

Uninterruptible Power Supply (UPS),

armed against power failures

■ Continuous production, guaranteed safety

Even brief power failures and voltage dips can have far-reaching consequences: loss of data, an irreparably blocked extruder, valuable products falling from a conveyor belt... These failures can have a serious effect on the productivity, reliability and safety of your business. It's a sure bet that this is something you want to avoid.

■ A UPS...

... guarantees the continuity of your power supply

A UPS uses the energy from a battery or flywheel to bridge voltage dips and brief power failures. It is also useful during longer power failures, as it will bridge the time needed to start the emergency generator. In this way the UPS guarantees the continuity of industrial plants and ensures safety at hospitals, airports, tunnels, etc. It will save you a great deal of trouble and will eliminate the considerable costs that can often accompany a sudden loss of power.

■ Laborelec...

... guarantees the effectiveness of your UPS

A UPS is like an insurance policy: to be sure that all eventualities are covered, at an optimal price, the best thing you can do is consult an expert. Our experts look into your particular situation and give an objective, technical and financial appraisal of the various devices on the market. Laborelec will also help with the installation and monitoring of the UPS, thereby guaranteeing you an effective reaction in the event of a power failure.



The technical Competence Center
in energy processes and energy use.
From innovation to operational assistance.



We will think along with you to find the best UPS solution for your business from a technical and financial point of view.

■ Types and characteristics

A UPS device provides a sort of energy back-up between the electrical supply and the load. It can be either static or dynamic.

A static UPS consists of batteries and power electronics. Static devices vary in power from 200 W to 800 kW. The bridging time depends on the number of batteries and is usually about 10 minutes as standard. 95% of disruptions can be handled with a bridging time of a few seconds. By combining a static UPS with an emergency generator your system autonomy is virtually unlimited.

A dynamic UPS consists of a constantly revolving flywheel and a quick-start diesel engine. Dynamic devices vary in power from about 100 to 2000 kW. In theory the device can supply power indefinitely, but in practice this is limited to the quantity of diesel available.

The static UPS: operating principle

A rectifier converts the electricity supply to direct current. In the event of a power shortage a battery in parallel provides the energy required. This electrical power is then re-converted to alternating current by means of an electronic A/C converter. The power electronics in static UPS devices can sometimes produce disruptive harmonics. We will check this and take appropriate measures where necessary.

The dynamic UPS: operating principle

A synchronous machine, mounted in parallel, turns a flywheel. In the event of a power shortage the energy flow is reversed: the flywheel powers the synchronous machine, which then operates as a generator and provides the electrical power needed to cover the shortage. If longer disruptions occur a quick-start diesel engine drives the flywheel.



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Five reasons for you to choose Laborelec:

- you have one-stop shopping for your energy needs;
- you get access to more than 40 years of experience;
- you get rapid service with reliable solutions;
- you increase the profitability of your installations;
- you benefit from independent and confidential advice.