

## LoadStart - Automatic Generator Start

- Generator starts when a load is applied.
- Generator stops when the load is removed.
- Generator runs when a load is applied or during a timed period.
- Fully automatic.
- Fully integrated.
- Efficient and reliable.
- Reduces fuel consumption.
- Reduces pollution and greenhouse gasses.
- Very convenient.
- Interfaces to a security system.
- Inputs for sensors to directly start the generator.
- One power output controlling the generator when the load is applied or removed.
- Second power output that only comes on when the generator is started by the first power output.

### Overview

LoadStart is for applications where stopping and starting the generator manually is inconvenient. Automatic operation is required but the application does not warrant the full Powerguard PS System.

LoadStart senses when the load is applied and automatically starts the generator. LoadStart then monitors the load and when it is removed automatically shuts the generator down. Virtually all loads or mixtures of loads will work with the system.

There are two power outputs from the system. The first power output controlling the generator

when a load is applied or removed. The second power output coming on when the generator is started by the first.

LoadStart works with an auto-start generator. If you have a generator that is key start it can probably be upgraded to auto-start by using a module from Deep Sea Electronics or similar.

LoadStart is very convenient removing the need to manually start and stop the generator when it is required. It will also reduce fuel consumption, generator run-time and maintenance because the generator will only run when required.

### Security

A sensor or sensors can be added to the system that will start the generator when somebody approaches. This can be used to make it more convenient for access at night with the generator starting and the lights coming on without having to enter the building.

It also enhances security with the generator starting and the lights coming on if there is an unauthorised entry.

The sensors can be connected into the system to directly start the generator rather than having to apply a load.

Some of the security lighting can be connected to the system so that it comes on whenever the generator runs. This can be further refined by adding a light sensor so that the security lights only come on at night.

### Programmable Time Clock

LoadStart includes a real time clock allowing the user to programme generator must-run periods during the day. The must-run periods override the load sense operation and keep the generator running for a preset duration. Must-run periods would be used when there are loads being applied regularly and intermittently and it is more convenient to have continuous operation.

The real time clock can also be programmed for no-run periods. The no-run periods override the

load sense operation and prevent the generator starting for a preset period. No-run periods would be used when loads may be applied that would normally start the generator. This could be used to prevent the generator running if a site was closed or under used.

LoadStart is ideal for applications including domestic, building sites, construction sites, businesses and remote locations.

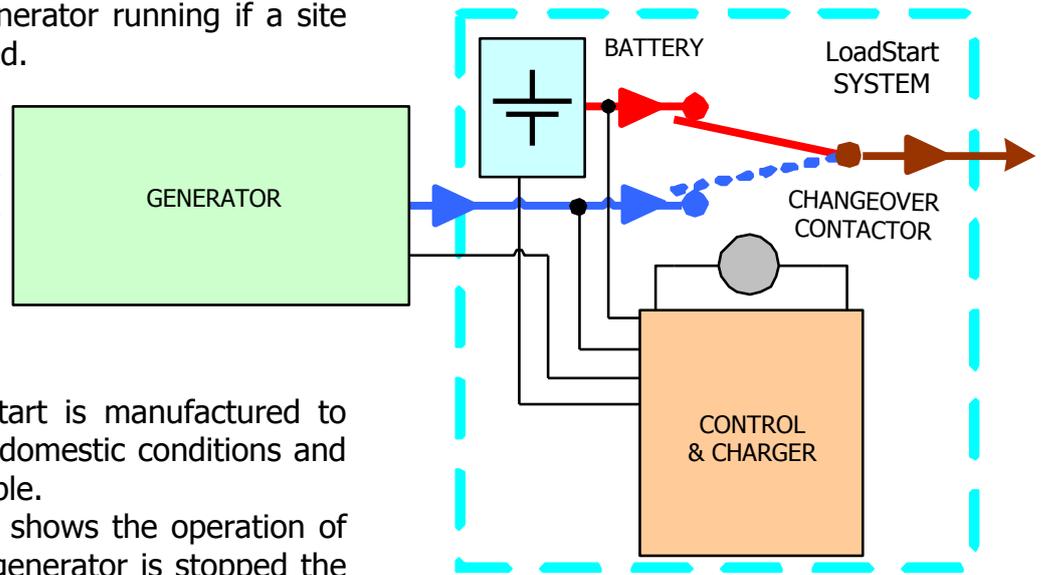
### Operation

The Powerguard LoadStart is manufactured to operate in industrial or domestic conditions and is very rugged and reliable.

The sketch on the right shows the operation of the system. When the generator is stopped the changeover contactor switches the battery power to the remote load - shown by the red path.

When a remote load is switched on the battery circuit is completed and is detected by the control. The generator is started and the changeover contactor switches the generator output and supplies the load - shown by the blue path.

The control senses when the load is switched off and shuts down the generator and switches the output onto the battery. The system is now



ready for a load to be applied again repeating the process.

The Powerguard LoadStart is fully automatic, fully integrated, efficient and reliable.

### Enclosure up to 27kVA

Manufactured from sheet steel with a galvanised mounting plate.

Finish: thermo-setting epoxy polyester powder coating.

Colour: RAL7035 textured finish.

Wall mounting.

