advance voltage stabilisers 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.

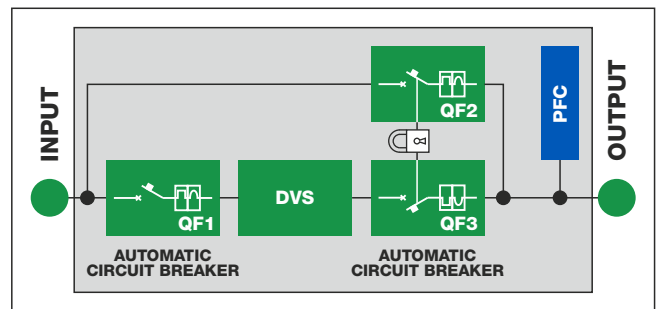
The **input automatic circuit breaker** (QF1) ensures protection against failure and/or short-circuits inside the unit.

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, overvoltage, undervoltage, phase sequence error and phase failure.

The **integrated automatic Power Factor Correction system** maintains the power factor value ($\cos \phi$) to a high level ensuring the known advantages for the users but also affecting the sizing of the stabiliser. The PFC system exploits high energy density metallised polypropylene three-phase capacitors (**Un=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.



Rating in relation to the input variation percentage

±15%	±20%	±25%	±30%	+15%/-35%	+15%/-45%
125	100	80	60	80	60
160	125	100	80	100	80
200	160	125	100	125	100
250	200	160	125	160	125
320	250	200	160	200	160
400	320	250	200	250	200
500	400	320	250	320	250
630	500	400	320	400	320
800	630	500	400	500	400
1000	800	630	500	630	500
1250	1000	800	630	800	630
1600	1250	1000	800	1000	800
2000	1600	1250	1000	1250	1000
2500	2000	1600	1250	1600	1250
3200	2500	2000	1600	2000	1600
4000	3200	2500	2000	2500	2000



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Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage $\pm 0.5\%$	Output current	Efficiency η	Speed regulation	Enclosure	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms/V]	Type	[kg]

Input voltage variation range $\pm 20\% / \pm 15\%$										
100-20	± 20	100	320-480	180	400	144	>98	15	53	880
125-15	± 15	125	340-460	213	400	181	>98	20	53	900
125-20	± 20	125	320-480	226	400	181	>98	15	53	900
160-15	± 15	160	340-460	272	400	231	>98	20	56	1150
160-20	± 20	160	320-480	289	400	231	>98	15	56	1150
200-15	± 15	200	340-460	340	400	289	>98	20	56	1220
200-20	± 20	200	320-480	361	400	289	>98	15	56	1220
250-15	± 15	250	340-460	425	400	361	>98	20	50	1450
250-20	± 20	250	320-480	452	400	361	>98	15	50	1450
320-15	± 15	320	340-460	544	400	462	>98	20	50	1700
320-20	± 20	320	320-480	578	400	462	>98	15	50	1700
400-15	± 15	400	340-460	680	400	578	>98	20	57	1880
400-20	± 20	400	320-480	722	400	578	>98	15	57	1880
500-15	± 15	500	340-460	851	400	723	>98	20	64	2200
500-20	± 20	500	320-480	903	400	723	>98	15	64	2200
630-15	± 15	630	340-460	1071	400	910	>98	20	64	2720
630-20	± 20	630	320-480	1138	400	910	>98	18	64	2720
800-15	± 15	800	340-460	1360	400	1156	>98	24	65	2950
800-20	± 20	800	320-480	1445	400	1156	>98	18	65	2950
1000-15	± 15	1000	340-460	1700	400	1445	>98	24	72	4240
1000-20	± 20	1000	320-480	1806	400	1445	>98	18	72	4240
1250-15	± 15	1250	340-460	2125	400	1806	>98	24	73	5500
1250-20	± 20	1250	320-480	2258	400	1806	>98	18	73	5500
1600-15	± 15	1600	340-460	2720	400	2312	>98	24	73	5980
1600-20	± 20	1600	320-480	2890	400	2312	>98	18	73	5980
2000-15	± 15	2000	340-460	3400	400	2890	>98	24	82	7840
2000-20	± 20	2000	320-480	3613	400	2890	>98	22	82	7840
2500-15	± 15	2500	340-460	4251	400	3613	>98	30	84	9600
2500-20	± 20	2500	320-480	4516	400	3613	>98	22	84	9600
3200-15	± 15	3200	340-460	5440	400	4624	>98	30	93	12800
3200-20	± 20	3200	320-480	5780	400	4624	>98	27	93	12800
4000-15	± 15	4000	340-460	6800	400	5780	>98	36	93	12800



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Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage $\pm 0.5\%$	Output current	Efficiency η	Speed regulation	Enclosure	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms/V]	Type	[kg]

Input voltage variation range $\pm 30\% / \pm 25\%$										
60-30	± 30	60	280-520	124	400	87	>98	10	53	880
80-25	± 25	80	300-500	154	400	116	>98	12	53	900
80-30	± 30	80	280-520	165	400	116	>98	10	56	1150
100-25	± 25	100	300-500	193	400	144	>98	12	56	1220
100-30	± 30	100	280-520	206	400	144	>98	10	50	1450
125-25	± 25	125	300-500	241	400	181	>98	12	50	1700
125-30	± 30	125	280-520	258	400	181	>98	10	57	1880
160-25	± 25	160	300-500	308	400	231	>98	12	64	2200
160-30	± 30	160	280-520	330	400	231	>98	10	64	2720
200-25	± 25	200	300-500	385	400	289	>98	15	64	2720
200-30	± 30	200	280-520	413	400	289	>98	10	65	2950
250-25	± 25	250	300-500	482	400	361	>98	12	65	2950
250-30	± 30	250	280-520	516	400	361	>98	10	72	4240
320-25	± 25	320	300-500	617	400	462	>98	12	72	4240
320-30	± 30	320	280-520	661	400	462	>98	10	73	5500
400-25	± 25	400	300-500	770	400	578	>98	15	73	5980
400-30	± 30	400	280-520	826	400	578	>98	12	73	5980
500-25	± 25	500	300-500	963	400	723	>98	15	82	7840
500-30	± 30	500	280-520	1032	400	723	>98	10	82	7840
630-25	± 25	630	300-500	1214	400	910	>98	15	84	9600
630-30	± 30	630	280-520	1300	400	910	>98	12	84	9600
800-25	± 25	800	300-500	1541	400	1156	>98	15	84	9600
800-30	± 30	800	280-520	1651	400	1156	>98	10	93	12800
1000-25	± 25	1000	300-500	1927	400	1445	>98	15	93	12800
1000-30	± 30	1000	280-520	2064	400	1445	>98	12	93	12800
1250-25	± 25	1250	300-500	2408	400	1806	>98	15	93	12800
1250-30	± 30	1250	280-520	2580	400	1806	>98	15	93	12800
1600-25	± 25	1600	300-500	3083	400	2312	>98	18	93	12800
1600-30	± 30	1600	280-520	3303	400	2312	>98	15	93	12800
2000-25	± 25	2000	300-500	3853	400	2890	>98	18	93	12800
2000-30	± 30	2000	280-520	4130	400	2892	>98	18	93	12800
2500-25	± 25	2500	300-500	4817	400	3613	>98	22	93	12800



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Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage $\pm 0.5\%$	Output current	Efficiency η	Speed regulation	Enclosure	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms/V]	Type	[kg]

Input voltage variation range +15%/-35%

80-15/35	+15/-35	80	260-460	178	400	116	>98	12	53	1000
100-15/35	+15/-35	100	260-460	222	400	144	>98	12	53	1030
125-15/35	+15/-35	125	260-460	278	400	181	>98	12	56	1300
160-15/35	+15/-35	160	260-460	356	400	231	>98	12	56	1420
200-15/35	+15/-35	200	260-460	444	400	289	>98	12	56	1650
250-15/35	+15/-35	250	260-460	556	400	361	>98	12	58	2100
320-15/35	+15/-35	320	260-460	711	400	462	>98	12	58	2220
400-15/35	+15/-35	400	260-460	889	400	578	>98	12	65	2600
500-15/35	+15/-35	500	260-460	1111	400	723	>98	15	65	3420
630-15/35	+15/-35	630	260-460	1400	400	910	>98	15	71	3700
800-15/35	+15/-35	800	260-460	1778	400	1156	>98	15	72	5040
1000-15/35	+15/-35	1000	260-460	2223	400	1445	>98	15	73	5950
1250-15/35	+15/-35	1250	260-460	2779	400	1806	>98	15	75	6480
1600-15/35	+15/-35	1600	260-460	3557	400	2312	>98	18	84	9540
2000-15/35	+15/-35	2000	260-460	4446	400	2890	>98	18	86	11350
2500-15/35	+15/-35	2500	260-460	5558	400	3613	>98	22	95	15500

Input voltage variation range +15%/-45%

60-15/45	+15/-45	60	220-460	158	400	87	>98	10	53	1080
80-15/45	+15/-45	80	220-460	211	400	116	>98	10	53	1130
100-15/45	+15/-45	100	220-460	262	400	144	>98	10	56	1450
125-15/45	+15/-45	125	220-460	329	400	181	>98	10	56	1520
160-15/45	+15/-45	160	220-460	420	400	231	>98	10	56	1800
200-15/45	+15/-45	200	220-460	525	400	289	>98	10	58	2300
250-15/45	+15/-45	250	220-460	656	400	361	>98	10	58	2420
320-15/45	+15/-45	320	220-460	840	400	462	>98	10	65	2800
400-15/45	+15/-45	400	220-460	1051	400	578	>98	12	65	3720
500-15/45	+15/-45	500	220-460	1315	400	723	>98	12	71	4050
630-15/45	+15/-45	630	220-460	1655	400	910	>98	12	72	5440
800-15/45	+15/-45	800	220-460	2102	400	1156	>98	12	73	6400
1000-15/45	+15/-45	1000	220-460	2627	400	1445	>98	12	75	6980
1250-15/45	+15/-45	1250	220-460	3284	400	1806	>98	15	84	10540
1600-15/45	+15/-45	1600	220-460	4204	400	2312	>98	15	86	12400
2000-15/45	+15/-45	2000	220-460	5254	400	2890	>98	18	95	16800