ELPS Series 4
Point of use power for Emergency Evacuation Lifts

Established in 1986 the company offers a power solution for meeting the emergency power requirements of Evacuation Lifts as defined in the Disability Discrimination Act of 1995 and the Regulatory Reform (Fire Safety) Order of 2005. The ELPS is also compliant with BS9999:2017

The Power Systems International team works closely with Lift manufacturers, Local Authority Fire Safety Officers, Consulting Engineers and Architects to determine the best cost effective means to deliver power "on demand" to a dedicated evacuation lift in an emergency when normal operations are halted.

The new Series 4 ELPS product is a “Black Box” point of use power system to feed VVVF lift hoisting or hydraulic systems.

About the Product:
The ELPS Series 4 evacuation lift power system is designed for positioning as close as possible to the lift in a well ventilated indoors location. Installation is quick and simple and therefore the cable runs are short and less exposed to the risk of theft, vandalism or sabotage, risks that exist with “centralised” back-up power systems. The ELPS is supplied with a length of flexible cable for input and output terminated with a CEE17 plug and socket. The package is provided with a “manual bypass box” for installation by the electrical contractor. This box is fitted with the mating plug and socket into which the flexible input and output cables of the ELPS are to be inserted.

ELPS sizes
The ELPS is available in six power capacities of 10, 15, 20, 30, 40 and 60kVA, though other sizes can be supplied upon request, all are suitable for use with mains power of 50Hz 400VAC/415VAC three phase input and output with the output having a protective earth. The inverter is designed to accommodate the unpredictable load of most passenger lifts with weights up to 1600kg. Our team will work with you to determine the correct sizing based on how many landing stops and starts per hour, how many passengers in the lift car in the upward elevation and on the descending journey. How long the lift will remain on a landing with the doors held open to allow disabled persons in wheel chairs be accommodated with dignity. The overall aim is to ensure that the ELPS can handle its minimum required evacuation duty of 10 upward and 10 downward journeys over the required number of landings in a period of 60 minutes.

How the ELPS works...
In order to comply with the current legislation we provide a key operated switch (located by the lift). The key switch is intended so that only an authorised person can operate the lift in an evacuation. When the key is turned it starts the power to the lift much as turning the key in the car starts the engine. The electrical contractor will need to install a suitable 5 cores signal cable from the ELPS to the remote control point. The lift manufacturer will also need to take this signal into the lift control panel for the lift operator to observe the “on emergency power” status alarm. The ELPS can be also be provided with an optional automatic control feature that allows the inverter to start upon sensing the loss of mains power (or other source) at the input terminals of the ELPS. A signal will be provided to indicate the inverter is operating.
Installation

The wall mounting dual purpose manual wrap around bypass box is as close as we can get to providing a “plug and play” simple and quick installation facility for connecting up the ELPS product to the mains power and to the lift traction system. The box will be delivered ahead of the ELPS unit so the electrical contractor can complete the installation of the box and fix all the cables without having the inconvenience of working around an obstructive “box” in the working area. This wall mounting box is fitted with the plug and sockets into which the flexible input and output cables of the ELPS are to be inserted.

Connecting the ELPS to the mains and to the lift

Each unit is tested in our facility with the batteries that will be used for that specific installation. In this way we know that the unit works in that configuration before it leaves us. The ELPS will be delivered to site with the batteries but without the batteries being installed.

The ELPS will be placed in its final operating place with the battery bank and correct internal connections, the plug and socket terminated flexible input and output cables stowed at the rear of the unit plugged into the bypass box fitted on the wall.

When the bypass switch is in the normal position the mains power feeds the ELPS input and battery charger. The ELPS output circuit is connected to the lift traction system and controller.

The emergency

There are many emergencies which may result in a building or part of a building needing to be evacuated. These emergencies are not just restricted to fire, earthquake tremors, explosion, a security threat, impact damage from crashing vehicle, flooding, storm damage, chemical, gas or other vapour release into the atmosphere.

The likelihood of one or more of these occurrences leading to an emergency call to evacuate will vary depending on the location and the use of the building. The majority of emergency considerations in the UK over the past 10 years have focused on fire, toxic fumes and smoke emission and the exceptional storm water flooding and mains power line failures over the winter of 2014. The familiar warning sign asking occupiers not to use lifts in an emergency is often specifically about a fire emergency. At the discretion of official policy relating to Public Buildings it might be permitted to use an appropriate lift under supervision for the evacuation of disabled persons where it is recognised there is a daunting and virtually impossible task to use exit flights of stairs for a quick exit of wheelchair bound persons.

It is important to minimize the cable lengths to reduce the risks of damage. The advantage of the ELPS unit is it can be located close to the source of power feeding the lift or even to fans needed for a safe refuge area.

The ELPS is the obvious solution

The ELPS “point of use” product from Power Systems International is the more secure and better cost effective means of providing power to make the difference for emergency evacuation lifts:

• The ELPS delivers power when it is needed.
• The ELPS delivers power to the point where it is needed.

No exhaust fumes, no smell, no diesel fuel or gas storage, no risk of fuel spillage, no noise, no environmental pollution.....The ELPS just needs a little energy to keep the internal batteries charged ready for the emergency!...perhaps, a “no brainer” choice for the decision maker!