



Why Choose a Voltage Stabilizer ?

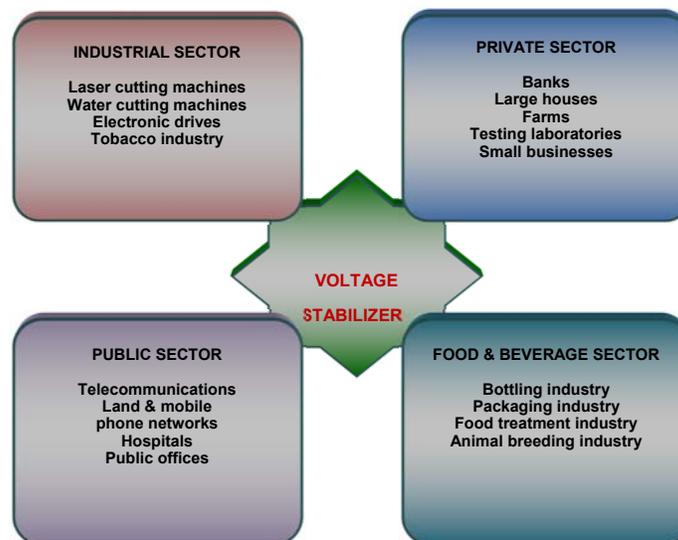
The increasing use of voltage sensitive electronic equipment requires products able to guarantee the supply of high quality voltage, despite variations in the main supply. Loss of data, defective products, security failure, machinery faults and inaccurate information are only a few examples of possible problems due to unstable supply.

The voltage stabilizer has proved to be an efficient **solution** to prevent potential damage due to input voltage fluctuation. Installing a voltage stabilizer is often the solution to ensure continuity and quality of production. A typical voltage stabilizer is able to respond to changes in the voltage level on the input line.

Sags may be due to undersized distribution lines, connection of large loads to the network, ground faults, etc. Surges might be generated by disconnection of large loads, increased voltage at the generating plant, atmospheric events, etc. The duration of such phenomena depends on their cause and is not easily predictable. Sags are generally more common especially where the distribution system is not wide and efficient .



Applications



Characteristics

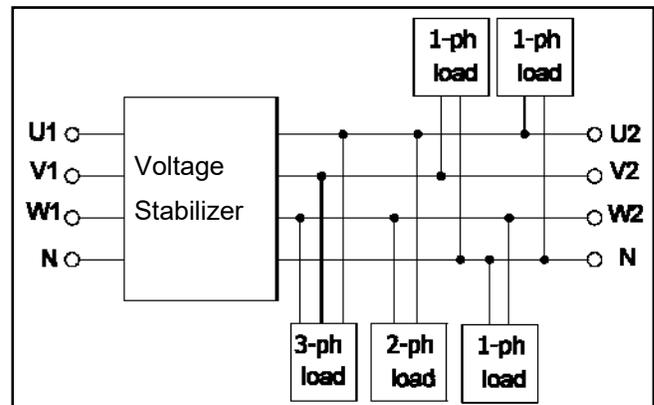
The stabilizers are designed and built in compliance with the European Directives concerning CE marking 2006/95/EEC (Low Voltage Directive) and 2004/EEC (Electromagnetic Compatibility Directive) and can be used in A and B environments according to IEC439.1.

DIGIT@L-M+ stabilizers cover the power rating range between **150kVA and 1000kVA** allowing for several input voltage variation percentages within a broad range (from +30% up to -45%).

Regulation in the **DIGIT@L-M+** stabilizers is achieved independently on each phase. Either toroidal or columnar regulators are used depending on rating.

Areas for Application

DIGIT@L-M+ stabilizers are suitable for use with 3-phase loads and single-phase loads with up to 100% unbalance or with unbalanced input rated voltage. They are even suitable in case of a non-symmetric main supply. **In this configuration, the voltage stabilizer requires the presence of a neutral.** It can also operate without neutral wire by adding suitable equipment (Δ/Y isolating transformer or neutral inductance).



Instrumentation, Alarms & Control

The instrumentation is installed on the cabinet door and consists of two multi-task digital network analyzers, which provide information regarding the status of the lines upstream and downstream from the voltage stabilizer (phase and linked voltages, current, power factor, active power, apparent power, reactive power, etc).

Minimum voltage, maximum voltage, internal overheating and overload on the voltage regulator are signalled by an acoustic alarm.

The stabilizer is provided with microprocessor-based logic control.

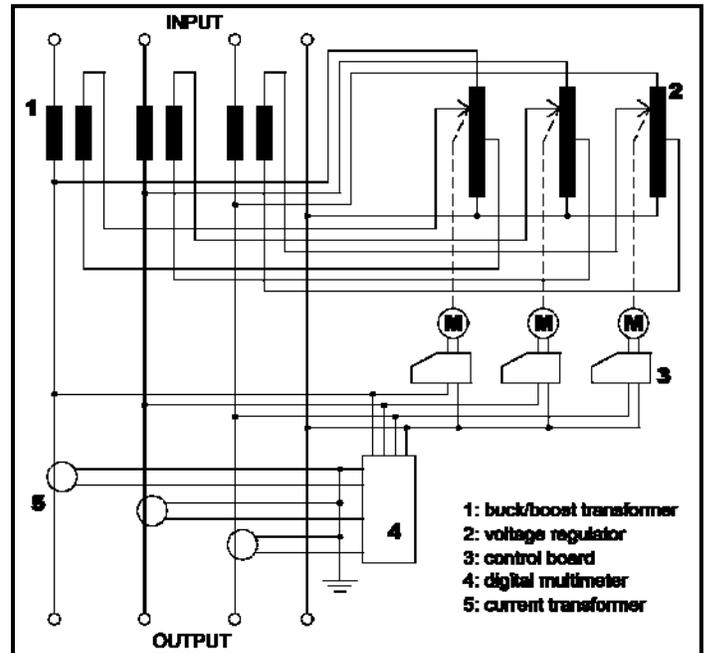
DIGIT@L-M+ Voltage Stabilizer 150-1000 kVA



Working Principle

The control circuit compares the output voltage value to the preset value. When the percentage variation is too high, the control drives the voltage regulator gear motor. This causes the regulator rollers to change their position thus varying the voltage drawn and supplied to the buck/boost transformer primary winding.

As the secondary voltage of the buck/boost transformer is either in phase or in opposition to the supply, the voltage drawn from the regulator is added to or subtracted from the mains voltage, thus compensating its variations.



Main Features

- Power design based on the maximum input current;
- Regulation based on 'RMS voltage' and insensitivity to harmonics on the mains;
- Full functionality with load charge variable from 0 to 100%
- Up to 30% harmonic content admitted on the load current.
- Insensitivity to the load power factor
- No generation of noticeable harmonics in the output voltage.

Protections & Signals

- Motor rotation stop due to regulation reaching the limit switches
- Motor rotation failure due to short-circuit
- Maximum and minimum line voltage alarm
- PCB thermostat (set to 65°C)
- Automatic circuit breaker to protect against overload and short circuit on the voltage regulator
- Fuses to protect the auxiliary circuits
- Class II surge arrestors

DIGIT@L-M+ Voltage Stabilizer

Selectable Rated Voltage (3ph+N)	380V-400V-415V-480V
Input variation range	+15% / -25%
Output Accuracy	±0.5%
Frequency	50/60Hz ±5%
Regulation Time	18msec/V
Efficiency	>98%
Admitted Load Variation	0-100%
Admitted Load Unbalance	0-100%
Supply Waveform Distortion Increment	<0.2%
Permitted Overload	200% / 2 Min
Cooling	AN (Aided over 45°C)
Ambient Temperature	-25°C/+45°C
Storage Temperature	-25°C/+60°C
Relative Humidity	95%
IP Protection	IP21(NEMA1) or IP54 (NEMA4)
Color	RAL7035
Installation	Indoor or Outdoor



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3075, 14th Avenue Unit13
Markham, Ontario
L3R 0G9 Canada
Tel: 416-849-2299
US Tel: 440-290-4499
Fax: 416-849-2298
www.omniverter.com
info@omniverter.com