

# FIRSTLINE® 924

Emergency Lighting Inverter System  
20 and 30 kW

## Three-Phase Central Inverter for Emergency Lighting Applications

FirstLine® 924 delivers high performance, tailored to meet the demands of emergency lighting applications. With a cost-effective reliable design, the FirstLine® 924 helps to ensure personnel safety, during an outage condition.

An all steel construction, with a compact footprint, provides durability, while allowing for simpler installation. Control and operation is easy to manage, plus its double conversion power electronics and battery system maintain full power system protection.

FirstLine® features unparalleled quality and reliability, with constant conditioned power to virtually any lighting type. The available Staco Options Cabinet (OC) makes for a well coordinated circuit distribution system.



Full Two Year  
Warranty

**STACO  
ENERGY®**  
PRODUCTS CO.

# FIRSTLINE® 924

## Three-Phase Central Inverter for Emergency Lighting Applications

In the event of an AC power failure, FirstLine® 924 automatically supports the connected lighting loads on battery power and will continue to provide power without any interruption for a full 90 minutes. When the utility power returns to normal, FirstLine® 924 will automatically recharge the batteries to be ready for the next power disturbance.



### Applications

- Public Buildings
- Commercial and Industrial Facilities
- Infrastructure Systems
- High Security Areas
- Schools, Universities
- Single Point of Power Protection

In addition to meeting life safety requirements, the FirstLine® 924 can also increase the life expectancy of the protected lighting system and reduce long-term cost of ownership.

### Technical Specifications

#### General

- On-line double-conversion topology
- True sine wave output
- Continuous, no-break operation
- Three-phase system will support single or three-phase loads
- LCD front panel monitoring and control
- Automatic system bypass
- Circuit breaker protection integral with battery cabinet, molded-case type

#### Input

- Input Voltage Rating: 208Y/120 and 480Y/277 standard, Delta connection with optional isolation transformer
- Input Voltage Range: +/- 10% system start-up; +10%/-20% from nominal
- Input frequency: 60Hz +/- 5%
- Full load walk-in from 25% to 100% of rated load in <5 seconds
- Harmonic current distortion <5% at full load
- Surge Withstand: Meets IEEE C62.41

#### Output

- IGBT: true sine wave PWM inverter
- Inverter output distortion: <5% THD (100% non-linear)
- Inverter output distortion: <2% THD (linear loads)
- Voltage regulation: +/- 1% of nominal at full load
- Frequency: 60 Hz

#### Battery

- Designed for easy maintenance
- Standard backup time of 90 minutes at full load
- Valve-Regulated Lead-Acid (VRLA) battery
- 10 year design life at 77°F (25°C)

#### Housing

- Freestanding, NEMA 1 steel enclosure
- Service access—top, front, all (4) sides
- Bottom access for conduit entries

#### Environmental

- Agency Compliance: UL924, FCC and CSPR22, Class A
- Operating temperature range 18°F (-8°C) to 104°F (40°C)
- Acoustical Noise: 75 db at 3 feet
- Relative Humidity: 0-95% non-condensing
- Meets NFPA 101 Life Safety, and NEC codes
- Seismic Zone 4 certified

#### Monitoring/Communications

- Front Panel LCD Display
  - 4 x 16 character display
  - System status and alarms
- Communications Port
  - RS-232
  - Dry Contact (AS/400)
  - Remote monitoring
  - SNMP available option

## What is an Emergency Lighting Inverter?

The National Fire Protection Association (NFPA) has written Life Safety Code® (NFPA 101\*\*) that defines the requirements for emergency lighting for means of egress. The standard requires that emergency illumination shall be provided for not less than 1½ hours (90 minutes) in the event of failure of normal lighting. Installation and testing requirements are written in the National Electric Code® (NFPA 70\*\*). The FirstLine® 924 is a central system battery back-up to meet these requirements.

Central lighting inverter system provides for a single point for power connection, monitoring and management of emergency lighting; plus eliminates the high cost of maintenance and testing of each individual emergency light, while security and peace-of-mind is improved. Additionally, other critical loads can be protected such as data security and fire.

\* Copies of summaries of these NFPA Codes are available upon request.



## FIRSTLINE® 924 System Configuration

Part Number	kW	Input Voltage	Output Voltage	Dimensions H x W x D (Inches)	System Weight (Lbs.)	# of Enclosures
FLU924-20-20-B	20kW	208/120Y	208/120Y	70.0 x 76.0 x 35.6	6110	3
FLU924-20-20-BI	20kW	208 DELTA	208/120Y	70.0 x 76.0 x 35.6	6525	3
FLU924-20-42-B	20kW	480/277Y	208/120Y	70.0 x 76.0 x 35.6	6410	3
FLU924-20-42-BI	20kW	480 DELTA	208/120Y	70.0 x 76.0 x 35.6	6518	3
FLU924-20-44-B	20kW	480/277Y	480/277Y	70.0 x 76.0 x 35.6	6581	3
FLU924-20-44-BI	20kW	480 DELTA	480/277Y	70.0 x 76.0 x 35.6	6689	3
FLU924-30-20-B	30kW	208/120Y	208/120Y	70.0 x 76.0 x 35.6	7715	3
FLU924-30-20-BI	30kW	208 DELTA	208/120Y	70.0 x 76.0 x 35.6	7983	3
FLU924-30-42-B	30kW	480/277Y	208/120Y	70.0 x 76.0 x 35.6	7850	3
FLU924-30-42-BI	30kW	480 DELTA	208/120Y	70.0 x 76.0 x 35.6	7972	3
FLU924-30-44-B	30kW	480/277Y	480/277Y	70.0 x 76.0 x 35.6	8029	3
FLU924-30-44-BI	30kW	480 DELTA	480/277Y	70.0 x 76.0 x 35.6	8151	3

Optional OC Cabinet



Optional Wall Mount Bypass Switch (WMBPS)



## Two Year Warranty

### Electronics:

A full **2 Year On-site Warranty** comes standard, and covers both parts and labor within the continental United States. Factory Authorized Start-up (included) is required for warranty coverage.

### Battery:

Our prorated **10 Year Warranty** on the Battery System ensures that your batteries are protected from system failure now and in the future. (Warranty provided by battery manufacturer.)

Extended warranties, customized service plans and preventative maintenance are also available. Please refer to our warranty statement for complete details.

### Central Inverter System Advantages:

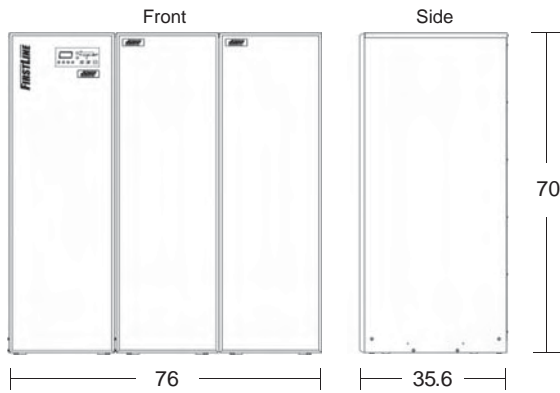
- Single point operations for simplified testing and recordkeeping
- Simplified service for reduced cost of ownership
- Industry standard battery pack for easy maintenance

### Lighting Types Supported:

(Consult factory for specific application)

- Incandescent
- Magnetic and electronic fluorescent ballasts
- High power factor compact fluorescent
- High Intensity Discharge (HID)
- High Pressure Sodium (HPS)
- Metal Halide (MH)

## FIRSTLINE 924 Cabinet Dimensions (inches)



Note suggested clearances for installation: front of cabinet 36 in., back of cabinet 12 in., side of cabinet 24 in.

## About Staco Energy Products Company

Since 1937, customers worldwide have been relying on Staco Energy Products Company to deliver voltage control and power quality solutions tailored to their needs.

As a leading power quality resource, we offer our customers world-class support; from our thorough applications assessment, to our ability to design and deliver a solution that is tailored to the specific needs of our customers; through delivery and commissioning.

Our professional, factory trained service team is in place to ensure that our customers' revenues are protected, and their investment provides them with many years of trouble free operation.

Staco develops total power solutions for OEM and end user applications.

In addition to the FirstLine® 924 Inverter System we offer a wide array of power quality products, including:

- **Uninterruptible Power Supplies**
- **Power Factor Correction**
- **Power Conditioners**
- **Voltage Regulators**
- **Variable Transformers**
- **Custom Engineered Test Sets**



# STACO ENERGY PRODUCTS CO.

Your tailored power solutions provider

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