WHITE
PAPER

LifeSafety Power®

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FlexPower Advanced Power Management Systems

Power when you want it and how you need it

Contents

Introduction

Headquartered in the state of Illinois, LifeSafety Power is dedicated to upholding the responsibility of providing the highest quality product to the lifesafety community and produces only listed, agency qualified product.

The FlexPower family of power products is the first group of products to be introduced, with more exciting products to follow over the next several months in the areas of Power Over Ethernet (POE), Network Interface, Rack Compatible, and other categories leading to a solid growth plan for this new company, an energetic new member of the lifesafety industry.

All products are agency listed across multiple disciplines, Fire Alarm, Access Control, Security, CCTV, Mass Notification for use in the US and Canada.
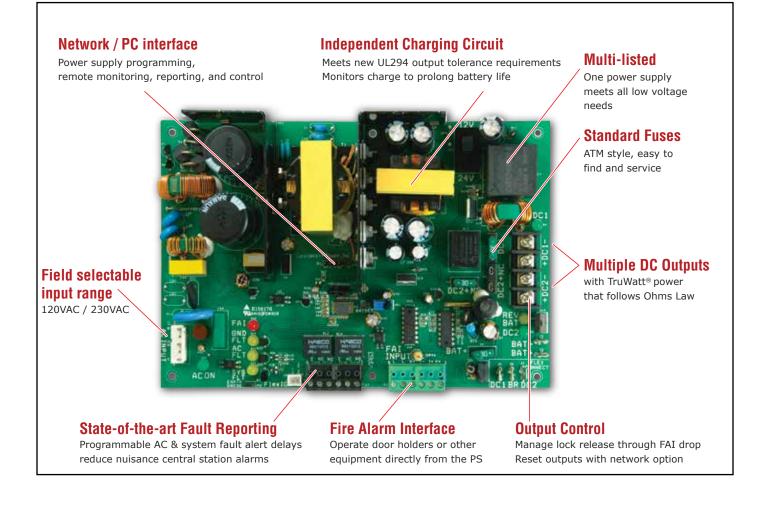
FlexPower Family

The FlexPower family consists of three base power supplies, and seven accessory modules, which may be grouped in any combination and supplied in either of five enclosures.

It is specifically developed to meet the expanding needs of the lifesafety industry by focusing on Access Control, Fire Alarm, Intrusion, Mass Notification and CCTV powered solutions.

For these markets, FlexPower's advanced feature set is designed to provide greater product reliability, increased flexibility, shorter install time, a smaller service inventory, and an intelligent, economical solution to the problem of reliable system power.

Network / PC interface
Power supply programming,
remote monitoring, reporting, and control

Independent Charging Circuit
Meets new UL294 output tolerance requirements
Monitors charge to prolong battery life

Multi-listed
One power supply
meets all low voltage
needs

Standard Fuses
ATM style, easy to
find and service

Field selectable input range
120VAC / 230VAC

Multiple DC Outputs
with TruWatt® power
that follows Ohms Law

State-of-the-art Fault Reporting
Programmable AC & system fault alert delays
reduce nuisance central station alarms

Fire Alarm Interface
Operate door holders or other
equipment directly from the PS

Output Control
Manage lock release through FAI drop
Reset outputs with network option

Product Reliability

All power supplies within the FlexPower system are fully fault protected and feature a fiberglass electronic printed circuit board, as used by telecom companies and the military, to protect the electronics from water, dust, and other corrosive elements found in industrial settings.

All products have been generated with reliability and longevity as a goal by designing for the highest possible operating efficiencies.

Higher efficiencies create lower operating temperatures and longer life.

Data sheet ratings, rather than being overstated, represent realistic values that can be relied upon for many years of reliable service.

Flexibility

The complete product family is agency listed for use in all life-safety industry segments, eliminating the need for multiple products that essentially perform the same purpose.

The FlexPower system provides simple expansion of system capacity or capability in the field by utilizing standard mounting footprints and pre-punched cabinetry. Installer field upgrades retain agency listing and factory custom configurations are fully agency listed.

Install Time

By providing the necessary systems features in the FlexPower system, all functions can be performed in a single, wall-mounted, enclosure requiring a single primary power connection thereby greatly simplifying and reducing installation time.

Generally, the only other wiring to add is the external device field wiring. No internal module interconnections are required to be done by the installer.

Inventory Management

FlexPower feature set standardization enables inventory reduction and simplification.

All power supply units:

– Provide either 12 or 24VDC at the discretion of the installer

– Utilize the same two standard mounting footprints

Service technicians do not have to carry multiple units to cover a range of installed systems because two units will do the job.

Reliability and Intelligence

The FlexPower product provides auto short circuit protect, single, dual, or multiple voltage configurations, and power distribution with all necessary features to support the systems integrator, agency listing for all industry segments, and capacity and capability expansion.

PowerCom software and the companion DataLink cable make it possible for any FPO power supply to be programmed for battery charging current and fault reporting delays, to track battery installation time, the total number of occurring fault conditions, and record several key power supply parameters into memory on a fault occurrence.

The DataLink cable connects to a computer through a standard USB port. Network connection will be available in the second quarter of 2010.

Value

All of the above plus a price structure that competes head to head with any price structure in the industry defines the true meaning of the word "value".

FlexPower Feature Set

LifeSafety Power offers a suite of advanced features found only in the FlexPower family of products:

VSelect

One single switch for configuring the output between 12 and 24VDC eliminates field errors and allows for the reduction and simplification of service inventory by eliminating the necessity of stocking units in each voltage.

TruWatt

Output power capability remains constant regardless of the output voltage setting. For example, a FlexPower 250 watt supply will provide 10 amps at 24VDC and 20 amps at 12VDC, allowing the same number of locking devices to be used at either the 12 or 24V setting.

SureCharge

The microprocessor controlled charging process used by FlexPower guarantees the proper charging current for the battery and the fastest charge time. The constant current charger provides a linear, predictable charge time for any battery set from 4 to 80 amphours without stress or damage to the battery.

Datalink

Smart Power Management Communication interface to monitor, program, control, and report key power supply functions by computer or local/wide area network using a browser interface or LifeSafety Power's PowerCom remote management software. Power supply network connection requires a NetLink network communication module.

Power Health

FlexPower's "Swiss army knife tool kit" for better power management through intelligent battery charging and remote battery state monitoring.

FPO power supply improves battery health with microprocessor control dual rate charging, precision battery current and voltage regulation, deep discharge rescue, and time to service notification. The NetLink communication modules enable remote battery state monitoring, testing and health reporting vie email or SNMP.

The FlexPower System Advantage

PowerCom

LifeSafety Power's proprietary software interface for communication with FlexPower equipment through a LAN/WAN connection. PowerCom is used for power supply monitoring, programming, and reporting. NetLink communication modules added to any FlexPower system report through the PowerCom browser GUI, the health and status of the power system, battery set and connected devices.

FlexConnect

The FlexPower series provides a prewired interconnection system between the power supply and accessory boards of the power system that introduces the concept of a dual voltage bus structure throughout all system modules and eliminates intermodule wiring by the field installer.

Field upgrading or expansion is as simple as using common mounting footprints, predrilled mounting holes, snap-in standoffs, and pluggable wires to add additional system capability or capacity when needed, all without restrictive agency listing issues.

Fault √

Auto-generated alerts and reports for proactive system monitoring sent out through FlexPower's NetLink network communication module. NetLink generates automated reports for detected system or AC faults, fire alarm interface activation, battery aging or on a time base for scheduled confirmation of proper operation.

A time and date stamped log of the past 1000 events is kept as buffer history and is accessed as a scheduled report or when an event triggers an alert and sends out an email.

Reliability+

All power supplies within the FlexPower system are fully fault protected and feature fiber glass PC boards, not paper-based, to protect the electronics from water, dust, and other corrosive elements found in industrial settings. High efficiency power supply design promotes low heat generation leading to a longer service life.

GreenSmart

All members of the FlexPower family are RoHs compliant, lead-free, and meet the new state and federal requirements for energy efficiency

Equipment Information

Power Supply Common Design Features

1. **Off line switching design** eliminates the AC transformer weight and space requirement, maximizes operating efficiency, allows operation on 120 or 230VAC, and minimizes heat generation, leading to a significantly increased operating life and increased reliability.

2. **All power supply** units have two outputs, one continuous for powering the system control panel or auxiliary devices, and one switched for direct control of fail-safe or fail-secure egress locks or other devices without the necessity for accessory modules when installing smaller access control systems, or fire system door holders.

3. **Accepts connection** of accessory modules to expand system functionality in an organized, controllable manner. All accessory modules may be used with any of the FlexPower Power Supply Modules in either of the two enclosures. All accessory modules may be "mix and match" when ordered from the factory, or when updated in the field, without affecting agency listing.

   a. C4, C8 Power Control Module provides either 4 or 8 inputs for use by an access control system, and 4 or 8 protected relay outputs that may be configured for fail-safe, fail-secure, dry contact, or continuous output voltage. When used in a single voltage system, each individual output zone may be programmed to respond to a fire alarm interface for control of egress locks. When used in a dual voltage system each individual output may be programmed to output either of the two system voltages, and to respond to a fire alarm interface connection. Such as in the case where both 12V and 24V locks are used.

   b. D8 Power Distribution Module provides 8 protected outputs for use by a lifesafety system. When used in a single voltage system, each individual voltage output zone may be programmed for a continuous output or to respond to a fire alarm interface for control of egress locks. When used in a dual voltage system, each individual voltage output zone may be programmed for a continuous voltage of either voltage or, to respond to a fire alarm interface for control of egress locks at one of the system voltages.

   c. F8 Power Distribution Module expands on the D8 capability by adding fail-safe, fail-secure, and FAI programming to each of the 8 voltage outputs as well as selection of either voltage in a dual voltage system, six programming choices per zone.

d. M8 Managed Power Control Module The M8 smart powerer controller communicates with the NL4 network module and provides eight (8) monitored and controlled relay outputs accessible from a network or internet.

Utilizing eight (8) control INPUTS capable of voltage or dry contact activation and eight (8) controlled and monitored OUTPUTS, with each output network programmable for failsafe, fail-secure, fire alarm over ride, and AC loss over ride for egress lock control, each output is also programmable to either of the two voltages available when used in a dual voltage iSCAN power system.

Each output may also be individually enabled/disabled through a browser interface and the voltage and current of each output may be monitored via network or internet, and trigger points may be set up on each output to generate an alert when that output is outside of selected parameters..

e. B100 Power Supply Module is used to generate a second, third, or fourth voltage in a multiple voltage system when it is desired to operate the complete system from a single standby battery set or when it is necessary to generate multiple voltages for use within a single system, such as 24VDC, 12VDC, 9VDC, and 5VDC.

f. NL2 / NL4 Network Communication Modules serves as a "Gateway" to the FlexPower system and allows communication from the outside world into the power supply, locks, and power control modules. It will generate alerts on detected fault conditions via Email. SNMP, XML, and PSIA.System performance reports are generated visually on the Graphics User Interface (GUI), and by an Excel compatible CSV File. Using the Netlink allows allows remote control of the power system over LAN/WAN.

4. A universal mounting footprint for the modules and prepunched cabinetry allows interchangeability and addition of modules for easy field upgrades.

5. Intelligent, programmable battery charger handles battery sets from 4 to greater than 80 amphours on larger capacity units and up to 40 amphours on the smallest unit without stress or damage to the battery.

6. Power supplies are protected from input and output cur-

rent overload, surge currents, surge voltages, short circuit, and over-temperature conditions.

7. Power supplies detect and report abnormal operation, AC brownout, AC loss, battery presence, and earth ground utilizing two isolated form 'C' relay contacts. Fault reporting may be programmed for an optional delay to avoid reporting intermittent or short term fault conditions and feature a user disable on the battery presence and earth ground when those functions are not required.

Conclusion

LifeSafety Power's iconic, industry leading FlexPower brand began our quest to provide the most innovative, intelligent networked power solutions for security and life safety applications. FlexPower has been designed from the ground up for enhanced product specification flexibility, reliability and system installation efficiencies and cost savings. Modular system expandability and robust feature sets yield comprehensive benefits to systems integrators and end users in proactive remote monitoring and managed services.

About LifeSafety Power — Power is Knowledge™

LifeSafety Power is the leader in Smart Power Solutions and patented remote monitoring capabilities, providing modular AC, DC, and PoE power systems that meet the growing needs of the life safety and security industries. Realizing that network technology presents new opportunities for active monitoring and management of power supplies connected to access control systems, fire systems, video surveillance and more, the company has built its products from day one with intelligence and functionality in mind. LifeSafety Power's current product offering and planned future innovations in battery test, display and diagnostics represent an important step in providing overall system reliability and uptime.

All of the product features discussed in this white paper are available within LifeSafety Power's product line.

Visit www.lifesafetypower.com for more information.

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