PC-350V-12

12-Outlet Vertical Networked Power Controller & Conditioner with Surge Protection and Metering



- Mounts vertically on the rack frame and occupies no rack space (zero RU)
- 12 Individually-switched outlets with remote control
- Adjustable power on sequencing and cycle delay per outlet
- Built-in current sensing and energy monitoring per outlet
- Line voltage, energy, and current monitoring
- Scheduling for turn on, turn off, and power cycling at set intervals
- UL® 1449 Type 3 surge protection
- Thermal breaker overload protection
- Adjustable overvoltage and undervoltage cutoff
- EMI and RFI noise filtering
- Wiring fault detection
- Ambient temperature sensing with alert notifications
- Ping monitoring (device lockup detection and reboot)
- Built-in energy usage and event logging
- Easy setup and operation using the web UI
- Crestron[®] control system integration via Ethernet
- Remote management via XiO Cloud[®] service, Crestron Home[™] OS, and Domotz[™] solution¹
- Integration with a custom-programmed Crestron control system via SIMPL programming software
- Rated 12A at 120VAC

The PC-350V-12 is a vertical rack-mountable power controller designed to occupy no rack space (zero RU). It provides 120V AC power distribution, switching, surge protection, noise filtering, and energy monitoring for Crestron® control systems, AV systems, computers, and other equipment. All 12 individually-switched outlets are protected and monitored, including six outlets with EMI and RFI noise filtering. Ping monitoring and power cycle scheduling are adjustable to ensure connected devices are always operational. Power cycle delays and sequencing are adjustable to ensure a system powers up reliably every time. The switched outlets are also individually controllable via a control system to enable independent switching of devices, load-shedding, and other custom power control functionality.¹

Line voltage, current, power, and energy usage monitoring at each outlet is possible for troubleshooting and to prevent device failures. An external temperature sensor <u>PC-TS</u> can be purchased separately to monitor temperature within the equipment rack or room. Network connectivity allows for setup and operation using the web UI, with extensive custom control and monitoring capabilities enabled through integration with Crestron Home[™] OS, the XiO Cloud[®] service, and Domotz[™] solution.¹ The PC-350V-18 can also be integrated with a customprogrammed Crestron control system via <u>SIMPL</u> programming software.

Power Conditioning

The PC-350V-12 includes the following power conditioning features:

- Surge Protection Disconnects power to all outlets if surge protection is compromised
- **Overcurrent Protection** Disconnects power to all outlets or the last outlet that drew current exceeding the set threshold values
- Under/Over Voltage Cutoff Disconnects power to outlets if the line voltage exceeds the set threshold values
- Thermal Breaker Disconnects 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 outlets until the fault is corrected²

Adjustable Turn On Delay

The PC-350V-12 can be set to the following turn on delays:

Startup Delay — The delay sequence between outlets turning on can be set for 1 to 10 seconds. Startup delay ensures that the connected devices power up in a proper sequence and do not overload the circuit or generator.

Startup delay is initiated by disconnecting the power controller from the power source and then reconnecting it. It can also be initiated remotely using the web UI, Crestron Home, XiO Cloud, or Domotz.¹

 $\mbox{Cycle Delay}-\mbox{Up to 300 seconds of delay can be set between the turn off and turn on of an individual outlet.}$

Remote-Controllable Switched Outlets

Any of the PC-350V-12 outlets can be turned on or off individually over the network using the web UI, a Crestron control system, or Domotz. This feature helps to resolve technical issues or power down the select components to save energy when not needed. Through integration with a control system, custom functionality can be programmed to enable control from a touch screen, keypad, remote, or mobile device. Sequential power-up and power-down functionality can be enabled through programming of the control system, with select outlets designated as always on.

The PC-350V-12 integrates seamlessly with Creston Home, enabling the end user to reset connected faulty devices.



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Energy Monitoring

By sensing the incoming line voltage and individual device loads, the PC-350V-12 facilitates a host of solutions for monitoring, automating, and troubleshooting a system.

- Voltage monitoring tracks and logs fluctuations in the power line, helping to identify and document problems with the power utility or building wiring.
- Energy monitoring per outlet tracks and logs the real power consumption (watts), current draw (amps), and energy usage (watt-hours) for each connected device.
- Individual device usage can be tracked to inform the scheduling of maintenance and future purchasing decisions.

Ambient Temperature Sensing

The temperature sensor <u>PC-TS</u> (available separately) connects to the PC-350V-12 and provides a complete equipment protection solution by monitoring the ambient temperature within the equipment cabinet or room. The PC-350V-12 sends alert notifications when <u>PC-TS</u> detects abnormal temperature conditions.

Ping Monitoring

The PC-350V-12 can be configured to detect an unresponsive device by sending it a ping command at regular intervals. If the ping request is not returned after a preset number of continuous pings, the outlet feeding the monitored device cycles off and on to reboot the device, quickly restoring normal operation without any human intervention.

Scheduling

Recurring schedules can be set up to power cycle unused devices to ensure they are operational when needed. The executed schedules are recorded in the logs of the web UI and XiO Cloud.

Built-In Logging

Events such as overcurrent conditions, over/under voltage conditions, over-temperature conditions, ping failures, and outlet switching activity can all be logged as they occur to document the time and cause of problems and to track device usage. All sensor readings are logged to record a detailed history of events and energy usage over time.

Remote Management & Control

The PC-350V-12 integrates seamlessly into any system or facility. It can be set up and managed using the web UI. Builtin SNMP support enables integration with third-party IT management software, allowing network administrators to manage one or many networked PC-350V-12 devices in an ITfriendly format. The PC-350V-12 can be integrated with a Crestron control system via Ethernet to enable control and monitoring through a touch screen, handheld remote, or mobile device.

UL® 1449 Certified

Surge protection for PC-350V-12 has been tested and certified by UL as compliant with the UL 1449 safety and performance standard for surge protective devices (SPD).

Specifications

Power Conditioner

Maximum Output Current, Total:	12A @ 120VAC		
Maximum Output Current, Per Outlet:	12A @ 120VAC (subject to a maximum total output current of 12A for all outlets combined)		
Filtration (Outlet 7- 12):	-1.9 dB @ 100 kHz, -25 dB @ 300 kHz, - 39 dB @ 500 kHz with 50 Ohm load		
Surge Protection Modes:	Line-Ground, Line-Neutral, Neutral- Ground		
Surge Protection Shutoff:	Shuts off outlets if surge protection is compromised		
Joule Rating:	3640 Joules		
Clamping Voltage:	600V		
Clamping Time:	1ns		
Wiring Fault Detection:	Shuts off outlets if the following wiring faults are detected at the input:		
	Reversed polarity		
	Missing ground wire		
Voltage Sensing Range:	90 to 145V rms ±1%, measured at input		
Current Sensing Range:	0.1 to 12A rms ±1% when load > 1A, measured per outlet		
Under Voltage Cutoff:	Adjustable 90 to 100V, shuts off outlets if input drops below set value		
Over Voltage Cutoff:	Adjustable 130 to 145V, shuts off rear outlets if input exceeds set value		
Cycle Delay Adjustment:	5 to 300 seconds, adjustable per outlet		
Startup Delay Adjustment:	1 to 10 seconds, adjustable per outlet		

Power

Line Power

12A @ 120VAC, 60 Hz



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Communications		SHUTDOWN:	(1) Amber LED, indicates power to outlets is shut off due to any of the of
Ethernet	10/100 Mbps, auto-switching, auto- negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SNMP, web server, web UI setup and control, Crestron control system integration, XiO Cloud monitoring		 the following fault conditions: overvoltage undervoltage overcurrent line input miswire missing ground
120V~ 12A 60Hz:	Detachable 9.8 ft (3 m) grounded AC power cord with NEMA 5-15P plug, line power input	HW-R:	 (1) Recessed pushbutton; Initiates hardware reset, factory restore, DHCP
OUTLET 1 -12	 (12) NEMA 5-15R AC power outlets; Individually-switched 120VAC power outlets; Adjustable power cycle delay per outlet; Adjustable startup delay per outlet; Remote switchable per outlet 	THERMAL BREAKER: LAN:	 (1) Disconnects power to all outlets (1) Disconnects power to all outlets in case of an overload condition, press to reset after overload condition is resolved (2) LEDs, green LED indicates Ethernet
TEMP:	(1) 2-pin 3.5mm detachable terminal block; Connection for external temperature sensor (not included)	Per Outlet Indicator:	link status, amber LED indicates Ethernet activity (1) Green LED:
LAN: (1) 8-pin RJ45 jack; 10Base-T/100Base-TX Ethernet port Controls & Indicators			 Illuminates when outlet is turned on blinks when the "Identify" search process is initiated for the outlet in the Crestron Home app
PWR:	(1) Bi-color green/amber LED, indicates line power is present and:	Environmental	
	 illuminates amber while booting 	Temperature:	32° to 104°F (0° to 40°C)
	 illuminates green when the device is operating normally 	Humidity:	10% to 90% RH (non-condensing)
	 turns amber if the outlets have been shut off due to a fault condition 	Construction	
		Chassis:	Metal, black finish
	 blinks in amber during the factory reset process 	Mounting:	0 RU vertically rack-mounted (mounting brackets included)
	• blinks in green when the "Identify" search process is initiated for the unit in the Crestron Home app	Dimensions	
		Height	36.40 in. (925 mm)
FAULT:	(1) Red LED, indicates any of the following fault conditions: ²	Width Depth	1.73 in. (44 mm) 2.60 in. (66 mm)
	 surge protection is compromised 	Weight	
	 line and neutral are reversed 		
	 no ground is detected 	יטו גען (4.31 Kg)	
PROTECT:	(1) Green LED, indicates surge protection is fully functional		



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Compliance

Regulatory Model: M202015002

UL 62368 Listed, UL 1449 SPD Type 3 , FCC Part 15 class B, IC Class B

Models

PC-350V-12

12-Outlet Vertical Networked Power Controller & Conditioner with Surge Protection and Metering

PC-350V-18

18-Outlet Vertical Networked Power Controller & Conditioner with Surge Protection and Metering

Available Accessories

For a list of available accessories, visit the <u>PC-350V-12</u> product page.

Notes:

- 1. XiO Cloud, Crestron Home, Domotz, and Crestron control system sold separately.
- 2. 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-350V-12 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 contact us for additional information by visiting <u>https://www.crestron.com/contact/our-locations</u> for your local contact.

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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Rev 11/24/21



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