

PC-100

Power Conditioner 100



- *Rack-mountable power conditioner*
- *Eight switched rear panel outlets and one unswitched front panel outlet*
- *Three-stage sequential turn-on delay*
- *Professional grade surge protection*
- *UL® 1449 Type 3 Listed*
- *Thermal breaker overload protection*
- *Over voltage and under voltage cutoff*
- *EMI and RFI noise filtering*
- *Wiring fault detection*
- *Front panel main power switch and status indicators*
- *Protection status contact closure output*

The PC-100 is a professional grade, rack-mountable power conditioner designed to provide 120 VAC power distribution, switching, surge protection, and noise filtering for Crestron® control systems, AV systems, computers, and other equipment. Eight switched outlets are provided on the rear panel, and a single unswitched convenience outlet is provided on the front. All nine outlets are protected and filtered. The switched outlets are arranged in four banks of two, and two of the banks are turn-on delayed.

Power Conditioning

The PC-100 includes the following power conditioning features to maximize overall system performance:

- **Surge Protection:** Provides protection against surges and spikes in the AC power line caused by lightning and other electrical disturbances
- **Under/Over Voltage Cutoff:** Shuts off power to the rear panel outlets if the line voltage strays beyond the normal operating range
- **Thermal Breaker:** Disrupts power to all outlets in case of an overload condition
- **EMI/RFI Noise Filtering:** Prevents electromagnetic and radio frequency interference that can negatively impact sound and video quality
- **Wiring Fault Detection:** Detects faulty wiring of the incoming AC power line and shuts off power to the rear panel outlets until the fault is corrected¹

Three Stage Turn-On Delay

The switched outlets on the PC-100 rear panel are arranged in four banks, with two outlets per bank. When the front panel switch is turned on, or when power is applied to the main line input following a power outage or through an externally switched circuit, the outlet banks turn on in the following sequence:

- The first two banks of outlets turn on immediately.
- The third bank turns on following a one second delay
- The fourth bank turns on following a two second delay.

This sequence ensures that the connected equipment gets powered up in proper order, preventing transients that can damage components and potentially trip the main circuit breaker. It can also help to prevent audible pops and thumps through connected audio equipment at power-up.

Protection Status Output

A contact closure output is included to provide notification to a control system or other equipment if the internal surge protection circuit is compromised due to an extreme transient voltage surge. In the unlikely event of such a condition, the PROTECTION output presents a low-voltage contact closure signal and all power to the rear panel outlets is switched off. Protection status is also indicated via LEDs on the front panel.

UL 1449 Certified

The PC-100 has been tested and certified by UL as compliant with the UL® 1449 safety and performance standard for surge protective devices (SPD).

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Specifications

Power Conditioner

Maximum Output Current, Total	15 A @ 120 VAC
Maximum Output Current, Per Outlet/Bank	15 A @ 120 VAC (subject to a maximum total output current of 15 A for all outlets combined)
Filtration	40 dB @ 100 kHz, 50 dB @ 300 kHz, with 50 Ω load
Surge Protection Modes	L-G, L-N, N-G
Surge Protection Shutoff	Shuts off rear outlets if surge protection is compromised
Energy Dissipation	2000 J per mode
Clamping Voltage	370 V
Clamping Time	1 ns
Wiring Fault Detection	Shuts off rear outlets if a wiring fault is detected at the input ¹
Under Voltage Cutoff	Shuts off rear outlets if input drops below 93 V
Over Voltage Cutoff	Shuts off rear outlets if input exceeds 135 V
Turn-On Delay	SWITCHED ON 1: 0 seconds; SWITCHED ON 2: 0 seconds; DELAYED ON 1: 1 second; DELAYED ON 2: 2 seconds

Power

Line Power	15 A @ 120 VAC, 60 Hz
Power Consumption	~10 W typical, 30 W maximum (not including load)
Cresnet	Cresnet secondary mode

Connectors

120V~ 15A 60Hz	(1) Attached 9.8 ft (3 m) grounded AC power cord with NEMA 5–15P plug; Line power input
SWITCHED ON 1	(2) NEMA 5–15R AC power outlets; Switched 120 VAC power outlet bank; Turn-On Delay: 0 seconds
SWITCHED ON 2	(2) NEMA 5–15R AC power outlets; Switched 120 VAC power outlet bank; Turn-On Delay: 0 seconds
DELAYED ON 1	(2) NEMA 5–15R AC power outlets; Switched 120 VAC power outlet bank; Turn-On Delay: 1 second
DELAYED ON 2	(2) NEMA 5–15R AC power outlets; Switched 120 VAC power outlet bank; Turn-On Delay: 2 seconds
PROTECTION	(1) 2-pin 3.5 mm detachable terminal block; Normally open, isolated relay; Rated 1 A, 30 VAC/VDC; Provides a dry contact closure if surge protection is compromised
G	(1) 6-32 screw, chassis ground lug
ALWAYS ON (front)	(1) NEMA 5–15R AC power outlet; Unswitched 120 VAC power outlet

Controls and Indicators

PWR	(1) Bicolor green/amber LED, indicates line power is present and the power switch is on (green) or off (amber)
FAULT	(1) Red LED, indicates any of the following fault conditions: surge protection is compromised, line and neutral are reversed, or no ground is detected ¹
PROTECT	(1) Green LED, indicates surge protection is fully functional

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SHUTDOWN	(1) Amber LED, indicates power to the rear outlets is shut off due to an over voltage, under voltage, line input miswire, missing ground, or compromised surge protection fault condition
Power Switch	(1) Rocker switch, "On" position initiates turn-on delay sequence to the rear panel outlets, "Off" position turns all rear outlets off immediately
THERMAL BREAKER (rear)	Disrupts power to all outlets in case of an overload condition, press to reset after overload condition is resolved

Environmental

Temperature	32 to 113 °F (0 to 45 °C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	34 BTU/hr typical, 102 BTU/hr maximum

Construction

Chassis	Steel, black finish
Front Panel	Extruded aluminum, black finish, polycarbonate label overlay
Mounting	1 RU 19 in. rack-mountable (rack ears included)
Temperature Sensor	Adhesive or magnetic mount, 9.8 ft (3.0 m) attached lead

Dimensions

Height	1.73 in (44 mm);
Width	17.32 in (440 mm), 19.00 in (483 mm) with rack ears
Depth	10.56 in (269 mm)

Weight

8.2 lb (3.8 kg)

Compliance

UL® 1449 Type 3 Listed

Models

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Notes:

1. Detects most input line wiring faults. Does not detect neutral/ground reversal. Does not discern between ground connections at the AC power line, chassis, or connected equipment (a ground connection at any point will be detected by the PC-100 as normal). The installer is responsible for proper wiring and grounding of this and all connected equipment according to applicable electrical codes, accepted guidelines, and best practices. Proper wiring and function of the AC power source should be verified prior to connecting the PC-100 or any other equipment. Use of this product does not negate the responsibilities of the installer and end-user to exercise all appropriate and required measures for safe and reliable installation and operation.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

The specific patents that cover Crestron products are listed online at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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