Serial On/Off Switch (AP9214) Installation Guide

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Preliminary Information

Features of Serial On/Off Switch

American Power Conversion's Serial On/Off Switch is a computer controlled 20 Amp switch. The Serial On/Off Switch can be used to restart computer systems or other network devices using a 'Master' computer system. The Master computer uses serial communication to control the Serial On/Off Switch and is connected to the switch using the serial cable supplied. The Serial On/Off Switch can be mounted in a standard 19" rack or left as a standalone device.

In most mirrored server or cluster applications, several Serial On/Off Switches will be required. Each server in the cluster will act as the Master computer to control the switch powering the mirrored server. When fully configured, each server will control the power to another server creating a peer environment.

 The Master computer system must be configured to communicate correctly to the Serial On/Off Switch. Please refer to the section titled *Connecting the Serial On/Off Switch* for more details.

Inventory

The Serial On/Off Switch comes with the following items:

| Item	Part Number	Qty.
Serial On/Off Switch	AP9214	1
Communication Cable	940-1000A	1
Rack Mount Brackets and screws	870-8213, 870-8183	2
Installation and Quick Start Manual	990-0620	1
Warranty Registration Card	990-0004A	1
Safety Sheet	990-6023A	1

Installing the Serial On/Off Switch

The Serial On/Off Switch can be used as a standalone device or installed in a 19"
enclosure. Please follow the instructions below to install the switch in a rack or
enclosure.

1. Begin the rack mount installation by removing the rubber feet at the bottom of the
   unit.
2. Attach the Serial On/Off Switch to the rack mount brackets supplied (870-8213,
   870-8183). Please use the flat head screws provided.
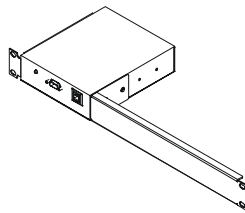
3. Insert the caged nuts on the vertical mounting rails you have chosen for the switch
   location.
4. Align the switch's brackets with the caged nuts that you inserted in step 3.
5. Insert the mounting screws (provided with the enclosure, not the switch) and
   tighten.
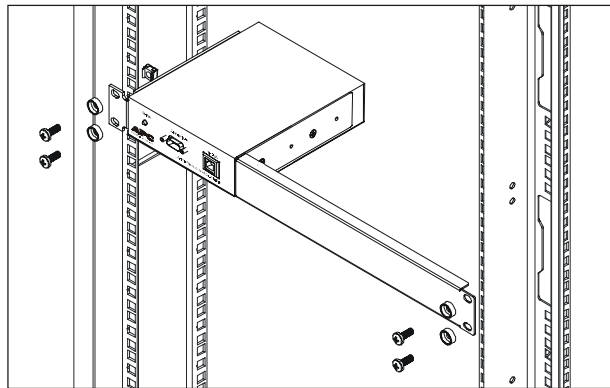
Connecting the Serial On/Off Switch

The Serial On/Off Switch does not provide power protection. Therefore, APC does not recommend plugging the unit directly into an unprotected power source.

1. Connect the power cord of each device you wish to control into the outlets on the rear of the Serial On/Off Switch.
2. Connect the serial cable provided (940-1000A) to the serial port on the Serial On/Off Switch.
3. Connect the remaining end of the serial cable to the serial port of the 'Master' server (the server which is controlling the switch).
4. Plug the Serial On/Off Switch into a protected power source.

Configuring the Master Server

Once the Master server is connected to the switch via the serial cable (940-1000A), the server port must be configured to the following terminal settings:

Baud Rate: 9600 bit/sec
Data Bits: 8
Stop Bits: 1
Parity: None
Flow Control: None (important)

Note: Please disable any applications that require the use of the serial port above.

Once the port settings are changed, the user must create a script that completes either one of the following tasks:

1. The script sends the ASCII character 'U' to the port repeatedly 1024 times
2. The script copies a text file of 1024 'U' characters to the serial port

Once the script file is created, the Master Server should be configured to execute this script when power to the controlled equipment is to be interrupted. The power to the equipment will be switched off one second for each 960 'U' characters transmitted. Thus, to increase the amount of time the switch remains off, simply edit the script by adding 960 'U' characters for each additional second desired.

Compatible Cluster Software

The Serial On/Off Switch is ideally suited for deployment in conjunction with clustering software products that include the corresponding software support. Such clustering products require the use of power switches to preserve data integrity in the event of a catastrophic failure. The following cluster products have been certified for use with the Serial On/Off Switch:

Mission Critical Linux's Convolo Cluster
The Convolo cluster product is designed to address the need of commercial Linux users for highly available, robust computing environments that require the highest data integrity guarantees. Convolo provides the highest levels of availability and data integrity for off-the-shelf, commercial applications; including file and database servers.   http://www.missioncriticallinux.com