



# AC Power Distribution & Specialty Solutions



Remote/Local Power Management System



## Remote/Local Power Management System

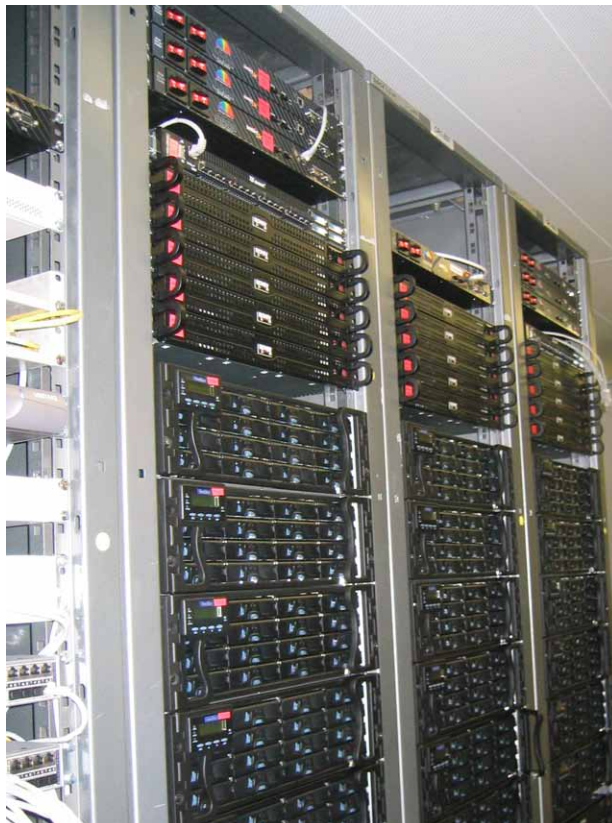
The AC SMARTStart® is a multifunctional AC power distribution unit designed to control eight AC loads and monitor vital parameters. This product is available in 15 Amp, 16 Amp, and 20 Amp total load capacity models. In addition, we offer output configurations that use screw clamp terminal blocks, in lieu of IEC or NEMA connectors, for industrial applications.

All models have the ability to power-on or power-off any or all loads in any sequence over a wide range of time intervals. The PDU automatically sequences each output. This significantly reduces the total in-rush current and limits the possibility of equipment damage due to the combined turn-on transient of several loads. The sequence order and delay is user defined at setup.

A circuit breaker at the AC input provides overall protection. To prevent the circuit breaker from tripping during power up, the PDU features a power-on current limit. The AC SMARTStart® is also capable of monitoring input line voltage and total load current, as well as line frequency.

Operation/control is accomplished either manually, using controls on the front panel of the unit, or remotely, using a computing device that utilizes EIA RS-232 and RS-485/422 communications such as a laptop computer, desktop computer, or other personal electronic device.

Two user programmable external contacts can be configured to alert the user of under-voltage, over-current, or over-temperature conditions using the dry contact closure. These contacts allow remote operation and control from Web browser or Telnet interface.



### Features

- Power control capability to groups of outlets
- Remote operation and control capabilities via Telnet or Web interface
- Local operation and control capabilities by means of front panel push-button switch and backlit LED status indicator
- Monitors input line voltage, total load current, line frequency, and remote external temperature (with optional temperature sensor)
- Two isolated contact inputs can be used with alarm sensors, security sensors, limit switches, and/or remote stop. Emergency Power Off (EPO) configuration also possible.
- May be used as a master PDU with several slaves linked via RS-485/422 or RS-232
- Includes optional front or center mounting brackets
- Complies to FCC, CE, UL, and TÜV requirements

# Web/Telnet/SNMP Option:

## ▼ Initial Set Up Screen

- Enhanced web-based device set-up and control management
- Auto Ping feature to test and optionally power cycle a connected host
- Email alerts to up to three designated recipients
- Optional sensors can be incorporated and included in alarm email alerts with user defined messages
- SNMP MIB for standards-based monitoring and control of the power distribution unit and its associated operating features

**Unit Setup**

Unit Name:

Outlet 1 Name	Outlet 1	PDU Address	255
Outlet 2 Name	Outlet 2	Master/Slave	Standalone
Outlet 3 Name	Outlet 3	Baud Rate	9600 kbps
Outlet 4 Name	Outlet 4	Current Limit A	20.0
Outlet 5 Name	Outlet 5	Current Limit B	20.0
Outlet 6 Name	Outlet 6	Undervoltage Setpoint A	180
Outlet 7 Name	Outlet 7	Undervoltage Setpoint B	180
Outlet 8 Name	Outlet 8	Sequence Delay (sec)	1.0
		Sequence	12345678
Group 1 Name	Group 1	Group 1 Outlets	0000
Group 2 Name	Group 2	Group 2 Outlets	0000
Group 3 Name	Group 3	Group 3 Outlets	0000
Group 4 Name	Group 4	Group 4 Outlets	0000

OK Cancel

**POWER Technologies Group**

Unit Name:

PDU Address: 255

Firmware Version: SSJR 2X4 v1.4HC

Agent Version: 2.06.001

Configuration: Standalone

Unit Mode: Remote

Temperature (°C): 0.0

Channel A: Voltage (V) 207.0, Current (A) 0.00, Frequency (Hz) 60.0

Channel B: Voltage (V) 209.0, Current (A) 0.00, Frequency (Hz) 60.0

Outlet Status: 1 2 3 4 5 6 7 8

Navigation: Login, Unit Setup, Alert Setup, Circuit Setup, User Setup, Outlet Control, About

◀ Main Screen

**Outlet Control**

Outlet 1	On	Off
Outlet 2	On	Off
Outlet 3	On	Off
Outlet 4	On	Off
Outlet 5	On	Off
Outlet 6	On	Off
Outlet 7	On	Off
Outlet 8	On	Off
Group 1	On	Off
Group 2	On	Off
Group 3	On	Off
Group 4	On	Off

On Sequential (All) Off Sequential (All) Off Simultaneous

On Sequential (A) Off Sequential (A)

On Sequential (B) Off Sequential (B) Close

Java Applet Window

▶ Outlet Control with Group Management Capability

**Alert Setup**

Voltage High Alert (V)	130.0	Host 1	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Voltage Low Alert (V)	90.0	Host 2	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Current Alert (A)	14.00	Host 3	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Temp Alert (°C)	35.0	Host 4	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Ping Interval (sec)	60	Host 5	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Ping Timeout (ms)	1000	Host 6	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
Ping Threshold	3	Host 7	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180
		Host 8	<input type="checkbox"/>	0.0.0.0	Test	Restart Delay (sec)	180

E-mail Recipients:  Test

Trap Recipients:  Test

SMTP Server: 0.0.0.0

E-mail Host ID:

From Address:

OK Cancel

Java Applet Window

◀ Alert Threshold Screen

Specialty AC Power Solutions

## Electrical & Mechanical Specifications

Input and Output		
	Global	NEMA
	<b>16 Amps</b>	<b>20 Amps</b>
Nominal Input Voltage	95 - 137 VAC or 200 - 208 VAC	200 - 230 VAC
Input Frequency	47 -63 Hz	47 -63 Hz
Input Current	16A max. per breaker	20A max. per breaker
Power Entry Connector	IEC C20 Inlet	IEC C20 Inlet or NEMA 5-20P on 10' cord
Outlet Connectors	8 x IEC C13	8 x NEMA 5-20R
Output Power	1.92 or 3.26 KVA <span style="color: orange;">(Basic Power)</span>	4.30 KVA <span style="color: orange;">(Basic Power)</span>
Input Protection	95 - 137 VAC - 16A 1 Pole Circuit Breaker 200 - 208 VAC - 16A 2 Pole Circuit Breaker	20A 2 Pole Circuit Breaker
Panel Indicators	LED	LED

Physical and Environmental		
	Global	NEMA
	<b>16 Amps</b>	<b>20 Amps</b>
Size (Overall)	17.19"W x 1.75"H x 8.00"D	
Weight	≈ 11 lbs.	≈ 11 lbs.
Operating Temp.	0 - 45°C (32 - 113°F)	
Operating Humidity	0 - 95% (non-condensing)	
Operating Elevation	0 - 10,000 ft. (0 - 3000 m)	

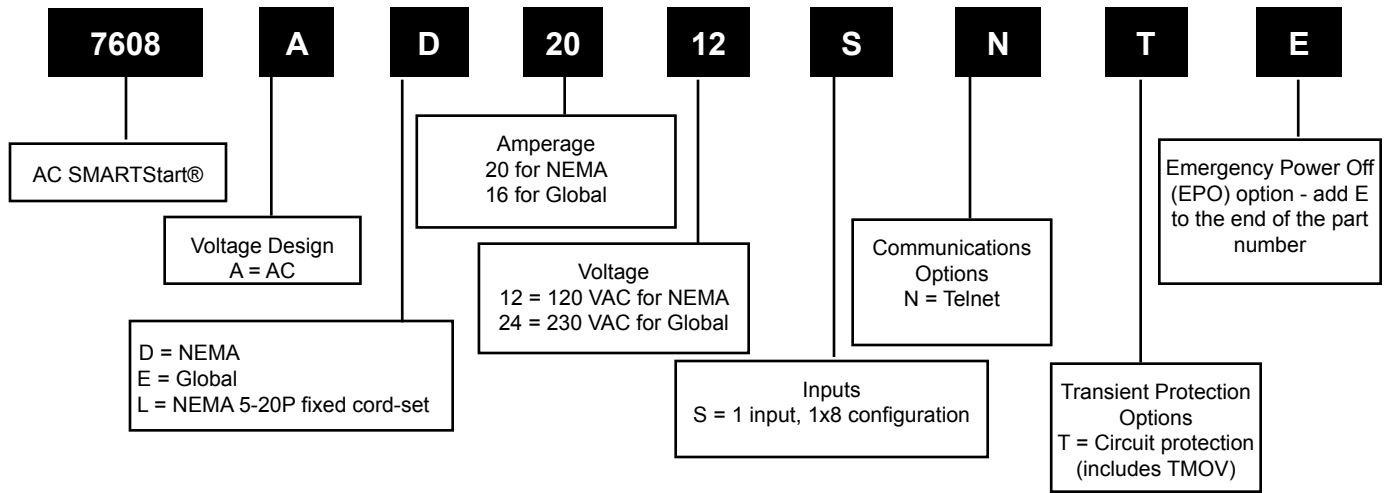
### Communications:

- RS-232: Front panel DB-9F or DB-9M connector
- RS-485/422 rear panel RJ-11
- Telnet with web interface (when ordered with LAN module)
- SNMP
- Other options available upon request

### Accessory (Optional):

- Temperature Sensor 72-1021-189 (Hookup wire not supplied)

# Part Number Configuration



## Ordering Information



(15 Amp also available)

Part Number	Voltage Input	Input Connection	Output Connection	Configuration	Communication
7608AD2012S	120VAC/47-63Hz	IEC C20	NEMA 5-20R	Single Input	Serial RS232
7608AL2012S	120VAC/47-63Hz	NEMA 5-20P on 10' cord	NEMA 5-20R	Single Input	Serial RS232
7608AE1624S	230VAC/47-63Hz	IEC C20	IEC C13	Single Input	Serial RS232
7608AD2012SN	120VAC/47-63Hz	IEC C20	NEMA 5-20R	Single Input	Serial RS232 & Web/Telnet
7608AL2012SN	120VAC/47-63Hz	NEMA 5-20P on 10' cord	NEMA 5-20R	Single Input	Serial RS232 & Web/Telnet
7608AE1624SN	230VAC/47-63Hz	IEC C20	IEC C13	Single Input	Serial RS232 & Web/Telnet

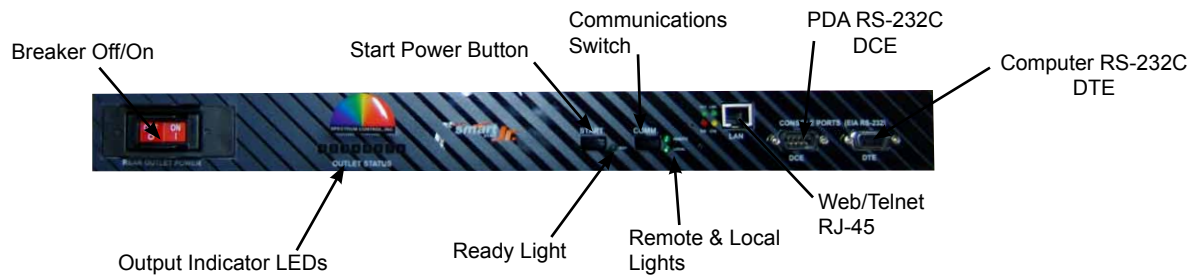
Specialty AC Power Solutions

# Mechanical Specifications

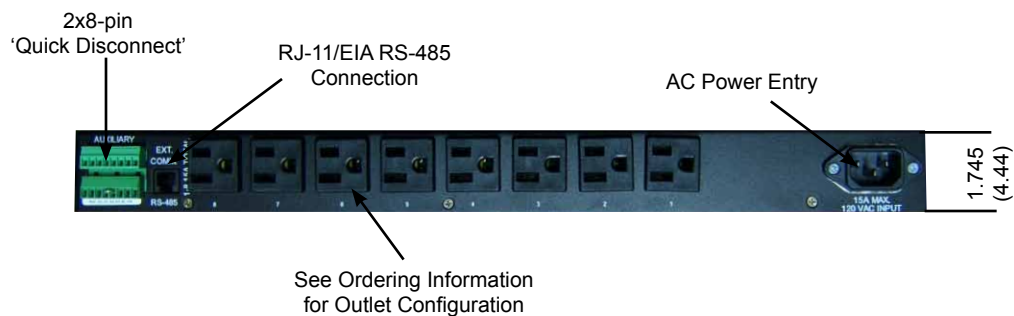
## Top View:



## Front View:



## Back View:



# Quality Assurance

Spectrum Power Management Systems tests all power strips and power distribution systems for conformance to all applicable functional standards.

In order to provide the most accurate and specific test procedures, our engineering staff has developed custom and automated test equipment that is positioned at critical points in our manufacturing operation. We administer our test procedures not only for prototypes, but for each and every power product we manufacture. This focus on quality and reliability is part of the commitment we make to our customers.

Dependent on application, SPMS can tailor additional tests to provide verification for unique application environments.

The compliance tests performed are described below.



## Ground Bond Test

Checks for proper continuity through the chassis ground circuit by applying high current, and measuring the ground resistance via kelvin connection.

## Voltage Drop Test

Checks for excessive resistance of the wire paths in the PDU from the individual pins on the input plug to each of the outlet receptacles. This test is performed at full load. It also verifies the proper termination of each power output receptacle.

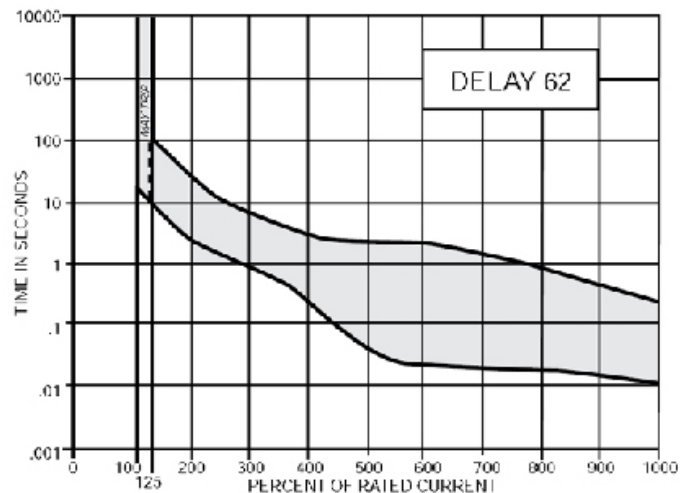
## High Pot Test

Checks for electrical isolation from a hot circuit at high voltage to ground.

## Overload Test

Checks the circuit breaker reaction (trip curve) by applying a high load to the power strip.

## Circuit Breaker Trip Curve





## Investor Relations

Corporate Headquarters  
8031 Avonia Road  
Fairview, Pennsylvania 16415  
Phone: 814-474-2207  
Fax: 814-474-2208

## Spectrum Power Management Systems

1900 West College Avenue  
State College, Pennsylvania 16801  
Phone: 814-272-SPMS  
Fax: 814-272-2702  
[www.specpower.com](http://www.specpower.com)  
[sales@specpower.com](mailto:sales@specpower.com)



## Power Management Systems

---

AC Power Strips - Single Phase  
AC Power Strips - 3 Phase  
AC Power Strips with Meter Display  
AC Power Sequencers  
AC Power Entry Panels with Circuit Protection  
Customer Specific AC Power Outlet Strips  
AC SMARTStart® Switched PDU  
DC SMARTStart® -48VDC / "+24 - +28"VDC  
DC Circuit Breaker/Fuse Panels -48VDC / "+24 - +28"VDC  
AC or DC Specialty Hi-Rel Power Management Systems  
[www.specpower.com](http://www.specpower.com)

## EMI Filters & Components

---

Ferrite Beads & Inductors  
Surface Mount Filters  
Discrete EMI Filters  
Filter Connectors  
Gaskets & Shielding  
Ceramic Capacitors  
Single Line Filters  
Filtered Terminal Blocks  
Power Entry & Power Line Filters  
Military/Multisection Filters  
EMC Testing  
[www.specemc.com](http://www.specemc.com)  
[sales@specemc.com](mailto:sales@specemc.com)

## Microwave Components & Systems

---

Lumped Element Filters  
Cavity Filters  
Bandpass Filters & Duplexers  
Tubular & Waveguide Filters  
Tower Mount Amplifiers  
Coaxial Resonators  
Patch Antennas & Assemblies  
Switchable Filter Bank Assemblies  
Low Noise Amplifiers  
Local Oscillator Doublers  
Microwave Synthesizers  
Couplers  
Integrated Microwave Sub-assemblies  
[www.specwave.com](http://www.specwave.com)  
[sales@specwave.com](mailto:sales@specwave.com)

## Sensors & Controls

---

Element Segments & Wiper Assemblies  
Rotary Precision Potentiometers  
Linear Precision Potentiometers  
Motorized Potentiometers  
Hollow Shaft Potentiometers  
Custom & Value-added Assemblies  
[www.specsensors.com](http://www.specsensors.com)  
[sales@specsensors.com](mailto:sales@specsensors.com)