



RPS-1: Portable Power Supply

Features:

Easy Interface to Data Loggers, Transducers, Transmitters.

Self-contained, Battery Powered

Two Programmable Output Voltages (3.5-22VDC, 250mA)

Optically Isolated Power Supply On/Off Control Input

Battery State Of Charge Indicator

Rechargeable from AC, DC, Solar

Weatherproof

General Description:

The RPS-1 is a self contained battery power source for use in conjunction with the [Bitlogger System Base](#), [Hyperlogger System Base](#), and other data loggers, field RTU's and field data acquisition equipment to power transducers requiring external power (e.g., strain gauges, pressure transducers, 4-20mA transmitters, etc.) over a voltage range of 3.5 - 22 VDC.

The RPS-1 contains two user configurable, rechargeable gel-cell type batteries and integral recharging circuitry. The charging circuitry will accept AC or DC current from photovoltaic arrays, wind generators, utility sourced transformers, or other current sources. The sealed batteries are capable of operating in any orientation over a temperature range of -10 to 60C. The slide switch allows the user to configure the RPS-1 for 12 or 24VDC operation.

Two user programmable power supply outputs are available which can source seven different regulated voltage levels from 3.5 to 22 VDC. Outputs are short circuit/over-current protected. The two power supplies can be independantly programmed for output voltage as well as type of operational mode. Two modes are available: Continuous On or Automatic Operation. In Automatic Operation, the power supply is under control of an optically isolated low voltage (5VDC, 0.5mA) control input signal;. This control input interfaces directly to the Bitlogger RPS-1 control output line or one of the Hyperlogger built in digital outputs (or any other data logger's control output) which in turn cycles the RPS's power supplies on and off, providing transducer excitation under the loggers control during a logging session. This automatic power supply cycling technique maximizes RPS-1 battery life.

Additionally, the RPS-1 can be used as a general purpose regulated power source for many other types of equipment (alarm systems, control systems, etc.) requiring field power in a remote environment.

Applications:

Field Excitation for Transducers & Transmitters (4-20mA, Bridge, Voltage, etc.)

Low Cost Emergency Power Supply

Auxiliary Power for Battery Powered Instrumentation

Alarm Power

Control Applications Power Source

Power Supply Specifications:

Power Supplies: Two, independent user programmable power supplies.

Output Voltages: 3.5, 5, 10, 12, 15, 18, 22 VDC; dip switch programmable

Current Output: 250mA maximum per supply, short circuit protected.

Batteries: (12VDC) operation. A three-position user switch selects 12VDC, 24VDC or OFF

Charging Circuitry:

Input Voltage: 12VDC Operation, 14 to 20 VA/VDC; 24VDC Operation, 26 to 32 VAC/VDC

Current: 150mA maximum, automatic current limit control

Charging technique: Tapering current, fixed voltage -13.6V in 12VDC operation, 27.4V in 24 VDC operation.

Other:

I/O Wiring 7/16" binding head terminal strips

Control signal: 5VDC, 0.5mA optically isolated. High turns ON power supplies in AUTO mode.

State Of Charge: 10 step bar graph LED display of relative battery voltage under load. Indicates LOW to FULL charge.

Package: Gasketed rain-proof plastic, supplied with liquid-tite wire fittings.

Dimensions: 9.5"H x 7.5"W x 4.15"D

Weight: 7 LBS (including batteries)

Operating Temperature: -10 to 40C for full capacity and life, -10 to 60C with reduced battery life and capacity.

Unit is shipped with instructions, hanger, Bitlogger interface control cable, three seal fittings, and AC (120VAC) recharger.

Ordering Information:

RPS-1 Includes batteries, enclosure, fittings, hanger, control cable

PPM-12/24 Photovoltaic power module

ACXF RPS-1 battery charging AC(120VAC) adapter

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