ACCESSORIES

The characteristics described so far are typical of the standard machine. Accessories performing other tasks can be supplied on request. Combinations of one or more of the following accessories might require the expansion of the stabiliser size.

Interrupting devices

Every voltage stabiliser can be fitted with an automatic circuit breaker with thermal and magnetic release on the input (to protect from short-circuit downstream the stabiliser on inside it) and/or on the output (to protect from overload). The input breaker must be chosen according to the highest possible input current.

Surge arrestors (SPD)

Where not already provided, surge arrestors (lightning arrestors) and overvoltage suppressors can be added to protect the load from overvoltage peaks of atmospheric or operational origin by discharging them to ground.
The installation depends on the system configuration. For example, in case of high ratings the suggested sequence would be: spark-gap arresters followed by an isolating device (ideally an isolating transformer) and varistor-based arresters on its output.

Input isolation transformer

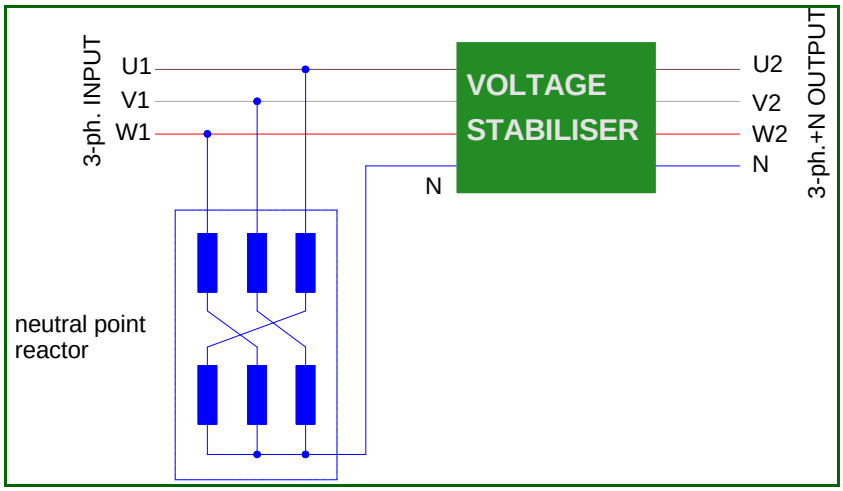
The input isolation transformer is the best solution to provide for:

- galvanic separation between the stabiliser and the mains
- delta/star or delta/zig-zag connection in order to cancel the 3rd harmonic and balance the phase voltages
- generation of a fixed and steady neutral point
- protection from overvoltage generated by connecting/disconnecting manoeuvres on the line

The transformer is fitted with electrostatic screen between primary and secondary winding.
It is also possible to have high insulation level (16kV) between input and output

Neutral-point reactor

The neutral point inductor creates a neutral reference to the system when the input AC mains does not include the neutral connection or when a stable neutral is required to supply the load. The neutral point inductor is available for any stabiliser size.



Maintenance By-pass switch

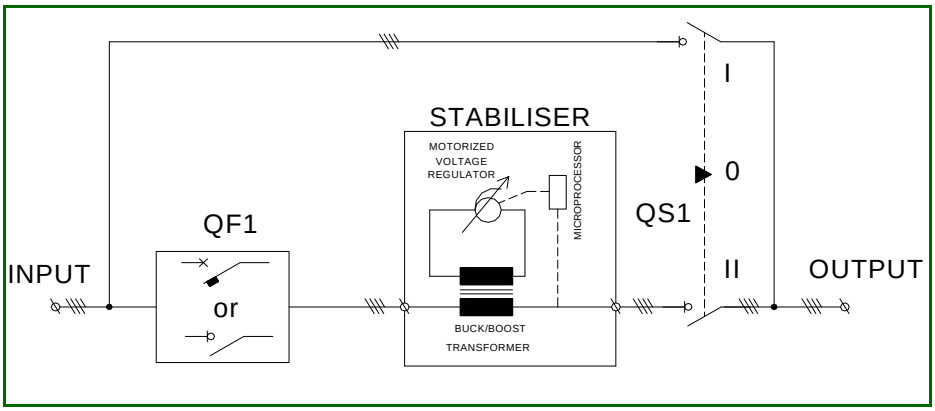
The by-pass circuit enables the stabiliser to be segregated from the line supplying the load. The operator can therefore access the internal components and perform maintenance or repairing sessions without having to disconnect the load. For the duration of the bypass condition, the load is directly fed by the mains: the voltage is therefore not stabilised. The bypass line configuration can be chosen between the following possibilities:

1.

- input disconnecting switch
- I-0-II changeover interlocked switch on the output line

2.

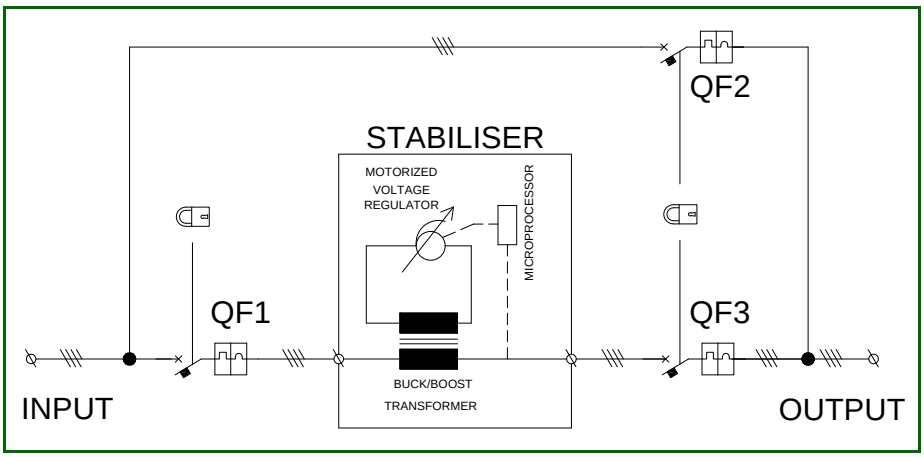
- Input automatic circuit breaker
- I-0-II changeover interlocked switch on the output line



3.

- Input automatic circuit breaker (QF1)
- Bypass automatic circuit breaker (QF2)
- Output automatic circuit breaker (QS3)

QF1 is independently lockable from QF2 and QF3.
QF3 is interlocked with QF2 by means of an individual key. When one of the breakers is closed, the other one is open and the closing spring cannot be manually loaded.



Over/undervoltage protection

This circuit offers a double protection by:

- delaying the connection to the load each time the stabiliser switches on, so that the user can undergo a smooth start-up with an already stabilised voltage.
- protecting the load from surges, sags and overload by disconnecting the load from the stabiliser.

The protection intervenes when the output voltage is outside a ±6% range (with regard to the rated value) for at least 8 seconds.
When the supply goes back to the regular value (within a ±2% of the nominal value for at least 5 seconds), the load is automatically re-connected.

Integrated PFC system

A PFC system can be integrated in the same cabinet with a voltage stabiliser, offering the stabilisation and the correction of the power factor of the plant in the same solution.
The result is a stabilised supply to the load and a higher power factor of the load itself, with the advantage of a reduction in the rated power of the stabiliser.

Sirius digital voltage stabiliser with integrated PFC bank

IP54 stabilisers

indoor installation

They are equipped with air conditioning units allowing for the correct ventilation of the internal magnetic and electrical components.
The cabinet is completely sealed: this makes the stabiliser suitable for operating in damp and dusty environments.

100kVA ±20% IP54 Discovery

Rear-mounted A/C units

outdoor installation – air cooled

ORTEA's stabilisers are also available for outdoor installation in steel air cooled cabinets.

Air cooled outdoor IP54 ORION for mobile telecommunication use

Air cooled outdoor IP54 SIRIUS

outdoor installation (oil-cooled)

ORTEA's outdoor stabilisers are also available with oil-cooling system, which gives a bigger overload capability and a better protection to the magnetic components inside the cabinet.