

ECS-3

Power Sequencer & Conditioner



Features

- 3 Sequencer Timing Sections Fixed 3-Second Intervals, 6 Seconds Total
- 9 Total Outlets are Provided
- 6 Rear Panel Outlets are Sequenced in Three Steps
- 2 Front Panel and 1 Rear Panel Unswitched Convenience Outlets
- RFI Noise Filtering to Reduce Radio Frequency Interference
- EMI Suppression to Reduce Electromagnetic Interference
- Dual Clamping Spike & Surge Suppression, DCS Circuitry
- Front Panel Digital AC Mains Voltmeter
- LED Indication of Reversed “Live” and “Neutral” Wiring
- Abnormal AC Line Voltage Indicator for Voltages Between 102V–107V or 128V–132V
- Extreme Voltage Shutdown (EVS) Below 102V or Above 132V AC Line
- Circuit Breaker Protection @ 15A Indicated by “Breaker Open” Indicator
- Front Mounted Pull-out LED Light with 2-Position Dimmer
- Rear Mounted XLR Connector for 12VDC LED Lamp
- External Switch Sequence Trigger Activation
- External DCV Sequence Trigger Activation 5-24VDC
- 24VDC Sequence Trigger Output for Optional External AC Outlet

Applications

The ECS-3 was designed to be flexible with features that allow it to be used in a variety of applications. The sequenced outputs allow the turning of equipment on and off in a particular order, to eliminate an inrush of current and audible pops that often occur with non-sequenced power strips. It also can be used solely for protection against lightning strikes or voltage surges. If fuzzy video or frequent static pops occur, the AC power conditioning will eliminate or reduce those inconveniences. The following are just a few examples of applications the ECS-3 can be used in:

- Restaurants
- Houses of Worship
- Schools
- Home Theaters
- Office Buildings
- Sports Bars

General Description

The ECS-3 has been designed to meet most installation requirements for AC power distribution and equipment power protection. The 15A compact 1 RU unit features three sequential timing sections that can be activated via the unit, or remotely. Front panel activation is via a momentary switch, while rear activation is via a momentary contact closure, or by 5-24VDC trigger feed. AC Mains Voltage can be monitored via the front panel from the precision Digital Volt Meter. To light the rack, the ECS-3 has incorporated a front panel pull-out dimmable LED tube light. The rear of the rack can be illuminated by the optional 18” gooseneck LED lamp connected via an XLR style socket. LED lamps are far superior in longevity along with heat reduction when compared to traditional incandescent lamps and the XLR base mounts are also superior to the commonly used BNC type base. If a 15A AC Mains power source is not enough to meet the amperage demand of the system, the ECS-3 provides a sequenced 24VDC output that can be used to trigger other devices such as the AtlasIED ECM-20SH 20A stand alone AC power module.

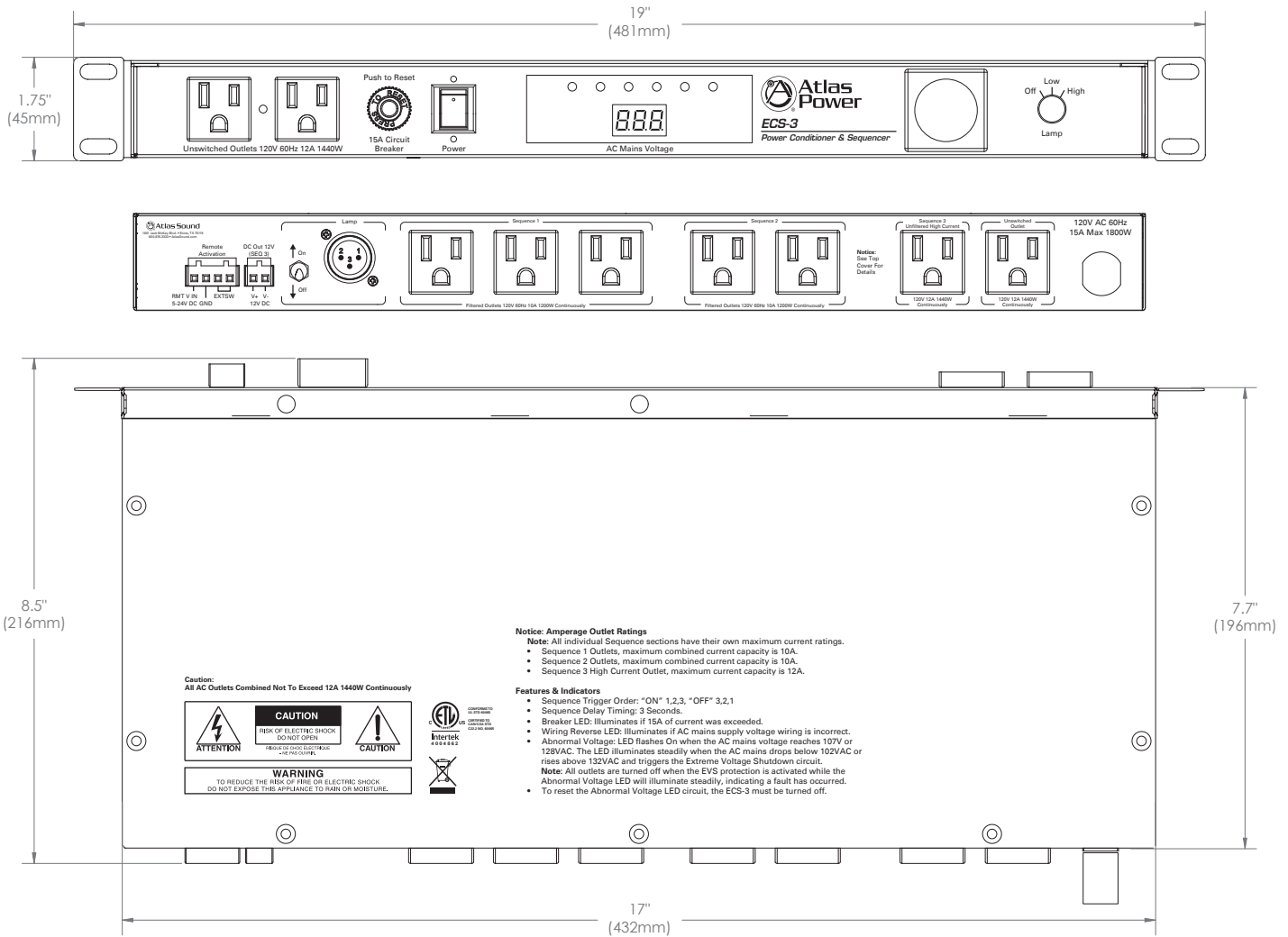
System	
Type	Power Sequencer, Power Conditioner & Suppressor
Sequencer Sections	3, Fixed Time of 3 Seconds Between "On" Seq. 2 & 3, "Off" 2 & 1
Load Rating	15A
Front Panel	
Outlets	2 Unswitched
Lights	1 Pull-out LED with Dimmer Switch
Activation Switch	Momentary
Circuit Breaker	15A Resettable
AC Mains Voltmeter	Three Digits, Digital
Front Panel Indicators	
Sequencer Sections 1 / 2 / 3	Green, Qty 3
Abnormal Voltage Indicator	Red, Qty 1
AC Fault Indicator	Red, Qty 1
Breaker Open Indicator	Red, Qty 1
Wiring Fault Indicator	Red, Qty 1
Rear Panel	
AC Outlets	7 Outlets Total, Sequence Section 1 (3 Outlets), Sequence Section 2 (2 Outlets), Sequence Section 3 (1 Outlet), Unswitched (1 Outlet)
External Switch Activation Trigger	Momentary Contacts, 2 Position Euro / Phoenix Type Connector
External Voltage Activation Trigger	5-24VDC Continuous, 10mA, 2 Position Euro / Phoenix Type Connector
DC Output	24VDC 100mA Output Paralleled to Sequencer Section 3 Timing
LED Light Socket	XLR Socket to Provide 12VDC for Optional 18" Gooseneck Lamp
LED Light Switch	Two Position On / Off
Grounding Terminal	Hand Screw Type Terminal to Chassis Ground
AC Mains Power Cord	9' (3 Meters) 14-gauge
Technical Data	
Current Rating	15A
Operating Voltage	102VAC - 132VAC
Power Consumption	12 Watts
High Voltage Surge Protection	Trigger at 133VAC, 1 ms Typically
Low Voltage Protection	Trigger 101VAC, 1 ms Typically
Voltmeter Accuracy	±1.5VAC
Spike Protection Modes	DCS (Dual Clamping Suppression) Circuitry on Incoming AC Mains and Each Sequential Section Output
Minimum Spike Clamping Voltage	460 VRMS @ 3,000A
Maximum Spike Clamping Voltage	6,000V
Maximum Spike Clamping Resp. Time	1 Nanosecond
Spike Clamping Voltage @ 100A	1250Vp for 20µs
Maximum Surge Current	6,500A
Energy Rating @ 2ms	2000 Joules
Noise Attenuation EMI/RFI Sequencer Section 1 & 2	10dB @ 10 kHz, 40dB @ 100 kHz, 100dB @ 10 MHz
Unit Operating Temperature Range	41° - 95°F, 5° - 35°C
Humidity Range	5% to 95% Relative Humidity
Mechanical	
Chassis Finish	Black
Product Dimensions (HxWxD)	1.75" x 19" x 8.5" (45mm x 481mm x 216mm)
Unit Weight	76 lbs. (3.45kg)

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Agency Approvals	
Safety Listing	MET (UL 1449 Code)
Package Contents	
ECS-3	Qty 1

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Dimensional Drawings



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Architect and Engineer Specifications

The electronic control system sequencer panel and power conditioner shall be AtlasIED Model ECS-3.

The Electronic Control System Sequencer and Power Conditioning Panel shall be equipped with a front panel digital voltmeter to monitor AC mains, and LED indicators to alert the user to abnormal voltage, breaker open, wiring fault, AC fault in addition to the 3 sequence activations of the unit. Front panel shall feature a 2 position switch (Hi Lo plus off) to activate a pull out LED light. The rear panel shall be illuminated via an optional plug in lamp with a separate on/off switch for activation.

The sequencer shall be equipped for multiple modes of sequencing activation to include front panel mounted momentary switch, rear panel mounted euro-block style 4 position connector with contact closure and 5-24 Vdc External Voltage Activation trigger paralleled to Sequencer activation mode 3. The unit shall be capable of activating a remotely powered switched outlet (Model ECM-15SM or ECM-20SH) assembly via an included 24VDC output accessed on a rear mounted 2 position euroblock connector.

Power sequencer shall include 3 un-switched (2 front panel and 1 rear panel mounted) and 6 switched outlets (rear mounted) in 3 sequence activation modes. Sequence Mode 1 features 3 outlets turned on immediately on activation; sequence mode 2-after a 3 sec. delay, 2 additional outlets are turned on; sequence mode 3 after an additional 3 sec. delay a single outlet is activated for a total of a 6 second turn on sequence to minimize the in rush current draw of the connected components. Power off sequence is Mode 3 off, mode 2 off w/3sec delay, mode 1 off w/ 3 sec. delay.

Protection of incoming AC mains and Sequence 1 and 2 spike suppression shall be accomplished by DCS (Dual Clamping Spike / Surge Suppression) circuitry with 3 stage MOV protection circuits. Noise Attenuation of EMI/RFI in Sequence 1 & 2 shall be 10dB @ 10 kHz, 40 dB @ 100 kHz and 100 dB @ 10 MHz. Tested and Agency Listed MET Code (UL 1449).

Unit shall be constructed of 16 gauge CRS finished in black epoxy powder coated CRS with integrated 1 space brackets for rack mounting.