ttf transformatoren technologie friesland

GEMINI / GEMINI PLUS

single-phase
10-40 kVA

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

The voltage stabilizer can operate with input and output voltage different (single-phase 220V/240V - three-phase 380V/415V) from the rated voltage (single-phase 230V - three-phase 400V). Such setting can be performed at the factory or at the Customer's premises according to the instructions given in the handbook. The stabilizer 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 RAL 9005 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.

Main standard components:

- «Buck/boost» transformer.
- 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

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 maters 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.

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Voltage regulation	IGBT control
Selectableoutputvoltage*	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 9005
Protection degree	IP21
Instrumentation	Output digital voltmeter
Installation	Indoor
Overvoltage protection	Output class II surge arrestor
Protection	– EMI/RFI filters – Automatic by-pass protection

* 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.

Accessories - available on request

The characteristics described so far are relevant to the standard voltage stabilisers. Accessories to perform specific tasks are available on request.
Combinations or one or more of the accessories listed in the following might result in an increase of the stabilizer overall dimensions and weight.

Interrupting devices
Load protection against over/undervoltage
Manual by-pass line
Total protection kit
Input isolating transformer
Integrated automatic power factor correction system
SPD surge arrestor
EMI/RFI filters
Neutral point reactor
IP54 protection degree for indoor and outdoor installation

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Input voltage variation ±20% or ±15%,Rated power 7 to 40 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)						
Type	Input Variation	Rated Power	Input Current	Output Current	Dimension WxDxH	Weight
[kVA]		[kVA]	[A]	[A]	[mm]	[kg]
ES 7-20	± 20%	7	38	30	300x560x300	32
ES 10-15	± 15%	10	51	43		
ES 10-20	± 20%	10	54	43	300x560x300	40
ES 15-15	± 15%	15	76	65		
ES 15-20	± 20%	15	81	65	410x530x1200	57
ES 20-15	± 15%	20	102	87		
ES 20-20	± 20%	20	109	87	410x680x1200	80
ES 30-15	± 15%	30	153	130		
ES 30-20	± 20%	30	163	130	410x680x1200	95
ES 40-15	± 15%	40	205	174		

Input voltage variation ±30% or ±25%,Rated power 4 to 20 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)						
Type	Input Variation	Rated Power	Input Current	Output Current	Dimension WxDxH	Weight
[kVA]		[kVA]	[A]	[A]	[mm]	[kg]
ES 4-30	± 30%	4	25	17	300x560x300	32
ES 5-25	± 25%	5	29	22		
ES 5-30	± 30%	5	31	22	300x560x300	40
ES 7-25	± 25%	7	40	30		
ES 7-30	± 30%	7	44	30	410x530x1200	57
ES 10-25	± 25%	10	57	43		
ES 10-30	± 30%	10	62	43	410x680x1200	80
ES 15-25	± 25%	15	87	65		
ES 15-30	± 30%	15	93	65	410x680x1200	95
ES 20-15	± 25%	20	116	87		

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