

## Features

### Real-time Battery Condition Reporting

Smart circuits of the SPS-V's battery manager automatically check the battery condition every five minutes by disconnecting the charger and placing a resistive load on the battery. This periodic testing provides a real-time indication of battery condition.

### Alarms

If the SPS-V charging circuit loses its AC power source, a loss of charge alarm is activated. If the battery manager detects a voltage below 12.2 volts, a low battery voltage alarm is activated. If the battery voltage registers below 11.8 volts, a very low voltage status signal is activated. A low battery voltage alarm with charging voltage present acts as an early warning to let the user know that the battery is approaching the end of its useful life.

### Auto-Disconnect

If the charging source is lost for an extended period of time, the communications devices will continue to draw current and thereby drain the battery. To prevent battery damage, an "auto-disconnect" isolates all loads from the battery when the battery voltage drops to 11.0 volts. When AC power for charging is restored, the battery is automatically reconnected and all devices become operable.

### Long-life Battery

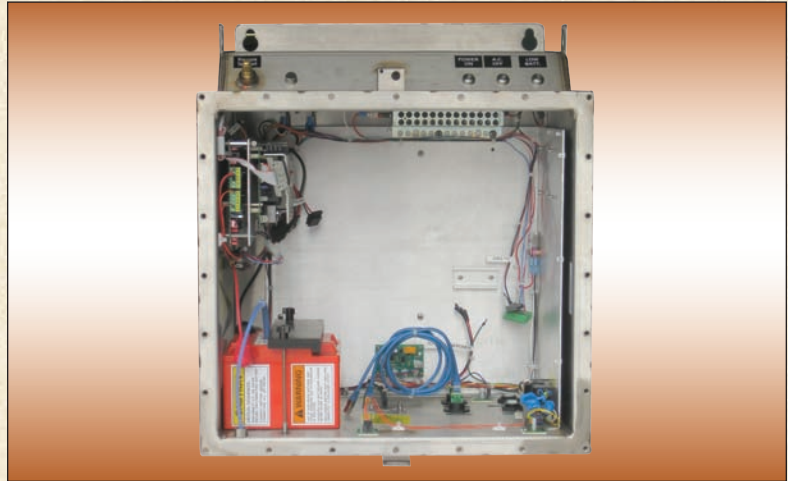
The battery used in the SPS-V is a maintenance-free, 33 amp-hour lead-acid type that is completely sealed. It has a pressure relief valve that only opens during excessive gas buildup should overcharging occur. Gasses are vented via a hose to the outside of the enclosure, preventing the buildup of corrosive and explosive gasses within the enclosure. The battery has a design life expectancy of 10 to 15 years depending upon duty and environment. Alternate battery types are available.

### Charging the Battery

The battery is charged through a transformer and rectifier that deliver an electronically controlled charge from the customer's AC source. The charging circuit has a temperature compensation feature to prevent overcharging or undercharging the battery, which could occur with temperature fluctuation.

# SPS-V Power System

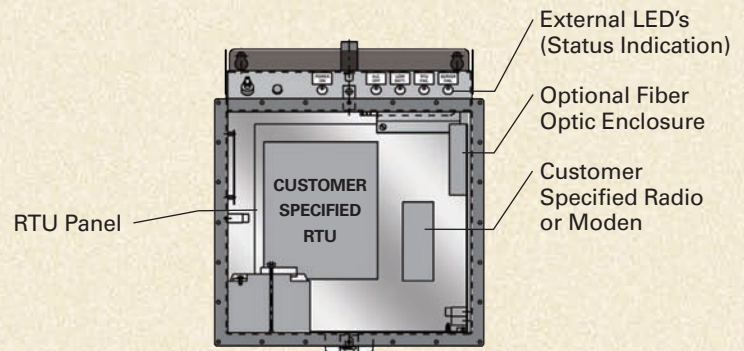
for underground  
outdoor applications



The Cleveland/Price SPS-V is a submersible power supply for below ground applications. It is also available in an overhead model (SPS) for above ground applications. The SPS-V is designed to mount directly to the walls of underground vaults.

The SPS-V is specifically designed to house a customer's components of choice. SPS-V applications include:

- Remote monitoring and control
- Data collection
- Communications router



The SPS-V's rugged construction is designed for real world conditions with a wide operating temperature range and battery charging components capable of withstanding condensing humidity. Materials are selected for corrosion resistance.

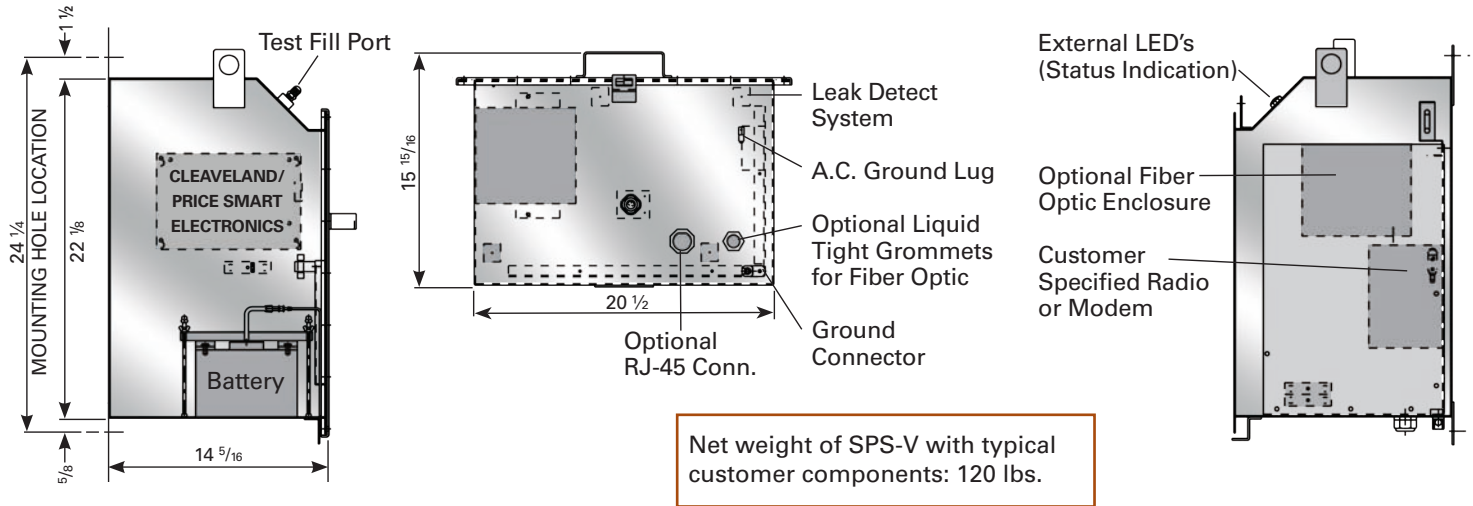
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# SPS-V Power System



## Enclosure

The enclosure of the SPS-V is designed for long, maintenance-free life. The stainless steel enclosure is rated IP68. Other features include:

- Gasketed front panel with lifting handle
- Front panel padlocking tab
- Documentation pocket
- Cabinet grounding connector
- Lifting eyes
- Pressure test port
- Gore valve
- Custom mounting panel for customer's devices

## Submersibility

All cable entrances are fitted with watertight connections. Liquid-tight grommets are used for fiberoptic cable entrances. Each SPS-V enclosure is factory tested to verify submersibility. The SPS-V is provided with a four point moisture detection system with alarm contact to alert user in case of water intrusion.

## Circuit Board

The circuit boards of the SPS-V's smart electronics are conformal coated to withstand condensing humidity, open door rain, frost, and environmental pollutants.

## Heater and Thermostat Protection

A thermostatically controlled 100 watt anti-condensation heater is provided in the SPS-V power supply.

## Surge and Electrostatic Protection

Incoming AC to the SPS-V is fused and surge protected by the field-proven Smurff™ surge protector. SPS-V circuits have been tested to withstand surges and electrostatic voltages beyond the values set by ANSI C37.90.1 and C62.41, and Mil. Std. DOC-HDBK263.

## Accessories/Options

- Coaxial cable lightning arrestor
- Enclosure mounted antenna
- 120 VAC GFI convenience outlet
- External status indicating lights
- Watertight and padlockable RJ-45 port
- Internal light with switch
- Transparent dead front panel
- Radio kill switch with external LED indication
- Intruder alarm

Cleveland/Price can design the SPS-V to meet customer specifications and can populate the SPS-V with the customer's components of choice to provide a true plug and play device.

## SPS-V Specifications

Input Voltage	120 V or 240 V
Battery Voltage	11.0 V– 15.0 V
Load Voltage	12 V nominal, 24 V nominal
Maximum Battery Charging Current	5 A
Maximum Load Current	2.5 A @ 12 V (higher load current rating is available) 0.65 A @ 24 V (higher load current rating is available)
Status Indications—Alarms	Loss of AC, Low Battery Voltage, Very Low Battery Voltage, Moisture Detection
Operating Temperature Range	-40°C to 50°C