

ITALWEBER

ELETTRA



Electrodynamic voltage stabilizer

Series STC-T three phase

Operating instruction manual

Dear Sirs,

We invite you to read the technical manual that will help you to learn all the necessary elements for proper installation of your STABILIZER.

We are at your disposal for any further information you require.

Best Regards.

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1. GENERAL WARNINGS – SAFETY AT WORK

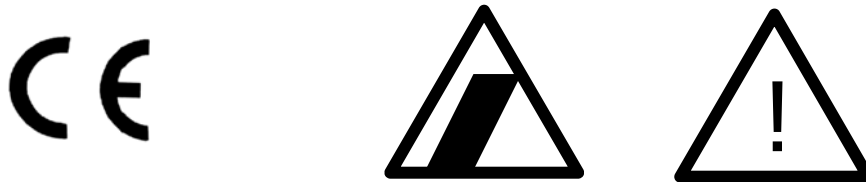
The voltage stabilizer is an electric apparatus, which due to its internal electric tension, may cause hazardous accident if not properly used.

Any possible risk will be eliminated to the surrounding ambient if the product is installed according to instructions.

The operator who activates the apparatus and is in charge of maintenance must be well aware of this matter and be able to identify all signals given from the apparatus.

The client will be responsible in case of improper installation and activation not conforming to the security norms given by the manufacturer.

Note: This is an updated technical manual. The manufacturer reserves the right to change technical specification or modify item without any previous information.



Standards :

EN 60742, EN 60076-1, EN 61558-2-2 / -2-4 / -2-6 / -2-17,
EN 50091-2 cl.B, IEC 289,
DIRECTIVE 89/336/EEC, DIRECTIVE
73/23/EEC, EN 60529

Note: The contents of this technical file are updated to the last issue.

The Manufacturer reserves the right to modify and change the specifications of the product without prior notice

2. INTRODUCTION

The ITALWEBER ELETTRA automatic voltage stabilizers are professional apparatus, which guarantee electric energy supply to the load maintaining a constant stabilized voltage even though the network is subject to variations.

Their utilization is indispensable whenever variations or sudden network surges are present in the network, which supplies the network units.

The product in your property is a result of accurate technological research, and it's easy to be used.

All materials utilized for the manufacturing are subjected to strict testing under various operating conditions.

3. INSTALLATION

Before to switch-on the apparatus, the following preliminary steps must be observed:

- check the main network verify the voltage input to the stabilizer
- check grounded wires
- check primary and secondary network cables (input and output).
- Check that the stabilizer is properly protected against overload and short-circuit (with automatic switches, fuses, etc.)
- Make sure that the apparatus is installed in a well ventilated area and in any case, that the air ducts are not obstructed.

FOR THIS TYPE OF STABILIZER THE NEUTRAL CABLE OF THE PLANT MUST NOT BE CONNECTED, BUT ONLY TO BE PASSING!

4. SETTING AT WORK

Dealing with an apparatus of the " series " type, it is recommended that the power supply is given during no-load operating conditions.

To activate the stabilizer:

- close the main input switch to the power station
- check the voltage indicated on the voltmeter
- close the main output switch of the output terminal
- insert load

To deactivate the stabilizer:

- deactivate the load
- open the output switch
- open the input switch

Furthermore, it is possible (for apparatus which foresee it) to regulate the output current within $\pm 2\%$ of the nominal stabilized value, allowing a high or low connections for loading or network purposes.

5. FUNCTIONAL DESCRIPTION

The electrodynamic voltage stabilizer **STC-T** is basically constituted by the following components:

Power circuit

Is realized by a special transformer " type booster " , together with its terminals.
It is built for handling any voltage alteration originated by the percentage of the voltage chosen by the designer of the plant and maintain the load at the stabilized voltage.

Regulating circuit

It is like a variable autotransformer having a purpose to supply various voltages to the booster transformer through an electronic control.
Each phase has an independent voltage regulation without reference to the NEUTRAL cable which only passing.

Electronic control

Is expressed give a high speed of response to the voltage variations on the network.
This type of stabilizer (equipped with adequate protection) drives the dc motor of each variable autotransformer.

Isolating transformer (on request)

It as a purpose, where necessary or required, of the galvanic separation between the network and the load.

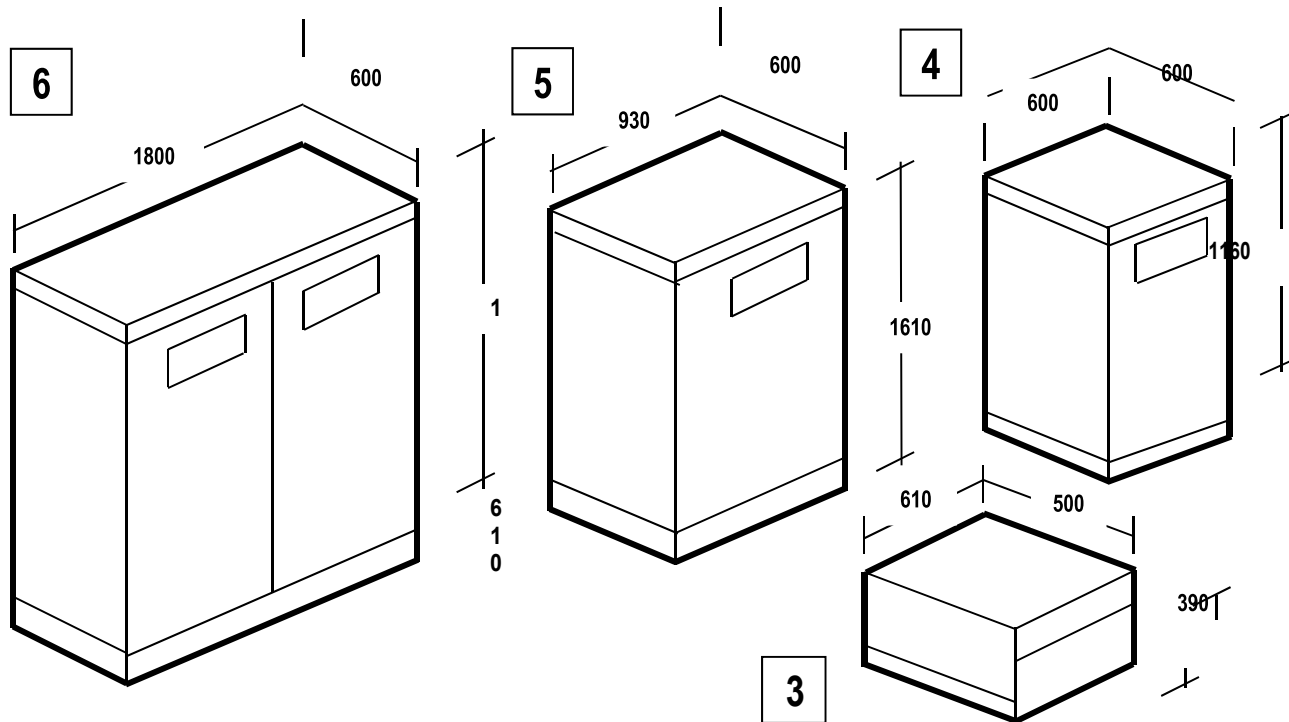
IMPORTANT:

For the standard versions (without isolating transformer), having a booster transformer, the electrodynamic stabilizer **STC-T** is not able to filtrate the disturbs present in the network or caused by the load, nor the galvanic separation of itself from the network.

6. TECHNICAL DATA

| Rated power KVA | INPUT VOLTAGE VARIATION | | | | Ref. |
|--------------------|-------------------------|------------------|------------------|------------------|------|
| | ±10% 360-440V | ±15% 340-460V | ±20% 320-480V | ±25% 300-500V | |
| 3 | | | | 1T/3 | 3 |
| 4 | | | 1T/4 | | |
| 5 | | 1T/5 | | | |
| 6 | | | | 2T/6 | |
| 7,5 | 1T/7,5 | | 2T/7,5 | | |
| 9 | | | | 3T/9 | |
| 10 | | 2T/10 | | | 4 |
| 11 | | | 3T/11 | | |
| 13 | | | | 4T/13 | |
| 15 | 2T/15 | 3T/15 | | | |
| 17 | | | 4T/17 | | |
| 20 | | | | 5T/20 | |
| 22 | 3T/22 | 4T/22 | | | 5 |
| 25 | | | 5T/25 | | |
| 30 | | | | 6T/30 | |
| 33 | 4T/33 | 5T/33 | | | |
| 40 | | | 6T/40 | 7T/40 | |
| 50 | 5T/50 | 6T/50 | 7T/50 | | |
| 80 | 6T/80 | 7T/80 | | 8T/80 | 6 |
| 100 | 7T/100 | | 8T/100 | | |
| 120 | | | | 9T/120 | |
| 132 | | 8T/132 | | | |
| 150 | | | 9T/150 | | |
| 160 | | | | 10T/160 | |
| 200 | 8T/200 | 9T/200 | 10T/200 | | 6 |
| 240 | | | | 11T/240 | |
| 260 | | 10T/260 | | | |
| 300 | 9T/300 | | 11T/300 | | |
| 400 | 10T/400 | 11T/400 | | | |
| 600 | 11T/600 | | | | |

- Rated input voltage 400V+N
- Frequency 50/60Hz
- Stabilized output voltage 400V+N ± 1,5%
- Response speed 25 ÷ 40 msV
- Insensitiveness to load and powerfactor variations costant
- Max. instantaneous overload 10In
- Overload 10 %
- Efficiency at full load 98 %
- Ambient temperature 10 + 40°C
- Max unbalance 50%
- Instruments:
 Voltmeter, overrange signal lamps, voltmetric commutator, potentiometer with ± 5 % regulation



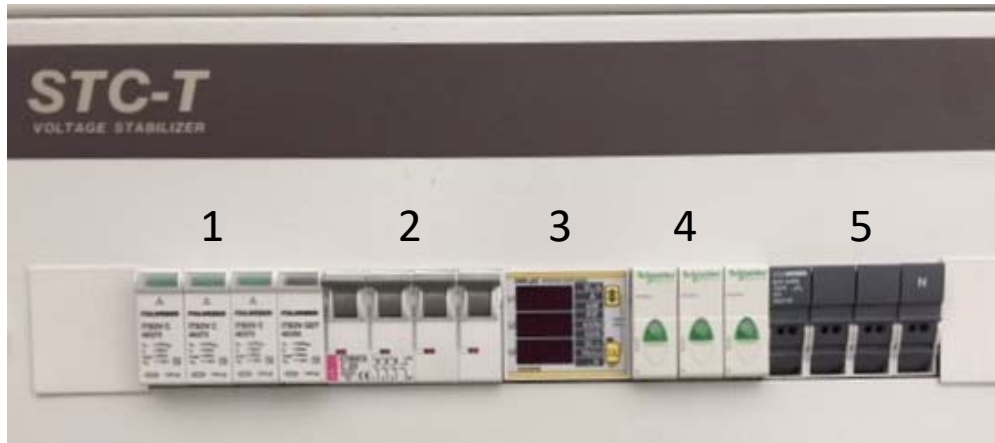
7. ELECTRICAL CONNECTIONS

The section of the cables for power supply is depending of the network conditions.
The intervention time of the protections must be coordinated before and after stabilizer.

It is recommended to follow the reported nominal values on the plate of the apparatus (power in KVA and correspondent current).

Bear in mind that the value of impedance given from the circuit is very low, therefore it is not possible to use the stabilizer as a circuit breaker especially under short-circuit conditions.

8. CONTROL PANEL



1. Surge Arrester
2. Miniature circuit breakers
3. Voltmetric commutat
4. Light warning min. voltage out of range
5. Fuse protection



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