

Static digital voltage stabilisers

Product range

The **static stabiliser** is used when the **correction speed** represents the critical issue (for example, computers, laboratory equipment, measuring benches and medical instrumentation).

The stabilisers are designed and built in compliance with the European Directives concerning CE marking 2006/95/EEC (Low Voltage Directive) and 2004/EEC (Electromagnetic Compatibility Directive).

The voltage stabiliser can operate with **input and output voltage different** (380V/415V) from the rated voltage (400V). Such setting can be performed at the factory or at the Customer's premises according to the instructions given in the handbook.

The stabiliser operates with a **load variation range** for each phase **from 0 to 100%** and **is not affected by the power factor of the load**.

The standard cabinet is an IP21 metal enclosure with RAL7035 finish for indoor installation.

The operating principle is similar to the one described for the electro-mechanical stabilisers. The difference lies in the fact that the **voltage compensation** on the buck/boost primary winding is performed by an electronic board through **IGBT static switches** instead of the

autotransformer with variable transformer ratio. The **microprocessor-based system** monitors the output voltage and determines the opening/closing of the IGBT switch ensuring the best regulation.

The **GEMINI** series is provided with a display (run by the control system microprocessor) showing output voltage and alarm signals. The **AQUARIUS** series is provided with an output digital multimeter.

Main standard components:

- Multi-tap autotransformer.
- Input automatic circuit breaker.
- Manual maintenance bypass.
- Automatic protection bypass (in the control board).
- Microprocessor-based control and command system.
- IGBT-based power regulation circuit.
- Input EMI/RFI filter.
- Output Class II surge arrestors.
- Digital display or multimeter.

Accessories

- Isolating transformer
- IP54 cabinet for outdoor installation.

Gemini	Single-phase	4-20kVA
Aquarius	Three-phase	10-60kVA





Static digital voltage stabiliser

Gemini

single-phase
4-20kVA



Standard features

Voltage regulation	IGBT control
Selectable output voltage	220-230-240V
Frequency	50/60Hz $\pm 5\%$
Admitted load variation	Up to 100%
Cooling	Forced ventilation
Ambient temperature	-25/+45°C
Storage temperature	-25/+60°C
Max relative humidity	95%
Admitted overload	150% 2 sec.
Harmonic distortion	None introduced
Colour	RAL 7035
Protection degree	IP21
Instrumentation	Output digital voltmeter
Installation	Indoor
Overvoltage protection	Output class II surge arrestor
Protections	<ul style="list-style-type: none">– Input automatic circuit breaker.– Automatic bypass protection.– Manual maintenance bypass.



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.

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Gemini

single-phase
4-20kVA

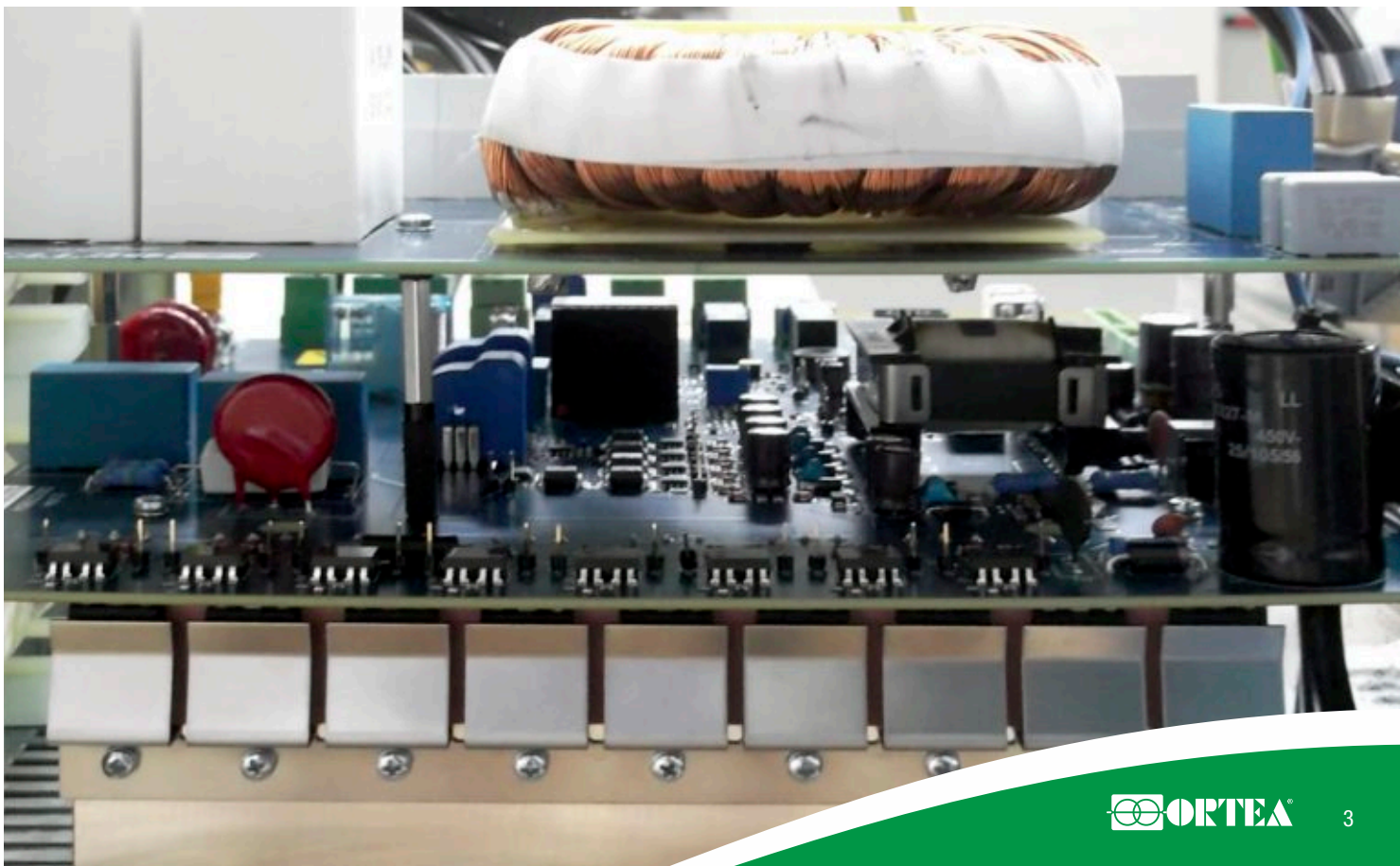
Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage $\pm 0.5\%$	Output current	Efficiency η	Correction time	Enclosure	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]		Type	[kg]

Input voltage variation range $\pm 20\% / \pm 15\%$

ES7-20	± 20	7	184-276	38	230	30	>98	Half-cycle	13	32
ES10-15	± 15	10	195-265	51	230	43	>98	Half-cycle	13	40
ES10-20	± 20	10	184-276	54	230	43	>98	Half-cycle	13	40
ES15-15	± 15	15	195-265	76	230	65	>98	Half-cycle	13	40
ES15-20	± 20	15	184-276	81	230	65	>98	Half-cycle	14	57
ES20-15	± 15	20	195-265	102	230	87	>98	Half-cycle	14	57

Input voltage variation range $\pm 30\% / \pm 25\%$

ES4-30	± 30	4	161-300	25	230	17	>98	Half-cycle	13	32
ES5-25	± 25	5	172-288	29	230	22	>98	Half-cycle	13	40
ES5-30	± 30	5	161-300	31	230	22	>98	Half-cycle	13	40
ES7-25	± 25	7	172-288	40	230	30	>98	Half-cycle	13	40
ES7-30	± 30	7	161-300	44	230	30	>98	Half-cycle	14	57
ES10-25	± 25	10	172-288	57	230	43	>98	Half-cycle	14	57





Static digital voltage stabiliser **Aquarius**

three-phase
10-60kVA



Standard features

Voltage regulation	IGBT control
Voltage stabilisation	Independent phase control
Selectable output voltage	220-230-240V (L-N) / 380-400-415V (L-L)
Frequency	50/60Hz $\pm 5\%$
Admitted load variation	Up to 100%
Cooling	Forced ventilation
Ambient temperature	-25/+45°C
Storage temperature	-25/+60°C
Max relative humidity	95%
Admitted overload	150% 2 sec.
Harmonic distortion	None introduced
Colour	RAL 7035
Protection degree	IP21
Instrumentation	Output digital multimeter
Installation	Indoor
Overvoltage protection	Output class II surge arrestor
Protections	<ul style="list-style-type: none"> – Input automatic circuit breaker. – Automatic bypass protection. – Manual maintenance bypass.



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Aquarius

three-phase
10-60kVA

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

Input voltage variation range $\pm 20\% / \pm 15\%$

ET20-20	± 20	20	320-480	36	400	29	>98	Half-cycle	23	130
ET30-15	± 15	30	340-460	51	400	43	>98	Half-cycle	23	170
ET30-20	± 20	30	320-480	54	400	43	>98	Half-cycle	23	170
ET45-15	± 15	45	340-460	76	400	65	>98	Half-cycle	23	170
ET45-20	± 20	45	320-480	81	400	65	>98	Half-cycle	30	200
ET60-15	± 15	60	340-460	102	400	87	>98	Half-cycle	30	200

Input voltage variation range $\pm 30\% / \pm 25\%$

ET10-30	± 30	10	280-520	20	400	14	>98	Half-cycle	23	130
ET15-25	± 25	15	300-500	29	400	22	>98	Half-cycle	23	170
ET15-30	± 30	15	280-520	31	400	22	>98	Half-cycle	23	170
ET20-25	± 25	20	300-500	39	400	29	>98	Half-cycle	23	170
ET20-30	± 30	20	280-520	41	400	29	>98	Half-cycle	30	200
ET30-25	± 25	30	300-500	57	400	43	>98	Half-cycle	30	200

