

PFX-5581

SPS Series Inverters Emergency Power Systems

STANDARD

OPTIONAL



BATTERIES AND CHARGER

Battery

Battery: Sealed Lead Calcium (10 year life)

Battery Voltage: 24 VDC for SPS-55/125, SPS-110/125 models and 48VDC for SPS110/250, SPS220/250 models

Runtime: 90-minutes standard - based on battery performance at (25°C). Other runtimes available, consult factory.

Battery Protection: Low Voltage Battery Disconnect protects the battery from being severely damaged by deep discharge during prolonged power failures.

DC Overload and Short Circuit Protection provided by a DC input breaker and fuse.

Charger

Charger Type: Fully automatic, temperature compensated, dual-mode charger

Power Consumption (Charger Only):

15W maximum (2.5W in standby) for SPS-55/125, and SPS-110/125 models

30W maximum (5W in standby) for SPS110/250, and SPS220/250 models

Recharge Duty Cycle: Meets UL924 requirements

Battery Circuit Breaker: Also used as battery isolator **Controls:**

Momentary test switch, AC-ON,

Charge-ON and Inverter-ON LED indicator lights

Safety Circuitry: AC Lockout prevents battery discharge prior to initial unit power-up.

Brownout Protection automatically switches the unit to emergency mode when utility voltage is significantly reduced

Environmental

Altitude: < 10,000 feet (3,000m) above sea level without derating.

Operating Temperature Range 20°C to 30°C

NOTE: Optimum system performance between 20°C and 30°C; temperatures outside of this range will affect battery performance and life.

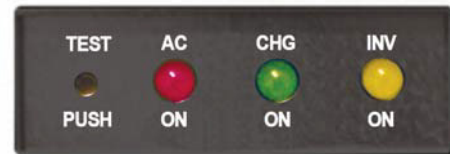
Relative Humidity: 95% non-condensing

OPERATION

Upon failure of the normal utility power the SPS unit is automatically turned on by a solid-state switching circuit and provides a minimum of 90-minutes of emergency power to the connected load. Lumen output will be maintained at 100% of the lamp's rating throughout the entire duration.

A solid-state low voltage disconnect circuit is used to protect the battery from being severely damaged by a deep discharge. When normal utility power is restored, the unit switches the load back to normal utility operation and the fully automatic, temperature compensated, dual mode charger begins to restore the battery; bringing it to full charge within UL924 specified parameters. A brownout sensing circuit insures proper operation during "low line" conditions.

SYSTEM STATUS MONITORING PANEL



All SPS Systems provide a monitoring panel on the front of the unit to show operating status at all times. The panel provides a test switch for user initiated system tests and a 3-LED array that provides an intuitive visual indication of unit readiness.

IMPROVED AESTHETICS

PFX-5581-SPS System's sinusoidal AC output design eliminates voltage drop and proximity concerns. This allows added flexibility in installation location as SPS units can be installed hundreds of feet from the units they power. This means SPS units to be located conveniently out of sight in closets or utility rooms without interrupting architectural aesthetics.

In lighting applications, no special or additional emergency fixtures are necessary. Simply designate and connect existing lighting fixtures, either interior or exterior, to the SPS unit for emergency operation eliminating the need for exposed, stand-alone emergency luminaires

Disclaimer:

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SPS SYSTEM ADVANTAGES

Compared to traditional discrete emergency lighting units, the SPS Series provides emergency illumination from a single power source resulting in lower maintenance overhead and routine testing expenses.

SPS units lower installation costs by powering existing lighting fixtures during emergencies. And because connected fixtures are driven at full brilliancy, they provide far superior egress lighting and deliver improved occupant safety.

SUGGESTED SPECIFICATIONS

An inverter system with sinusoidal output shall be supplied capable of powering any combination of lighting fixtures, including fluorescent, induction and/or LED light sources without compatibility problems

The system shall transfer in less than 1.0 second to reliably back up lighting fixtures without loss of illumination and operate any and all connected lighting fixtures at full lumen output during the complete 90-minute discharge cycle

The input voltage shall be the same as the output voltage and shall be single phase 120/277 volts, 60 Hz. Output capacity will be (55W/125VA) / (110 Watts/125VA) / (110 Watts/250VA) / (220 Watts/250VA) for a minimum duration of 90-minutes.

The design shall be a standby, off-line inverter with on-line efficiency of 98%; on-line double conversion UPS systems shall not be considered acceptable alternatives. SPS System output shall be a PWM generated sine wave with less than 3% total harmonic distortion with "Soft-Start" design reducing fixture inrush current. The system shall also provide short circuit and overload protection as standard.

An intuitive three LED display shall provide system operational information at a glance and alert user to any malfunction in system performance. Authorized maintenance personnel shall have access to the system's controls while being protected from any live exposed connections.

Protective devices shall include AC Line fuses, DC input breaker and a DC input fuse. The entire SPS system, including batteries, shall be incorporated into compact cabinetry which shall have provisions for (surface, recessed or T-Grid) mounting.

System shall be capable of providing up to 4 switch bypass circuits, adjustable output or 0 to 10 volt dimmer bypass, remote test switch, and self-test/self-diagnostics, were necessary

System shall utilize a sealed lead calcium battery with a 10 year design life. The charger shall be temperature compensated, dual mode type, and recharge the batteries as per UL924 guidelines. Entire system shall be tested, approved, and labeled to UL924 Emergency Lighting and Power Systems standards. T-Grid models will be plenum rated.

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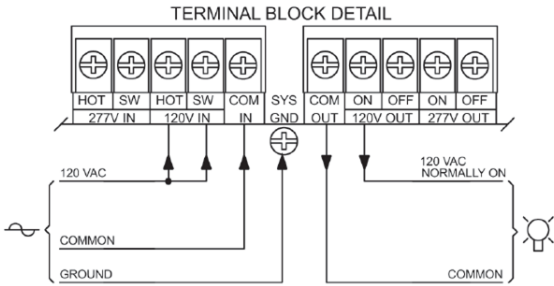
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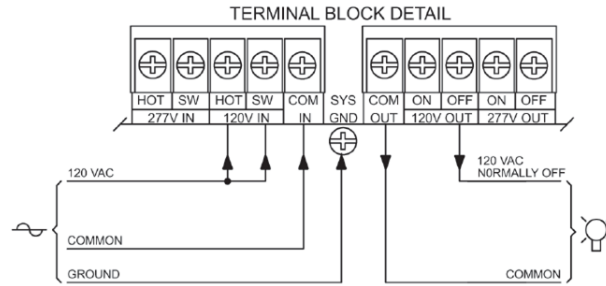
WIRING DIAGRAMS

120VAC Connections

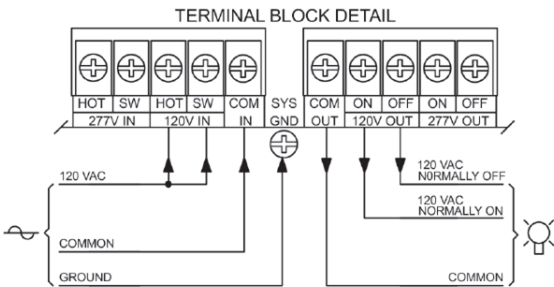
A) NORMALLY ON LOADS



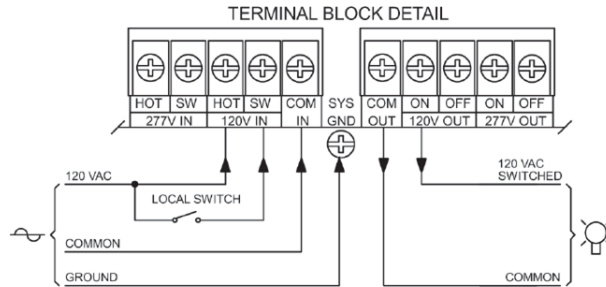
B) NORMALLY OFF LOADS



C) NORMALLY ON & OFF LOADS

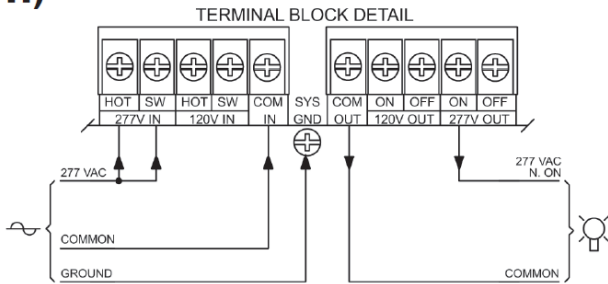


D) SWITCHED LOADS

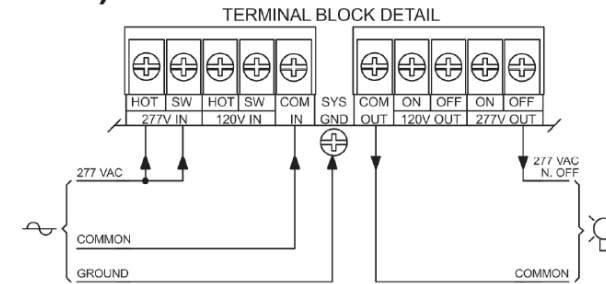


277VAC Connections

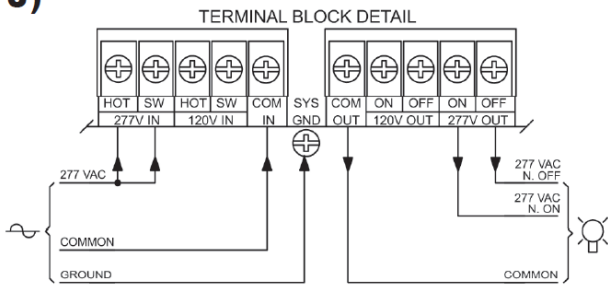
H) NORMALLY ON LOADS



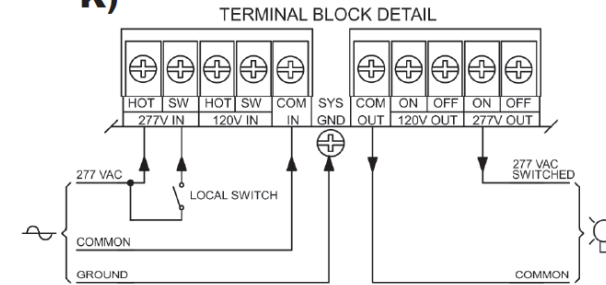
I) NORMALLY OFF LOADS



J) NORMALLY ON & OFF LOADS



K) SWITCHED LOADS



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