LifeSafety Power

DESCRIPTION

The LifeSafety Power FPO250-N24E1R is a Notification Appliance Circuit (NAC) Expander Power Supply designed to extend the power capabilities of existing NACs and provide power for auxiliary devices. The unit connects to any 12 or 24V Fire Alarm Control Panel (FACP) or operates stand-alone. The unit is configured in a red painted, steel, locking enclosure with tamper switch and integral battery space.

The FPO250-N24E1R will provide regulated and filtered 24VDC power to four NAC's and two auxiliary outputs, the first being a continuous output, and the other a resettable output controlled by NAC, dry contact or voltage input. The NAC outputs are rated at 3.0 amps each and the auxiliary output is rated at 10 amps (current from this output may be continuously supplied, even in alarm, and therefore must be taken into account for power supply loading and battery size calculations). The total system current cannot exceed 10 amps.

The FPO250-N24E1R features independent output circuit supervision and will notify the host FACP of an abnormal or trouble condition. Synchronization is built in for four appliance brands, follower, and temporal modes are also provided.

The FPO250-N24E1R has fully independent supervised initiating circuits that can be used for synchronized strobes and coded horns. Their NAC outputs may be configured as any of the following:

- four Class B (Style Y)
- two Class A (Style Z)
- two Class B and One Class A

These power supplies contain an internal battery charger capable of charging up to 80 amp-hour (AH) batteries.

BENEFITS

- ➢ Agency Listed for Access Control, Fire, Security, CCTV, and Mass Notification
- ➢ *FlexPower®* Feature Set
  - *SureCharge*   Microprocessor controlled battery charging
  - *PowerCom*   Power supply programming / monitoring software
  - *VSelect*   Installer selectable output voltage
  - *TruWatt*   Delivers twice the current at 12V than at 24V
  - *PwrHealth*   Intelligent battery charging and battery state monitoring
  - *FlexConnect*   Dual voltage bus / pre-wired accesory board interconnects
  - *Reliability+*   Full fault protection / high efficiency / fiberglass pcb
  - *GreenSmart*   RoHS compliant, lead free, energy efficient design
  - *DataLink*   Network communication interface option
- ➢ *System Features*
  - Fully modular power management system
  - Multiple outputs for system power, direct lock control and accessory power distribution modules
  - Fire alarm interface for egress lock control (FAI)
  - Configurable fail-safe / fail-secure modes of operation
  - Comprehensive fault detection and reporting including optional earth ground and battery presence
  - AC and System fault output relays can be delayed via PowerCom
  - Microprocessor dual rate charging restores battery sets from 4 to 80 amphours
- ➢ *Lifetime Warranty*

ELECTRICAL RATINGS

Parameter	Rating	Unit
Input Voltage	120 / 230	VAC
Input Power (max)	282	Watts
Output Voltage	12 or 24	VDC
Output Current	20 or 10	Amps
Battery Charge Capacity	80	Ah
Efficiency	87	%
Output Ripple	120	mVp-p
Line Regulation	0.1	±%
Load Regulation	2	±%
BTU Rating	109	BTU/Hr
Continuous Power Outputs	1	
Switched Power Outputs	5	
Fire Alarm Interface	Yes	

AGENCY LISTINGS

USA		CANADA
UL 294	UL 1481	ULC S318
UL 603	UL 2044	ULC S319
UL 864	UL 2572	ULC S527
FCC Part 15, Subpart B		CSA 22.2 #60950
CSFM Approved		

FLEXPOWER® STANDARD FEATURES

SureCharge The microprocessor controlled charging process used by the FlexPower power supply guarantees both proper charging current for the battery and fastest charge time. The constant current charger provides a linear, predictable charge time for any lead acid, gel battery set from 4 to 80 amphours (based on charger rating) without stress or damage to the battery.

PowerCom/PowerCom-USB LifeSafety Power's proprietary software interface for communication with FlexPower equipment through a DATALINK or USB connection. PowerCom is used for power supply monitoring, programming, and reporting.

The NL1 DATALINK network module enhances PowerCom's capability with remote diagnostics, battery management, trouble / service email alerts via LAN/WAN, and remote on/off reset control.

The DL1 USB cable and a computer laptop USB connection, enables PowerCom-USB to be used by service personnel for onsite power supply programming and system diagnostic evaluation.

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 of the power supply 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.

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.

Reliability+ All power supplies within the FlexPower system are fully fault protected and feature fiberglass printed circuit boards rather than paper-based to protect the electronics from water and other corrosive elements found in industrial settings. High efficiency power supply design promotes low heat generation leading to a longer service life.
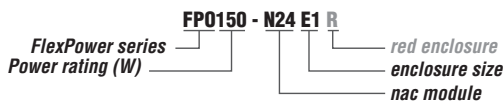
GreenSmart All members of the FlexPower family are RoHs compliant, lead-free, and meet the latest state, federal and European requirements for energy efficiency.

DataLink - Smart Power Management Communication Interface
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 the optional NL1 network module. Power supply computer connection requires the optional DL1 USB cable.

Model No.	Mechanical Info
FPO250-N24E1R	Size: 14" x 12" x 4.5" Weight: 12 lb.

FlexPower Numbering System

FPO150 - N24 E1 R

FlexPower series
Power rating (W)
nac module
enclosure size
red enclosure

FAULT DETECTION AND REPORTING

The comprehensive fault detection and reporting mechanism of the FPO series provides for both local and remote fault reporting.

On-board visual indicators are provided to give immediate installer feedback. Independent form C relay contacts are provided to report AC and system fault conditions to remote or auxiliary equipment.

Detected Fault Conditions:

➢ *AC Power*
  ◆ AC loss, AC low

➢ *DC Power and System*
  ◆ Abnormal or loss of power supply operation
  ◆ Over current, over temperature condition
  ◆ DC output high, low
  ◆ Battery Presence, Earth Ground (user optional)
  ◆ Reversed battery condition, blown fuse or loss of output voltage on selected accessory boards (detected on the power supply)
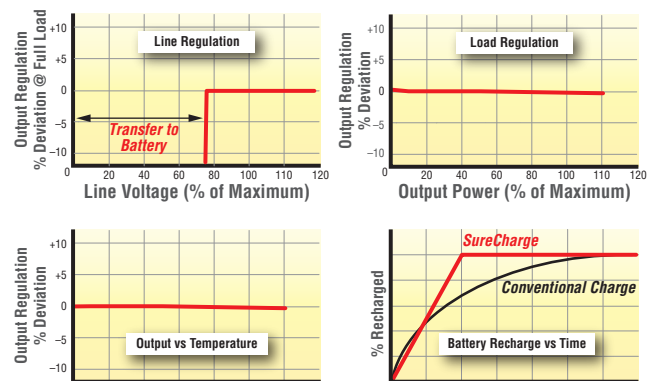
FIRE ALARM INTERFACE (FAI)

➢ *Activation Methods*
  ◆ DC voltage: 9 to 33VDC, 3 to 15mA
  ◆ Dry contact NO/NC

➢ *Latch Enable: NC contact set or switch (typically for Canadian use)*

NOTIFICATION APPLIANCE CIRCUIT (NAC)

The N24 NAC Expander accessory provides up to four NAC outputs, controlled by one or two NAC inputs. Inputs and Outputs can be configured as Class A or Class B. Maximum output is 3A per output zone. The N24 is powered from a 100W or larger FPO power supply set for 24VDC. The N24 works either as a follower (passing along synchronization or audible coding) or generates its own synchronization or audible coding.

➢ *Output Protocols include*
  ◆ ANSI Temporal Code, Steady, Follower Mode
  ◆ Gentex, Wheelock, Amseco-Potter

➢ *Output Voltage is 24VDC, regulated and filtered*
  ◆ 3 Amp current per output to a maximum of the FPO capability
  ◆ Each output is rated for Class 2 Power Limited operation

PERFORMANCE GRAPHS

Line Regulation — Output Regulation % Deviation @ Full Load vs Line Voltage (% of Maximum). Transfer to Battery.

Load Regulation — Output Regulation % Deviation vs Output Power (% of Maximum).

Output vs Temperature — Output Regulation % Deviation.

Battery Recharge vs Time — % Recharged. SureCharge. Conventional Charge.