



by Schneider Electric

Installation and Operation

C-Type Power Filter C20B/C25B

General Information

The APC™ AV C-Type Power Filters C20B/C25B protect high performance audio and video system equipment from damage due to power surges, spikes, and lightning strikes.

Safety



Electrical Hazard: For indoor use only.



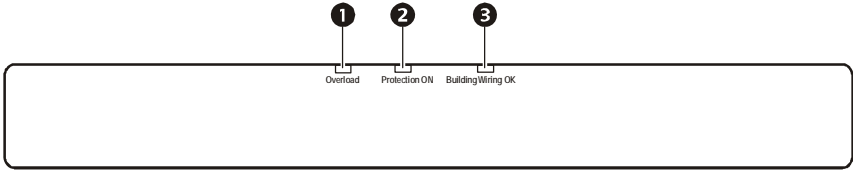
- **Risk of electric shock.** Do not plug into another relocatable power tap.
- **Contains always on receptacles.** To reduce the risk of electric shock, disconnect the filter from the power source before servicing the equipment.
- **Overloading.** Do not overload the wall outlet where this device is being connected. Do not overload this device. Ensure the total load to this device does not exceed that which is listed in the Specifications section of this manual.
- **Power.** Ensure this device is connected to a properly grounded AC power source. Further ensure the device is plugged into a source providing the required 120 Vac. Do not use a plug adapter which defeats the ground pin of the AC plug.
- **Placement.** Install the filter on a flat surface. Do not install this device on any unsteady surface. Do not install this device on any heat source.
- **Water and Moisture.** Do not use this product near any source of water, or in an environment where the relative humidity may exceed 95% (non-condensing).
- **Polarization.** This device has a polarized AC line plug having one grounding pin. This plug will only fit into the wall outlet in one orientation. This is a safety feature. Do not remove the round grounding pin.

- **System Ground Terminal.** The filter provides for the connection of grounding wires from all of your equipment to a central terminal lug. This ground connection eliminates ground loop problems; tie all component grounds to this screw to break any possible ground loops that can cause an audible noise.
- **Servicing.** There are no user-serviceable components within this device. Removal of the cover from this device may present a shock hazard, and/or void the warranty.
- **Damage Requiring Service.** If any type of damage occurs to this device, immediately disconnect it from the wall outlet. Notify APC Technical Support or Customer Service at once.
- **CAUTION:** Do not install this device if there is not at least 10 meters (30 feet) or more of wire between the electrical outlet and the electrical service panel.

Product Overview

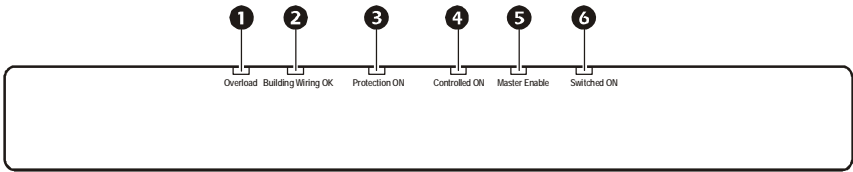
Front panel

C20B



- 1 Overload LED**
- 2 Protection ON LED**
- 3 Building Wiring OK LED**

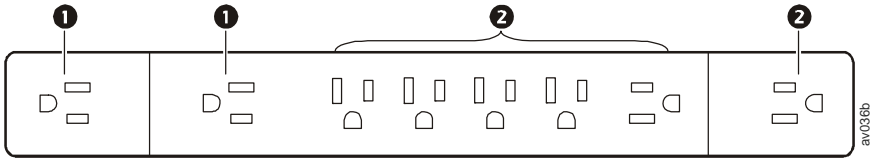
C25B



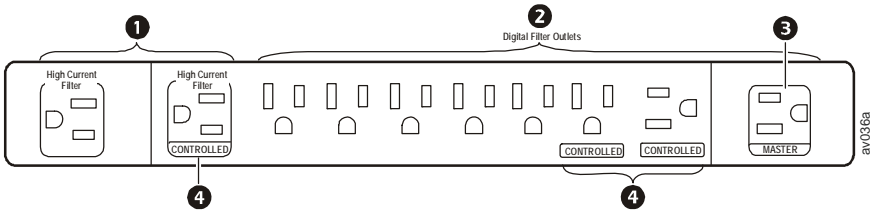
- 1 Overload LED**
- 2 Building Wiring OK LED**
- 3 Protection ON LED**
- 4 Controlled ON LED**
- 5 Master Enable LED**
- 6 Switched ON LED**

Rear panel

C20B



C25B

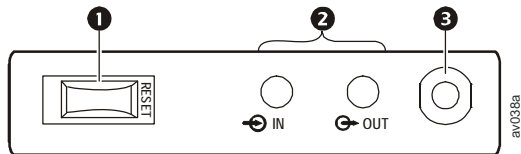


- ❶ High Current Filter outlets
- ❷ Digital Filter outlets
- ❸ Master outlet
- ❹ Controlled outlets

Left side panel

C20B and C25B models

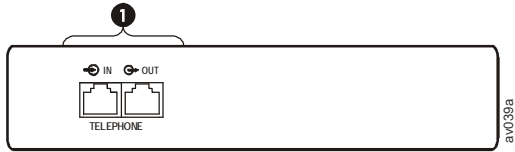
- ❶ Power switch/Circuit breaker
- ❷ Coaxial connectors
- ❸ AC power input



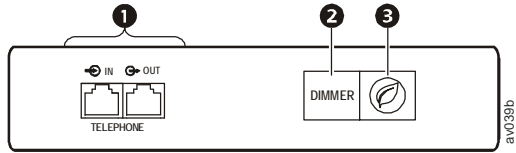
Right side panel

C20B

- 1 Telephone port
- 2 LED DIMMER button
- 3 MASTER ENABLE button



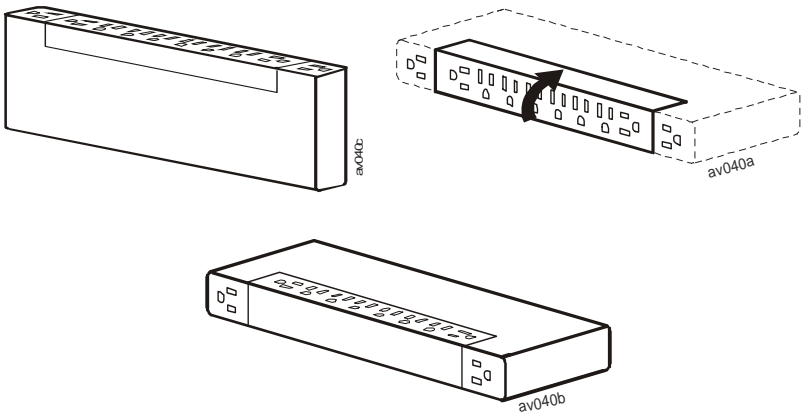
C25B



Installation

Rotate the outlet bank to change the orientation of the outlets. Refer to the diagrams below.

When rotating the outlet bank be careful not to pinch fingers.



Connect to AC Power

Connect the power cable to an AC outlet. If the filter is functioning properly, the **Protection ON** LED will illuminate.

When connected to AC power the filter will provide protection for connected components if it is turned on or off.

Connect Components to Power Filter

Digital Filter and High Current Filter outlets

Before connecting components to the filter, determine which components will utilize the Digital Filter and the High Current Filter outlets. Connect components to the appropriate outlets.

Digital outlets. The Digital outlets filter input AC power to provide protection for sensitive devices such as a CD or Blu-Ray player, a DVR, Television or CATV/SAT.

High Current outlets. The High Current outlets filter input AC power for high current devices such as subwoofers and amplifiers.

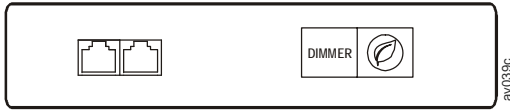
Power Saving Master and Controlled outlets: C25B model only

The filter is equipped with power saving outlets that conserve electricity. Configure the filter to recognize a Master device, such as a television, a computer or an A/V receiver, and Controlled peripheral devices, such as amplifiers, DVD players, or sub-woofers. When the Master device goes into Standby or Hibernation mode, or is turned off, the Controlled device will be turned off.

1. Before connecting components to the filter, determine which components will utilize the Master and Controlled outlets.
 - Connect a master device such as a TV to the Master outlet.
 - Connect peripheral devices such as amplifiers, DVD players, or sub-woofers to the Controlled outlets.
2. Connect components to the outlets on the rear panel of the filter.
3. Configure the filter to recognize the master outlet. Refer to “Configure Master and Controlled outlets: C25B model only” on page 8.

Operation

Right panel buttons: C25B model only



LED Dimmer. Use to adjust the brightness of the LEDs.

Master Enable/Disable. Push to enable or disable the Power Saving feature. When enabled, the **Master Enable** LED will illuminate.

Front panel LEDs

LED	Illuminated	Not Illuminated
Overload	The filter is experiencing an overload condition. Disconnect nonessential components.	The filter is functioning properly.
Protection ON	The filter is protecting all connected equipment.	The filter is not providing power protection. See “Troubleshooting” on page 9 and contact APC Technical Support immediately.
Building Wiring OK	The filter is functioning properly.	There is a problem with the building wiring. Contact a qualified electrician.
Master Enable	The Power Saving feature is enabled.	The Power Saving feature is disabled.
Controlled ON	Power is being supplied to the Controlled outlets.	Power is not being supplied to the Controlled outlets.
Switched ON	The AC power is within acceptable range.	The input voltage from AC power is outside the acceptable range and the filter has disconnected from AC power to protect the connected equipment.

Configure Power Filter

Turn the filter On or Off

Use the Power switch to turn the filter on or off.

Configure the brightness of the LEDs: C25B model only

To adjust the brightness of the LEDs, use the LED DIMMER button.

Configure Master and Controlled outlets: C25B model only

Enable and Disable the Power Saving feature. Use the MASTER ENABLE button to enable or disable the feature.

Setting the threshold. The amount of power used by a device in Sleep or Standby mode varies between devices. It may be necessary to adjust the threshold at which the Master outlet signals the Controlled outlets to shut down.

1. Be sure a master device is connected to the Master outlet. The filter should be in Sleep or Standby mode or turned off.
2. Push and hold the MASTER ENABLE button until the **Master Enable LED** on the front panel flashes three times. The filter will recognize the threshold level of the master device and save this as the new threshold setting.

Troubleshooting

Problem and Possible Cause	Solution
The power filter will not turn on	
There is no input power, or insufficient input power from the wall outlet.	Use a voltmeter to check the output of the wall outlet. Use a device that is known to work properly to check the outlet. Note: The filter will not turn on if the input AC power is out of the acceptable range.
A circuit breaker has been tripped.	Check the building circuit breakers and the filter's circuit breaker. Reset the breaker on the filter with the POWER switch. If it trips again, unplug one of the components plugged into the filter and reset the breaker. Note: If the breaker is tripped again after trying this solution, contact APC Technical Support.
Power is not supplied to some of the outlets.	
Power to the Controlled outlets has intentionally been turned off.	Disable the Power Saving feature using the MASTER ENABLE button or turn the master device on.
The Controlled outlets are not supplying power, even though the master device is not in sleep mode.	
The Master Outlet threshold may be incorrectly set.	Refer to "Setting the threshold" on page 8.
The filter is on, but none of the LEDs are illuminated.	
The LED DIMMER button needs to be adjusted.	Push the LED DIMMER button several times. The LEDs should illuminate. If they do not illuminate, contact APC Technical Support.
The Overload LED is illuminated	
The filter is overloaded.	Power off the filter and reduce the load by disconnecting one or more components from the filter. When the load is below the capacity of the filter, power on the unit again, the LED will extinguish.

Problem and Possible Cause	Solution
The Building Wiring OK LED is illuminated	
<ul style="list-style-type: none"> • The wall outlet polarity is reversed. • The neutral wire is overloaded. • The earth ground is not connected at the wall outlet. 	<p>Contact an electrician to inspect the building wiring.</p> <p>WARNING: Do not operate the filter if any of these conditions exist. The filter may not be providing surge protection.</p>

Specifications

	C20B	C25B
Input/Output		
Input/Output Voltage	Nominal 120 V	
Input/Output Current	15 A	
Frequency	50/60 Hz	
Receptacle Types	NEMA 5-15R	
Number of Outlet Receptacles	8	10
Dimensions (HxWxL)	4.5 cm x 13.6 cm x 37.8 cm (1.77 in x 5.35 in x 14.928 in)	4.5 cm x 13.8 cm x 43.6 cm (1.77 in x 5.43 in x 17.17 in)
Power Cord	1.8 m (6 ft.) right angle NEMA 5-15P	2.4 m (8 ft.) right angle NEMA 5-15P
AC Surge Performance		
EMI/RFI Filtering	50 dB: 150 KHz ~ 1 MHz 40 dB: 1 MHz ~ 30 MHz	
Environmental Performance Specifications		
Operating temperature	0° – 40°C (32° – 104°F)	
Storage temperature	-15° – 45°C (5° – 113° F)	
Net weight	1.5 kg (3.3 lbs)	1.9 kg (4.2 lbs)
Relative Humidity	0 – 95% non-condensing	
Safety Agency Approval	UL1449, UL1363, cETLus listed FCC Part 15 Class B	

Contact APC Technical Support

For technical support, go to the APC Web site, www.apc.com.

Warranty

APC warrants the C20B and the C25B to be free from defects in materials and workmanship under normal use and service for the lifetime of the original purchaser. APC warrants the removable flashlight to be free from defects in materials and workmanship under normal use and service for one year from the date of purchase. APC's obligation under this warranty is limited to repairing or replacing, at its sole option, any such defective products. To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from APC or an APC Service Center with transportation charges prepaid and must be accompanied by a brief description of the problem and proof of date and place of purchase. This warranty applies only to the original purchaser.

FCC Information

This equipment complies with FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

Applicable connector jack Universal Service Order Codes ("USOC") for the Equipment is RJ11C.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact US Service Center at www.apc.com. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

