

ENSTO

Ensto LVAC

Power quality solutions



Better life.
With electricity.

Ensto LVAC power quality solution offers reliable, fast and cost effective way of maximizing the existing low voltage network capacity.

ensto.com



Expertise in network power quality

Ensto allows energy to be produced, stored, and consumed in a flexible, intelligent, economical, and reliable manner. We are involved in building a better society by creating products and solutions that are used to improve the daily lives of us all.

The international electricity quality standard EN 50160 sets high standards for distribution companies and requires the most reliable and uninterrupted power distribution. Ensto wants to ensure high and consistent-quality power distribution by providing the best possible power quality solutions. Our power quality solutions are maximizing the capacity, safety, and lifetime of existing low voltage grids with cost-effective and fast ways. They are developed and manufactured to represent the latest innovations and demands so that high-quality electricity can be delivered throughout the network.

- **Voltage Booster** is the choice when having problems with lowered voltage levels. Even in the most difficult situations, it boosts the voltage up to 20%.
- **Voltage Controller** is the choice if eg. overvoltage problems caused by renewable energy production, exist in low voltage network. This small device can easily repair either lowered or overvoltage problems.
- **Phase Balancer** increases the safety! The device increases short circuit currents, which enables faster response of the protective devices in the fault situations. It also corrects asymmetric load problems and decreases harmonic distortion in low voltage networks.



Ensto
Utility Manager

Ensto Utility Manager is a cloud-based control system which enables observing and managing the data from the electricity network and its customers in detail - with all end devices. SCADA compatible.



Ensto Phase Balancer

Maximizes the capacity of existing networks

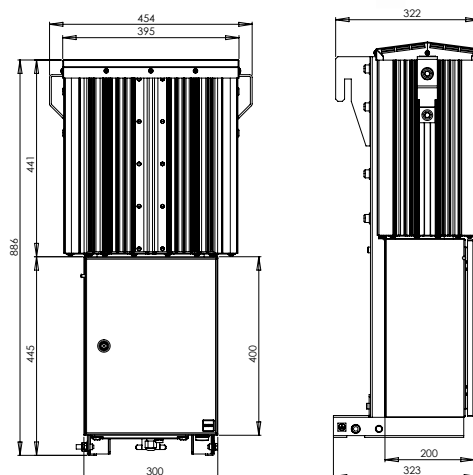
Ensto provides the best possible power quality solutions for low voltage grids



Ensto Phase Balancer corrects unbalanced loads in three phase networks and improves safety at the same time. The end users can enjoy safe and balanced electricity without worries about flickering lights or overloading the network.

The device can be used in several different locations in three phase networks, depending on which power quality problem has to be solved. The device offers multiple features that help utility network companies to improve capacity in low voltage network. Parallel connection allows fast and secure installation that saves investment costs.

- **Efficient** – Maximizes the existing low voltage capacity, reduces line losses, flicker, and total harmonic distortion (THD).
- **Safe** – Increases short circuit current, improves protection devices' operation time and reduces unwanted neutral wire current.
- **Cost efficient** – Enables minimal investment costs but considerably improves low voltage networks.



Ensto Voltage Booster

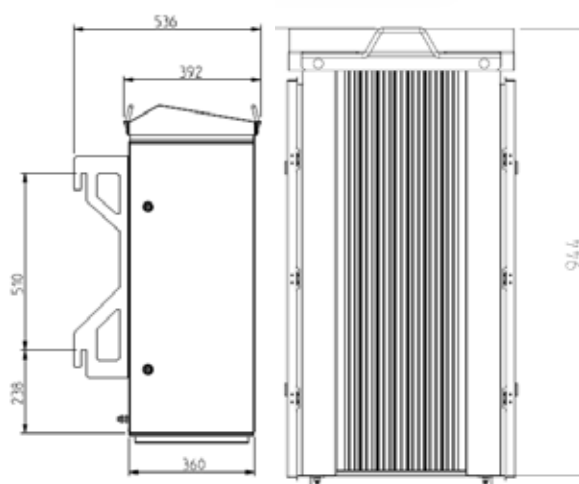
Solution for power quality problems



Ensto Voltage Booster corrects the lowered voltage level of energy consumers at the end of the network. It can be a quick and temporary solution when the network capacity is exceeded, and it can be reused by installing it in a new place.

Ensto Voltage booster is installed near the location where the lowered voltage level problem exists. The device measures the existing voltage continuously and if necessary activates the boosting function. Boosted voltage is based on an auto-transformer and the ratio of the boosting can be changed gradually with semiconductor switches.

- **Quick** – Quick to install and to take in use. Quick solution that provides better life quality for the end users in their homes.
- **Efficient** – Complies the existing grid topology, updates the existing grid to meet the current voltage quality demands and maximizes long lifetime of the low voltage network.
- **Safe and ecological** – Air-cooled, manufactured from ecological materials, and fully recyclable.



Ensto Voltage Controller

Answer for today's power quality problems

Ensto's power quality solutions maximize the capacity and safety in low voltage networks

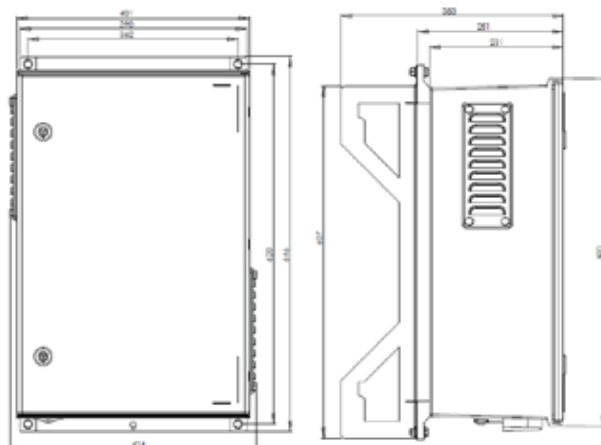


Ensto Voltage Controller is a single-phase solution, which is installed close to the energy consumer interface, where lowered or over voltage problem exist.

The device measures the existing line voltage continuously and determines the increase or decrease function automatically based on the local situation.

Ensto Voltage Controller is protected by a miniature circuit breaker and a control module that monitors the operation of the device, e.g. the transformer temperature. The protection class of the device is IP44, so it's suitable for a variety of different environmental conditions, from blazing hot to freezing cold.

- **Fast** – Quick to install and to take into use.
- **Compact** – Lightweight, efficient, and double isolated – there is no need for grounding.
- **Safe and ecological** – Air-cooled, manufactured from ecological materials, and fully recyclable. The device has a simple connection with Ensto ClampoPro terminals.





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