FURMAN®

220V-240V PRO LINE PRODUCT BROCHURE

ADVANCED POWER
MANAGEMENT SOLUTIONS
FOR AUDIO, VIDEO, AND
BROADCAST PROFFESSIONALS

FOUNDED IN 1974, Furman is the leading provider of power management solutions for audio, video and broadcast professionals. From pioneering the concept of power conditioning in 1983 to introducing advanced technologies such as Series Multi-Stage Protection and Linear Filtering Technology, Furman is committed to providing the highest level of performance and protection to equipment used in mission-critical applications around the world.

THE FURMAN DIFFERENCE

For over 40 years, Furman has been the industry's most trusted name in AC conditioning, regulation, balanced isolation transformers, sequencing and distribution for audio, video, and broadcast professionals. Our clients include respected professional musicians, renowned recording studios, commercial contractors, touring groups that handle major concert tours across the world, and commercial clients ranging from small business to Fortune 500 companies. They choose Furman because of our reputation for reliability, our engineering expertise, and our years of experience focusing on the specific needs of industry professionals who cannot afford equipment failure or downtime.

Furman has earned its reputation of trust around the world as a result of the millions of dollars worth of equipment saved from power problems, and because of its innovative technologies which maximize an A/V system's performance. For our clients, operating a system without the safe, clean power delivered by a Furman unit is simply out of the question.

FURMAN FEATURES AND TECHNOLOGIES

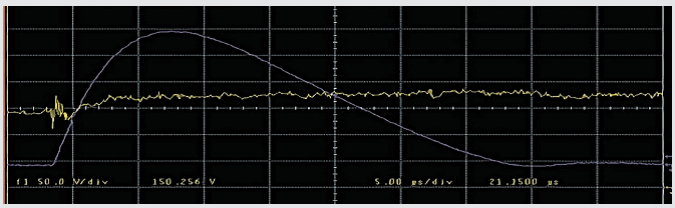
SERIES MULTI-STAGE PROTECTION (SMP)

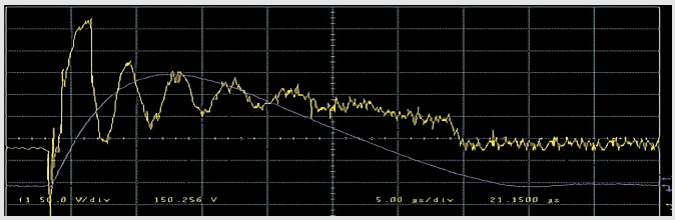
Audio/video professionals can never accept downtime, corrupted data, or unreliability. It is for this reason that a robust, professional level transient voltage surge suppression system, such as **SMP**, is the best choice for critical applications.

With **SMP**, there is virtually no downtime. In fact, the circuit is tested to handle multiple 6000 volt or 3000 amp pulses without sustaining any damage. This is far beyond the demands placed on typical surge suppressors. But because of the extreme conditions and critical applications faced by Furman's clients, the **SMP** circuit has been designed to pass this severe test and ensure that equipment damage or maintenance is extremely unlikely.

Furman's **SMP** relies on a network of components to slow down the impact of a potentially catastrophic surge by capturing it, dissipating it in the form of heat, and absorbing the remaining excess energy. When tested with multiple 6,000V/3,000A surges, the **SMP** circuit's maximum let-through voltage is only 376V Pk / 266V RMS on a 230V line. Due to the design of the circuit, it will not degrade over time (unlike most standard surge suppressors) and will show minimal increase in line impedance (unlike many advanced surge suppressors).

The **SMP** circuit is not simply designed to protect from a catastrophic surge, such as a lightning strike – it is engineered to provide maximum life to connected equipment. This means it not only protects from devastating spikes and surges, but also offers protection from the dozens to hundreds of small spikes and surges your equipment is exposed to on a daily basis. These common voltage fluctuations, although small, can have a serious adverse effect over the long-term. Even when protected by a standard surge protector, digital circuits can see long-term damage due to exposure to voltage on the ground line, causing intermittent behavior, equipment lock-ups, and data loss.



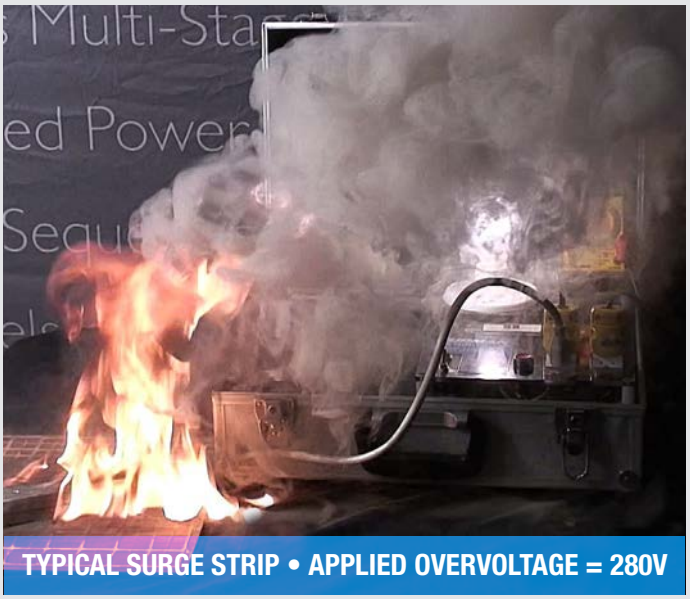


*TOP: Furman's **SMP** Circuit: 188V Pk measured let-through voltage*

BOTTOM: Typical non-sacrificial circuit: 461V Pk measured let-through voltage

By absorbing these everyday surges without deterioration of the circuit or contamination of the ground line, Furman's **SMP** maximizes the longevity of connected equipment and minimizes the risk of downtime or failure in mission-critical applications.

EXTREME VOLTAGE SHUTDOWN (EVS)



Standard power strips are not equipped to handle sustained over-voltage conditions.

Transient spikes and ground contamination are not the only problems faced by today's sensitive electronics. There are also sustained over voltage conditions, sometimes called extreme voltages. Many surge suppression devices will not be able to protect equipment from sustained over voltages. These conditions can occur for multiple reasons: wiring faults, storms and traffic accidents, and accidental connections can result in delivery of over 400V to your connected equipment. Many surge suppression devices are not equipped to handle these kinds of conditions. Without proper protection, the end result is destroyed equipment, or at best, a destroyed surge suppression system.

Furman's EVS constantly monitors incoming voltage, and once any overvoltage condition over 275 volts AC is detected, a relay opens which immediately shuts down the unit and all connected equipment. An indicator light informs the user there is a problem, and once the condition has been corrected, the unit may be reset and will operate normally.

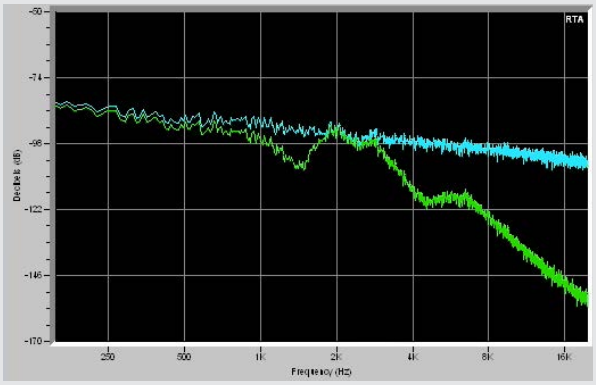
LINEAR FILTERING TECHNOLOGY (LiFT)

While delivering your power, your AC tap also delivers a significant amount of line noise. This is due to many reasons: the widening popularity of switching power supplies and the harmonics they backfeed into our AC power mains, the deterioration of our power grid from age and use, and the noise pollution generated from the massive amounts of electronic devices on our grid at any given time, among others. When this AC noise couples into critical circuits, it will distort and mask low-level signal information. This information is vital to today's high-performance, high-definition video and audio.

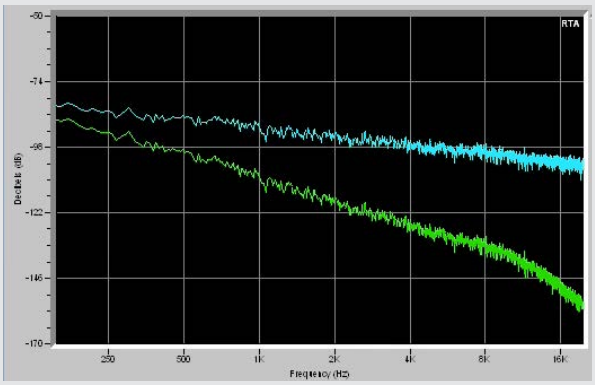
Furman's **LiFT** employs a finely tuned low-pass filter to reduce the differential AC noise coming through your line. What is significant about Furman's filtering is that it reduces the AC noise in a linear fashion across a very wide bandwidth. Prior filtering schemes (such as those found in most AC conditioners and in Furman's own conditioners prior to developing **LiFT**) reduce noise unevenly, creating a noise attenuation curve that resembles a roller coaster. This is akin to a poor job of equalizing a recording.

With Furman's LiFT, differential AC noise is reduced linearly, across a very wide bandwidth, even extending into the video frequencies.

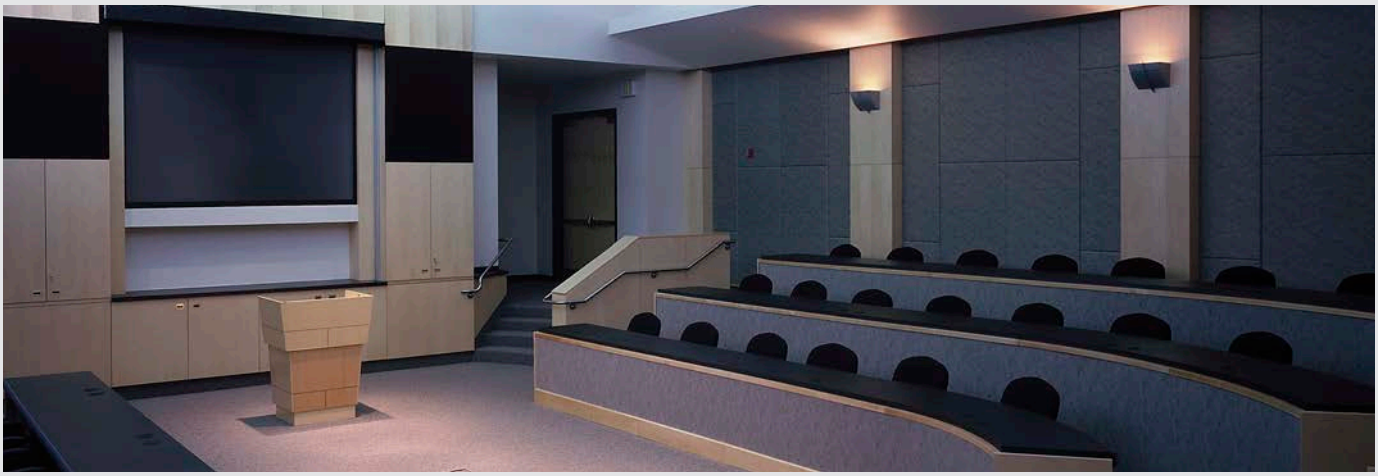
This results in a lower noise floor for your audio system, improved picture on your video display, and protection from possible data corruption and losses caused by low-level differential AC noise fed into digital systems



Output of real-time noise analysis software, showing the noise attenuation curve of a standard AC noise filter. Note the uneven shape of the output curve (the green line).



Output of the same analysis using Furman's Linear Filtering Technology. As you can see, the output noise attenuation curve is smooth and linear, without the resonant peaking seen in the standard filter.



SMARTSEQUENCING™

SmartSequencing technology allows large and complex Pro A/V systems to be safely powered on and off with a simple press of a button or turn of a key. Multiple units may be daisy chained at runs of over 300 meters with bi-directional communications between units for sequencing on and off large and/or complex systems.

TRUE RMS VOLTAGE REGULATION

Another power quality issue facing today's electronics is irregular voltage. While we may expect constant voltage to be supplied by our power utility, such an expectation is not realistic. Because of the chaotic demands on many power facilities and deterioration of power lines, AC voltage is often reduced so that it can be stretched to fulfill excess demand. This creates a substantial negative impact on your A/V equipment performance. Additionally, many regions and many applications require equipment be run by generator power. Since generators typically have voltage output specifications based on a constant current load, they are far from ideal for use in an A/V system which will typically see massive swings in the current draw. For this reason, generator power should always be followed by voltage regulation in an A/V application.

True RMS Voltage Regulation is achieved through the use of an ultra-quiet, microprocessor controlled autoformer with solid-state switching.

Today's power supplies are designed to operate at their optimum input - anywhere between 120V to 240V, depending on the region. When the voltage delivered is higher than the regional standard, your equipment is subject to extra electricity that can overheat or damage your equipment. When the voltage is lower than optimal, your equipment's power supply must work harder to create more electrical current in order to make up for the difference, creating a "tug-of-war" in your power supply. This can cause your equipment to malfunction or sustain permanent damage.

Furman's **True RMS Voltage Regulation** is designed around an ultra-low noise toroidal autoformer. A microprocessor within the regulator monitors the incoming RMS voltage with each cycle, measuring the phase angle in time with the advancing cycle. Most commercial voltage regulators using multiple-tapped transformers switch taps at uncontrolled times. This creates voltage spikes and clicks that can leak into audio. When a voltage fluctuation requires correction, Furman's True RMS Voltage Regulation advances a new tap with less stress than other technologies and, in turn, avoids distortion to the AC waveform. Hysteresis in the circuitry avoids the unnecessary switching back and forth between the adjacent taps (or "chatter") found in many commercial voltage regulators. If necessary, Furman's **True RMS Voltage Regulation** technology can switch taps as often as once each cycle and do so with a shorter recovery time than a commercial voltage regulator. In addition and unlike voltage regulators that employ ferroresonant transformers, Furman regulators are not sensitive to small errors in line frequency, making them ideal for use with generators. The autoformer's toroidal design assures minimal leakage of stray magnetic fields.

POWER SEQUENCING

Power sequencing is useful whenever various kinds of equipment must be powered up or down in groups, rather than all simultaneously. In audio systems, sequenced powering is often necessary to allow turn-on transients from low level amplifiers and processors to settle down before any power amps are turned on, because simultaneous powering would result in a loud, annoying, and potentially destructive "pop" reaching the speakers. And, in any large system whose components present an inductive load to the AC line (including electric motors, power supplies, and power amplifiers of all kinds), sequenced powering can avoid excessive inrush currents that can cause circuit breakers to trip even though the steady-state currents are not excessive. Power sequencing is particularly suited to applications where large installations must be switched by inexperienced personnel.

IP/RS-232 CONTROL

Available on select models for custom control and integration.

MERIT X SERIES POWER CONDITIONERS

Furman's most affordable rackmount power conditioners provide eleven total outlets, standard level surge suppression, standard level EMI/RFI filtration, and a robust steel chassis.

M-10X E 10A Power Conditioner

Standard Level Surge Protection | Standard Level RFI/EMI Filtration | 11 Outlets | 10A Rating | Protection OK Indicator

M-10LX E 10A Power Conditioner

Standard Level Surge Protection | Standard Level RFI/EMI Filtration | 11 Outlets | 10A Rating | Protection OK Indicator | Front Panel Retractable Lights

REAR PANEL (BOTH MODELS)

Merit X Series Specifications: **Maximum Output Current:**10 Amps. **Line Cord:** 1.5 meter, removable, IEC C-13 female to Schuko male. **Lamps (M-10Lx E):** Two multi-LED, dimmable lamps. **Spike Protection Mode:** Fused MOV, Line to neutral. **Operating Voltage:** 230VAC 50 Hz. **Energy Dissipation**: 305 joules. **Peak Impulse Current**: 12,000 amps. **Noise Attenuation (Transverse Mode):** Greater than 20dB, 1.5Mhz to 200 Mhz. **Dimensions:** 44.45mm H x 482.6mm W x 190.5mm D. **Weight:** 2.3 kg. **Safety Agency:** CE. **Warranty:** Three Year.

CLASSIC SERIES POWER CONDITIONERS

An update to Furman's popular Series II line, all Classic Series models provide advanced features such as SMP Surge Protection, EVS Voltage Protection, Linear Filtering Technology, pull-out LED lights, and isolated rear panel outlet banks.

PL-8C E 10A Advanced Power Conditioner

SMP Advanced Surge Protection · Linear Filtering Technology · EVS Voltage Protection · 11 Outlets · 10A Rating · Diagnostic Lights · Isolated Outlet Banks · Front Panel Retractable Lights · Rear Panel BNC Connector for Gooseneck Lamp

PL-PLUS C E 10A Advanced Power Conditioner

SMP Advanced Surge Protection · Linear Filtering Technology · EVS Voltage Protection · 11 Outlets · 10A Rating · Diagnostic Lights · Isolated Outlet Banks · Front Panel Retractable Lights · Rear Panel BNC Connector for Gooseneck Lamp · LED Voltmeter

REAR PANEL (BOTH MODELS)

Classic Series (10A) Specifications: **Maximum Output Current:**10 Amps. **Line Cord:** 2.5M, removable, IEC female to Schuko male. **Lamps:** Two multi-LED dimmable lamps. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 274V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **BNC Connector:** 12VAC 500MA max (lamp not included). **Dimensions:** 482.6mm W x 266.7mm D x 44.45mm H **Weight:** 6 kg. **Safety Agency:** CE. **Warranty:** Five Year.

CLASSIC SERIES POWER CONDITIONERS (PRO MODEL)

Furman's Classic Series PL-PRO DMC E provides additional features such as a higher current capacity (16A), USB front panel charger, and dual digital voltmeter/ammeter with color-coded "Voltage Range" indicator.

PL-PRO DMC E 16A Advanced Power Conditioner

SMP Advanced Surge Protection
Linear Filtering Technology
EVS Voltage Protection
11 Outlets
16A Rating
Diagnostic Lights
Isolated Outlet Banks
Front Panel Retractable Lights
Rear Panel BNC Connector for Gooseneck Lamp
Dual Voltage/ Current Meter
USB Charger

Classic Series (16A) Specifications: **Maximum Output Current:**16 Amps. **Line Cord:** 2.5M, removable, IEC female to Schuko male. **Lamps:** Two multi-LED dimmable lamps. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 274V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **BNC Connector:** 12VAC 500MA max (lamp not included). **USB Circuit:** 500 mA@5VDC, USB-A Connector. **Dimensions:** 482.6mm W x 266.7mm D x 44.45mm H **Weight:** 6 kg. **Safety Agency:** CE. **Warranty:** Five Year.

COMPACT POWER CONDITIONER

Ideal for flat panel televisions, video projectors, or anywhere advanced power conditioning is needed for components away from the main equipment rack, The AC-210A E provides advanced protection and filtration in a compact, 44.5mm H x 127mm W x 216mm D chassis.

AC-210A E 10A Compact Advanced Power Conditioner

SMP Advanced Surge Protection
Linear Filtering Technology
Auto-Reset EVS Voltage Protection
2 Outlets
10A Rating
Diagnostic Lights

AC-210A E Specifications: **Maximum Output Current:**10 Amps. **Line Cord:** 2.5M, removable, IEC female to Schuko male. **Spike Protection Mode:** SMP, line to neutral, zero ground leakage. **Extreme Voltage Shutdown:** 275 VAC (Auto-Reset). **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **Dimensions:** 44.5mm H x 127mm W x 216mm D. **Weight:** 1.36 kg. **Safety Agency:** CE. **Warranty:** Three Year.

PRESTIGE SERIES VOLTAGE REGULATOR / POWER CONDITIONERS

Furman's Advanced Voltage Regulators/Power Conditioners provide consistent voltage (selectable between 230V and 240V, ±10V) output while also offering all of the advanced protection and noise filtering benefits of Furman's advanced power conditioning technologies.

P-1400 AR E 6A Advanced Voltage Regulator / Power Conditioner

SMP Advanced Surge Protection | Linear Filtering Technology | EVS Voltage Protection | True RMS Voltage Regulation | 11 Outlets | 6A Rating | Diagnostic Lights | USB Charger | Isolated Outlet Banks | Dual Voltage/ Current Meter | Rear Panel BNC Connector for Gooseneck Lamp

P-1400 AR E Specifications: **Maximum Output Current:** 6 Amps. **Output Voltage:** Selectable between 230V and 240V, ±10V. **In Regulation Range:** 174 to 264 VAC. **Line Cord:** 2.5M, removable, IEC female to Schuko male. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 275V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **USB Circuit:** 500 mA@5VDC, USB-A Connector. **BNC Connector:** 12VAC 500MA max (lamp not included). **Dimensions:** 482.6mm W x 305mm D x 45mm H **Weight:** 7 kg. **Safety Agency:** CE. **Warranty:** Five Year.

BALANCED POWER CONDITIONER

Designed for the most critical low-noise applications, Furman's flagship P-2300 IT E provides pristine balanced power to connected equipment with 100% isolation from the power grid.

P-2300 IT E 10A Balanced Power Conditioner

SMP Advanced Surge Protection | Linear Filtering Technology | EVS Voltage Protection | Symmetrically Balanced Power | 14 Outlets

10A Rating | Diagnostic Lights | USB Charger | Isolated Outlet Banks | Dual Voltage/ Current Meter

P-2300 IT E Specifications: **Maximum Output Current:** 10 Amps. **Line Cord:** Detachable cord, 1mm x 3, 2.5m long, Schuko plug to IEC C13. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 275V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **Noise Attenuation (Common Mode):** >80 dB @ 20 kHz, >40 dB @ 20 kHz-1 MHz. **Dimensions:** 133mm H X 483mm W X 356mm D **Weight:** 43 kg. **Warranty:** Five Year.

ADVANCED VOLTAGE REGULATOR / POWER CONDITIONER

P-6900 AR E 30A Advanced Voltage Regulator / Power Conditioner

SMP Advanced Surge Protection

Linear Filtering Technology

EVS Voltage Protection

True RMS Voltage Regulation

11 Outlets

30A Rating

Diagnostic Lights

USB Charger

Isolated Outlet Banks

Dual Voltage/ Current Meter

P-6900 AR E Specifications (Note - Preliminary Specifications, subject to change): **Maximum Output Current:** 30 Amps. **Output Voltage:** Selectable between 230V and 240V, ±10V. **In Regulation Range:** 174 to 264 VAC. **Line Cord:** 30A C-Form connector with female mating connector for termination of custom line cord. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 275V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **USB Circuit:** 500 mA@5VDC, USB-A Connector. **Dimensions:** 482.6mm W x 406.4mm D x 133.35mm H (without line cord connector), 482.6mm W x 597mm D x 133.35mm H (with line cord connector). **Weight:** 26 kg. **Warranty:** Five Year.

P-2300 IT E

Furman's 40 kg. isolation transformer (in the P-2300 IT E) works much like balanced audio at a higher voltage. The incoming AC is split from 230V on the line to 115V on the line and neutral when referenced to the new 0V ground. Since these voltage paths are in opposite polarity, all noise on the incoming AC line is cancelled, resulting in a substantially lower noise floor and allowing harmonics and overtones in audio content to shine through without the masking effects of AC noise.

CONTRACTOR SERIES SMARTSEQUENCERS™

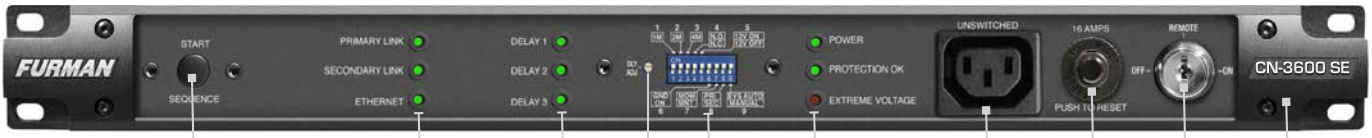
Furman's CN-3600 SE SmartSequencer™ combines protected AC power distribution and filtration, sequential system power on/off, remote control (IP control available) in a 1RU, 220-240VAC, rack-mount unit.

CN-3600 SE 16A SmartSequencer™

BlueBOLT® Compatible
with addition of BB-RS232 adaptor (sold separately)

FRONT PANEL

Security covers and sequence on/off key switch prevent unauthorized personnel from tampering or running/shutting down equipment with DIP switches.



Sequence On/Off Switch

SmartSequencing Primary Port Status

SmartSequencing Secondary Port Status

Delay 1, 2, and 3 LED Indicators

Potentiometer to Fine Tune Delay Time

DIP switches for configuring outlet delay

LED Indicators for Unswitched Power, Protection OK, and Extreme Voltage

Convenient Front Panel Outlet

Circuit Breaker 16A Thermal

Key switch (2 keys included)

Integrated Rack Ears

REAR PANEL

Remote Terminal Phoenix 4-pin connector with screw terminals

SmartSequencer Port Phoenix 4-pin connector with screw terminals

Force Off/Delay 3 Contact Closure Terminal Phoenix 5-pin connector with screw terminals

FORCE OFF (top)
DELAY 3 (bottom)

1.5mm2x3, 2.5 m Long IEC 60320 C-20 Female to Schuko CEE 7/7 Male Plug

Unswitched Duplex

Delay 1 Duplex (Configurable Delay)

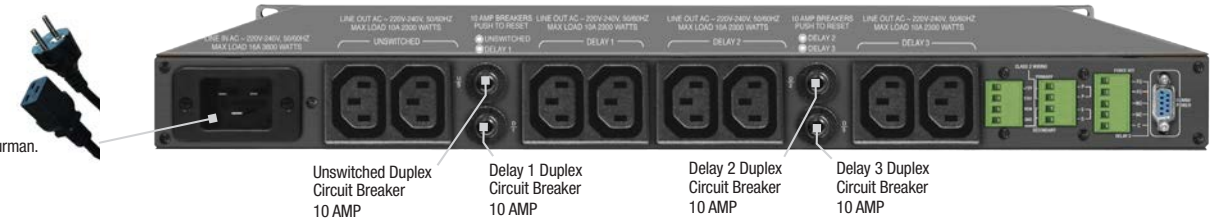
Delay 2 Duplex (Configurable Delay)

Delay 3 Duplex (Configurable Delay)

Ethernet Accessory Port D-Subminiature 9-pin female with threaded standoffs, IP Addressability: Optional, via BB-RS232 Ethernet/RS-232 Adaptor (sold separately) for IP control via Telnet, HTTP, BlueBOLT®

CN-3600 SE AC Cord
1.5mm2x3, 2.5 m Long
IEC C-19 Female to
CEE 7/7 Male Plug

Removable, Other cord options available from Furman.



Unswitched Duplex Circuit Breaker 10 AMP

Delay 1 Duplex Circuit Breaker 10 AMP

Delay 2 Duplex Circuit Breaker 10 AMP

Delay 3 Duplex Circuit Breaker 10 AMP

CN-3600 SE Specifications: **AC Voltage Input Range:** 180-270 VAC, 50/60Hz. **Maximum AC Current Rating:** 16 Amps (Thermal breaker). **AC Cord:** 1.5mm2x3, 2.5m Long, black, IEC C-19 Female to Schuko CEE 7/7 Male Plug. **AC Receptacles:** Convenience Outlet (Front Panel) 1 IEC C-13 (Unswitched); Rear Panel Outlets: 1 IEC C 13 pair (Unswitched), 3 IEC C13 pairs (Sequenced, each pair is controlled by separate relay). **Surge/Under-Overvoltage Protection:** AC Surge Protection: Series Multi-Stage Protection (SMP); Spike Protection Mode: Line to neutral, zero ground leakage; Spike Clamping Voltage: 375 V peak @ 6,000 volts/3,000 amps ; Response Time: 1 nanosecond; Maximum Surge Current: 6,500 Amps; AC Undervoltage Protection: 175VAC+/-5VAC; AC Overvoltage Protection: EVS, 275VAC+/-5VAC; AC Overvoltage Reset Modes: Manual and Auto-reset (configurable). **AC Filtering:** LiFT; Noise Attenuation: Linear, 10dB @10KHz, 40dB@100KHz, 50dB@500KHz. **Operating Temperature Range:** 5C (40F) to 40C (105F) degrees. **Humidity Range:** <90% rH (Relative Humidity). **User Interface:** Key switch: Front panel, 3-position key switch (On, Off, Remote); Keys: Included, 1 pair; Pushbutton Switch: Front panel, hidden by security cover; Circuit Breaker: Front panel, pushbutton, 16A Thermal Breaker; Front panel diagnostic indicators: Primary link, Secondary link, Ethernet, Remote off, Delay 1, Delay 2, Delay 3, Power, Protection OK, Extreme Voltage; Front Panel DIP Switches: Hidden by security cover, 1 Minute Delay, 2 Minute Delay, 4 Minute Delay, Force Off NO/NC, 12V Mode On/Off GND Mode On, Momentary/Maintained, Primary/Secondary, EVS Reset Auto/Manual; Potentiometer: Front panel, hidden by security cover, fine tune delay adjust. **Control/Status/Triggering (Rear Panel):** Remote Terminal: +5-30VDC In, 12VDC (10mA) Out; SmartSequencing: Phoenix-type 4-Pin Connector, Screw Terminals, Primary & Secondary Links (Current Loop - 300 m nominal); Remote Terminal: Phoenix-type 4-Pin Connector With Screw Terminals; +12V, STAT, REM, GND; Force Off/Delay 3 Terminal: Phoenix-type 5-Pin Connector With Screw Terminals, FORCE OFF, DELAY 3; RS-232 Compatible: Yes, DE-9 Connector; IP Accessibility: Optional, via BB-RS232 Ethernet/RS-232 Adaptor (sold separately) for direct IP control via Telnet, HTTP, BlueBOLT®; Voltmeter: Available data via RS-232 or Ethernet option, +/- 2VAC accuracy; Ammeter: Available data via RS-232 or Ethernet option, +/-1A accuracy. **Power Consumption (No Load):** 10 Watts. **Dimensions:** 483mm W x 280mm D x 45mm H **Weight:** 5.44 kg. **Warranty:** Fifteen Years. **Safety Agency Mark:** CE. **RoHS Compliant:** Yes

POWER SEQUENCER / CONDITIONER

Furman's rackmount Power Sequencer/Conditioner provides a solution for control of system start-up and shut-down along with advanced power protection and filtration.

PS-8RE III 10A Advanced Power Sequencer/Conditioner

Linear Filtering Technology | EVS Voltage Protection | Power Sequencing | 9 Outlets | 10A Rating | Diagnostic Lights | Isolated Outlet Banks | Rear Panel BNC Connector for Gooseneck Lamp

PS-8R E II Specifications: **Maximum Output Current:** 10 Amps. **Delay Banks:** 3 banks, adjustable delay, local or remote control. **Line Cord:** 2.5M, removable, IEC female to Schuko male. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Maximum Continuous Operating Voltage:** 276V. **Let Through Voltage**: 376V Pk / 266V RMS @ 3,000 Amps. **Noise Attenuation (Transverse Mode):**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **BNC Connector:** 12VAC 500MA max (lamp not included). **Dimensions:** 482.6mm W x 220mm D x 44.45mm H **Weight:** 3.1 kg. **Safety Agency:** CE. **Warranty:** Thee Year.

UNINTERRUPTIBLE POWER SUPPLY/POWER CONDITIONER

F1500-UPS E Battery Backup

BlueBOLT Compatible

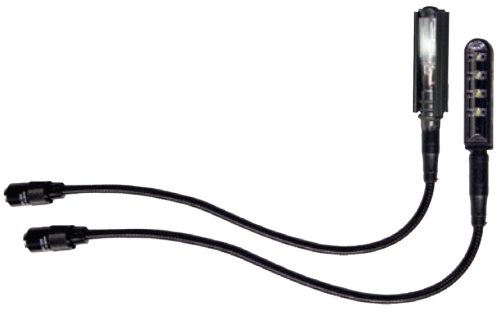
with BlueBOLT-CV1 interface card (sold separately): provides remote access to reboot components, power equipment on or off, and monitor power quality overthe Internet from anywhere in the world.

SMP Advanced Surge Protection | Linear Filtering Technology | Extreme Voltage Shutdown | Battery Backup Protects Data | Digital Indicators | Dual Learning IR Blasters | Custom Programming | Critical Load Management | BlueBOLT Compatible

F1500-UPS E Specifications: **Current Rating:** 10 Amps. **Outlets:** 4 Critical Load (2 banks - 2 outlets per bank), 6 Non-Critical load (2 banks - 3 outlets per bank) **Line Cord:** 3M, removable, with retention clip. **Spike Protection Mode:** SMP, Line to neutral, zero ground leakage. **Voltage:** 170 - 286 VAC **Overvoltage Shutoff, fast rise:** 300±10V **Overvoltage Shutoff, slow rise:** 296±5V **Noise Attenuation:**10 dB @ 10 kHz, 40 dB @ 100 kHz, 50 dB @ 500 kHz. **UPS Output Capacity:** 1500VA, 900W @ 0.75pf (7.5A) **UPS Back-up Time:** 12 Minutes at full load, 32 Minutes at half load **Dimensions:** (without rack ears) 432mm W x 488mm D x 90mm H **Weight:** 32.7 kg. **Safety Agency:** CE. **Warranty:** Three Year.

GOOSENECK LAMPS

GN-I / GN - LED Gooseneck Lamps



Furman's 12" gooseneck lamps provide incandescent (GN-I) and LED (GN-LED) illumination with a locking BNC connector, ideal for use with many Furman products that provide a rear BNC connector for discreet illumination at the back of an equipment rack.

ICON GLOSSARY

ISOLATED OUTLET BANKS

Isolation of rear panel outlet banks provides further noise reduction at the point of use by eliminating electrical crosstalk, which can be particularly troublesome when analog and digital equipment is plugged into the same circuit.

FRONT PANEL RETRACTABLE LIGHTS

Furman's signature front panel retractable lights provide convenient, discreet illumination to a rack full of equipment. Standard models include incandescent lights. Advanced models feature long-lasting, cool running LED lights.

BLUEBOLT®

Provides remote access to reboot components, power equipment on or off, and monitor power quality over the Internet from anywhere in the world.

DIAGNOSTIC LIGHTS

Diagnostic lights provide information regarding power quality and operational status of the Furman unit, including Protection OK indicator, Extreme Voltage indicator, and color-coded Voltage Range indicator (on select models).

LED VOLTMETER

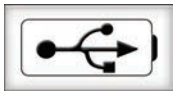
Segmented LED Voltage Meter. Indicates incoming voltage ranging from 180V to 254V. The LED's are color coded (Red=Stop, Yellow=Caution, Green=Go) to inform users at a glance if voltage is within a nominal range.

BATTERY BACKUP

Provides emergency power to connected equipment when the input power source fails.

DIGITAL VOLTMETER/AMMETER

Switchable, dimmable digital meter displays incoming voltage, switchable to output current in amps. Display also features Protection OK, Extreme Voltage, and color-coded Voltage Range indicators for comprehensive power monitoring.



USB CHARGER

Front-panel USB charger provides convenient charging outlet for most personal media devices and cell phones.

REAR PANEL BNC CONNECTOR

Rear-panel BNC Connector allows connection of BNC gooseneck lamp for rear rack illumination.

STANDARD LEVEL SURGE PROTECTION

Standard level, MOV-based sacrificial surge protection.

STANDARD LEVEL EMI/RFI FILTRATION

Standard level non-linear AC noise filtration.

BlueBOLT

BLUEBOLT ADAPTER

BB-RS232

Contractor Series
BlueBOLT Adapter

The BB-RS232 Adaptor provides Ethernet connectivity to BlueBOLT-supported products that are otherwise only capable of RS-232 communication. Once the Adaptor is connected between the BlueBOLT supported product (via RS-232) and the site's Local Area Network (via Ethernet), the product can communicate with our BlueBOLT servers or a local control system.

RS-232 (DTE pinout, DE-9)

BATTERY BACKUP (EXTRAS)

New Version!
Now with Embedded Web Control

BlueBOLT-CV2 Online Remote Power Management

(For use with F1500-UPS E)

Provides secure, hosted IP system control and monitoring for the MB1500 as well as additional BlueBOLT® compatible products from Furman/Panamax

FEATURES

- Control for individual outlet banks featuring power, trigger and delay settings
- Auto rebooting for connected network devices
- Remote diagnostics: check unit status and incoming line voltages
- Easy, plug-in installation
- Email alerts for over and under-voltages help you anticipate or prevent service calls

BATT1500-EXT (For use with F1500-UPS E)

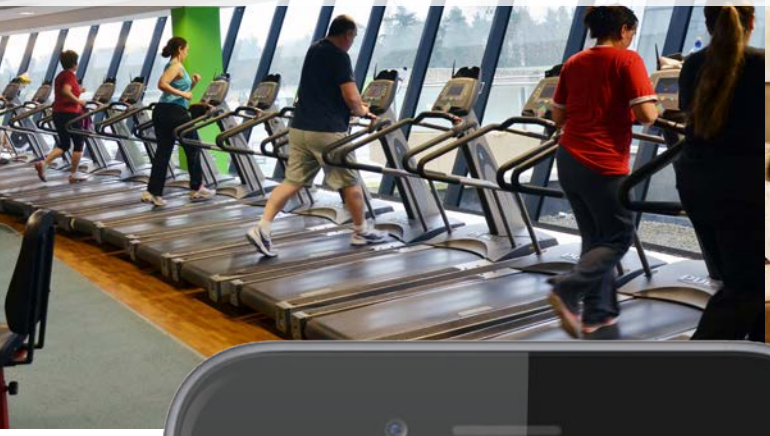
Extend Runtime with External Battery Pack Component for F1500-UPS E up to 100 minutes when used in combination with F1500-UPS E. One BATT1500-EXT may be used at a time.

Run Times

Extended Run Time with F1500*	
Half Load	100 Min.
Full Load	45 Min.

BlueBOLT™ REMOTE POWER MANAGEMENT

Commercial Integration Application Guide



BlueBOLT®

What Is BlueBOLT?

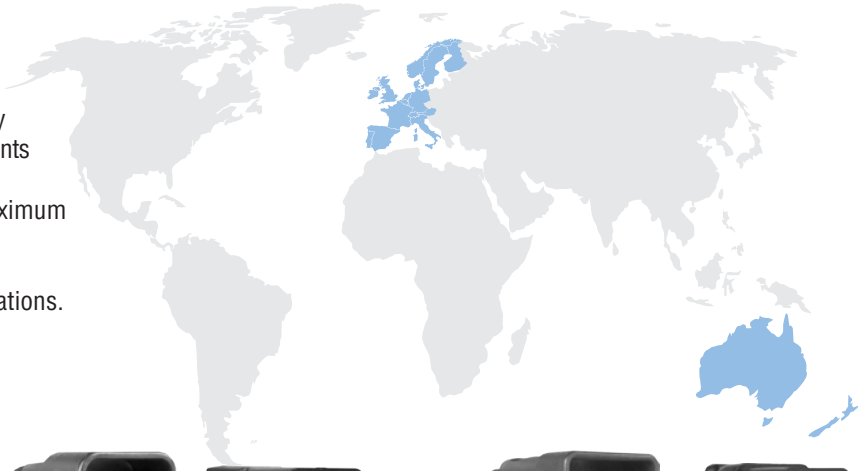
BlueBOLT is a free, cloud-based platform for control and monitoring of Panamax and Furman power management products. BlueBOLT can be used in integrated electronics systems to drastically reduce service calls by remotely rebooting problem components, send alerts regarding onsite system issues, manage energy use, monitor network connectivity, and much more.

Applications:

Retail
Restaurants/Bars
House of Worship
Medical Offices
Fitness Centers
Education
Dance Clubs
Property Management
Research/Labs
Corporate Meeting Rooms
Auditoriums
Hotels/Hospitality

GLOBAL COMPATIBILITY

Furman products are engineered to be universally compatible with the many regional power requirements around the globe. All 220V-240V Furman power management products feature IEC outlets for maximum convenience and flexibility in installation.
Furman offers a wide variety of adaptor cords to provide connection solutions for all global applications.



IEC ADAPTOR CORDS

ADP-10E1 (1 meter long)

To plug components with removable 10A IEC cords into Furman products with 10A IEC outlets. 10A Male IEC to 10A Female IEC.

ADP-10E2 (2 meters long)

To plug components with removable 10A IEC cords into Furman products with 10A IEC outlets. 10A Male IEC to 10A Female IEC.

ADP-16E2 (1 meter long)

To plug components with removable 16A IEC cords into Furman products with 16A IEC outlets. 16A Male IEC to 16A Female IEC.

UNITED KINGDOM (UK)

ADP-IEC UK (0.1 meter long)

To plug components with UK plugs into Furman products with 10A IEC outlets. 10A Male IEC to Female UK.

UK-10 (2.5 meters long)

For use with 10A Furman products with removable IEC power cord. 10A IEC Female to 10A UK Male.

UK-16 (2.5 meters long)

For use with 10A Furman products with removable IEC power cord. 16A IEC Female to 16A UK Male.

WESTERN EUROPE (SCHUKO)

ADP-IEC EURO (0.1 meter long)

To plug components with European SCHUKO plugs into Furman products with 10A IEC outlets. 10A Male IEC to Female SCHUKO.

SCHUKO-10 (2.5 meters long)

For use with 10A Furman products with removable IEC power cord. 10A IEC Female to SCHUKO Male.

SCHUKO-16 (2.5 meters long)

For use with 10A Furman products with removable IEC power cord. 16A IEC Female to SCHUKO Male.

GLOBAL MAINS VOLTAGE BY COUNTRY

Afghanistan	240 V
Albania	220 V
Algeria	230 V
American Samoa	120 V
Andorra	230 V
Angola	220 V
Anguilla	110 V
Antigua	230 V
Argentina	220 V
Armenia	220 V
Aruba	127 V
Australia	230 V
Austria	230 V
Azerbaijan	220 V
Azores	220 V
Bahamas	120 V
Bahrain	230 V
Balearic Islands	220 V
Bangladesh	220 V
Barbados	115 V
Belarus	220 V
Belgium	230 V
Belize	110 V/220 V
Benin	220 V
Bermuda	120 V
Bhutan	230 V
Bolivia	220 V
Bonaire	127 V
Bosnia	220 V
Botswana	231 V
Brazil	127 V/220 V
Brunei	240 V
Bulgaria	230 V
Burkina Faso	220 V
Burundi	220 V
Cambodia	230 V
Cameroon	220 V
Canada	120 V
Canary Islands	220 V
Cape Verde	220 V
Cayman Islands	120 V
Central African Republic	220 V
Chad	220 V
Channel Islands	230 V
Chile	220 V
China	220 V
Colombia	120 V
Comoros	220 V
Congo-Brazzaville	230 V
Congo-Kinshasa	220 V
Cook Islands	240 V
Costa Rica	120 V
Côte d'Ivoire	230 V
Croatia	230 V
Cuba	110 V
Cyprus	240 V
Czech Republic	230 V
Denmark	230 V
Djibouti	220 V
Dominica	230 V
Dominican Republic	110 V
East Timor	220 V
Ecuador	120 V
Egypt	220 V
El Salvador	115 V
Equatorial Guinea	220 V
Eritrea	230 V
Estonia	230 V
Ethiopia	220 V
Faroe Islands	220 V
Falkland Islands	240 V
Fiji	240 V
Finland	230 V
France	230 V
French Guiana	220 V
Gaza Strip	230 V
Gabon	220 V
Gambia	230 V
Germany	230 V
Ghana	230 V
Gibraltar	240 V
Greece	230 V
Greenland	220 V
Grenada	230 V
Guadeloupe	230 V
Guam	110 V
Guatemala	120 V
Guinea	220 V
Guinea-Bissau	220 V
Guyana	240 V
Haiti	110 V
Honduras	110 V
Hong Kong	220 V
Hungary	230 V
Iceland	230 V
India	230 V
Indonesia	127 V/230 V
Iran	220 V
Iraq	230 V
Ireland	230 V
Isle of Man	240 V
Israel	230 V
Italy	230 V
Jamaica	110 V
Japan	100 V
Jordan	230 V
Kazakhstan	220 V
Kenya	240 V
Kiribati	240 V
Korea, North	220 V
Korea, South	220 V
Kuwait	240 V
Kyrgyzstan	220 V
Laos	230 V
Latvia	220 V
Lebanon	110 V/200 V
Lesotho	220 V
Liberia	120/240 V
Libya	127 V
Lithuania	230 V
Liechtenstein	230 V
Luxembourg	230 V
Macau S.A.R. of China	220 V
Macedonia	220 V
Madagascar	127 V / 220 V
Madeira	220 V
Malawi	230 V
Malaysia	240 V
Maldives	230 V
Mali	220 V
Malta	230 V
Martinique	220 V
Mauritania	220 V
Mauritius	230 V
Mexico	120 V
Micronesia	120 V
Moldova	220-230 V
Monaco	127 V/220 V
Mongolia	230 V
Montenegro	220 V
Montserrat	230 V
Morocco	127 V/220 V
Mozambique	220 V
Myanmar/Burma	230 V
Namibia	220 V
Nauru	240 V
Nepal	230 V
Netherlands	230 V
Netherlands Antilles	127 V/220 V
New Caledonia	220 V
New Zealand	230 V
Nicaragua	120 V
Niger	220 V
Nigeria	240 V
Norway	230 V
Okinawa	100 V
Oman	240 V
Pakistan	230 V
Panama	110 V
Papua New Guinea	240 V
Paraguay	220 V
Peru	220 V
Philippines	220 V
Poland	230 V
Portugal	220 V
Puerto Rico	120 V
Qatar	240 V
Réunion	220 V
Romania	230 V
Russian Federation	220 V
Rwanda	230 V
St. Kitts and Nevis	110/230 V
St. Lucia	240 V
St. Vincent	230 V
São Tomé and Príncipe	220 V
Saudi Arabia	127 V/220 V
Senegal	230 V
Serbia	220 V
Seychelles	240 V
Sierra Leone	230 V
Singapore	230 V
Slovakia	230 V
Slovenia	230 V
Somalia	220 V
South Africa	220 V
Spain	230 V
Sri Lanka	230 V
Sudan	230 V
Suriname	127 V
Swaziland	230 V
Sweden	230 V
Switzerland	230 V
Syria	220 V
Tahiti	110 V/220 V
Taiwan	110 V/220 V
Tajikistan	220 V
Tanzania	230 V
Thailand	220 V
Togo	220 V
Tonga	240 V
Trinidad & Tobago	115 V
Tunisia	230 V
Turkey	230 V
Turkmenistan	220 V
Uganda	240 V
Ukraine	220 V
United Arab Emirates	220 V
United Kingdom	230 V
United States of America	120 V
Uruguay	230 V
Uzbekistan	220 V
Vanuatu	230 V
Venezuela	120 V
Vietnam	220 V
Virgin Islands	110 V
Western Samoa	230 V
Yemen	230 V
Zambia	230 V
Zimbabwe	220 V

FURMAN®

Part# L1P201 **Rev D, 8/2017**
Petaluma, CA 94954, USA

RoHS COMPLIANT

All 220V-240V Furman products are 100% RoHS Compliant.

To find your regional Furman distributor, please visit:
www.FurmanPower.com