Static digital voltage stabilisers

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 (Low Voltage Directive and 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 multimetre.

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 multimetre.

Accessories
- Isolating transformer.
- IP54 cabinet for outdoor installation.

Gemini	Single-phase	**4-40kVA**
Aquarius	Three-phase	**10-120kVA**

2 YEARS WARRANTY

Gemini

single-phase
4-40kVA

Standard features

Voltage regulation	IGBT control
Selectable output voltage*	220-230-240V
Frequency	50-60Hz ±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 voltmetre
Installation	Indoor
Overvoltage protection	Output class II surge arrestor
Protection	– Input automatic circuit breaker – Automatic by-pass protection – Manual maintenance by-pass

* 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 stabiliser parameters.

Gemini
single-phase
4-40kVA

Type	Input voltage variation range	Rating	Input voltage range	Maximum input current	Output voltage ±0.5%	Output current	Efficiency	Correction time	Cabinet	Weight
	[%]	[kVA]	[V]	[A]	[V]	[A]	[%]	[ms/V]	Type	[kg]
Input voltage variation range **±20%/±15%** (the values listed in the table are referred to 230V nominal voltage)										
ES7-20	±20	7	184-276	38	230	30	>98	mezzo ciclo	13	32
ES10-15	±15	10	195-265	51		43				
ES10-20	±20	10	184-276	54	230	43	>98	mezzo ciclo	13	40
ES15-15	±15	15	195-265	76		65				
ES15-20	±20	15	184-276	81	230	65	>98	mezzo ciclo	22	57
ES20-15	±15	20	195-265	102		87				
ES20-20	±20	20	184-276	109	230	87	>98	mezzo ciclo	23	80
ES30-15	±15	30	195-265	153		130				
ES30-20	±20	30	184-276	163	230	130	>98	mezzo ciclo	23	95
ES40-15	±15	40	195-265	205		174				
Input voltage variation range **±30%/±25%** (the values listed in the table are referred to 230V nominal voltage)										
ES4-30	±30	4	161-300	25	230	17	>98	mezzo ciclo	13	32
ES5-25	±25	5	172-288	29		22				
ES5-30	±30	5	161-300	31	230	22	>98	mezzo ciclo	13	40
ES7-25	±25	7	172-288	40		30				
ES7-30	±30	7	161-300	44	230	30	>98	mezzo ciclo	22	57
ES10-25	±25	10	172-288	57		43				
ES10-30	±30	10	161-300	62	230	43	>98	mezzo ciclo	23	80
ES15-25	±25	15	172-288	87		65				
ES15-30	±30	15	161-300	93	230	65	>98	mezzo ciclo	23	95
ES20-25	±25	20	172-288	116		87