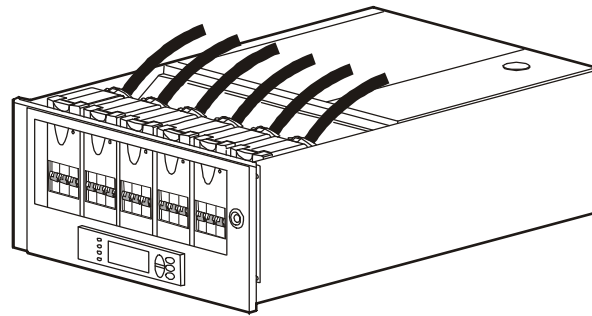


## Installation

### Modular Rack-Mount Power Distribution Unit



### IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

This manual contains important instructions for the modular rack-mount Power Distribution Unit (PDU) that should be followed during installation and maintenance of this unit.

#### Handling Safety



**Heavy:** To prevent back injury, two or more people are required to install the PDU in a rack.

#### Electrical Safety



**Warning:** To reduce risk of electric shock or injury to persons, disconnect all sources of power before servicing.



**Note:** Install the unit in accordance with the National and Canadian Electrical Codes, and if applicable, local codes.



**Note:** To prevent arcing when removing an APC Power Distribution Module (PDM) from the PDU, set all PDMs to OFF. Do not remove the modules under load.



## Inventory

Item	Part Number	Quantity
Modular rack-mount PDU 138 KW 200 A 400 V 18 Pole 5U	0G-PDPM138H-5U 1 and 0G-PDPM72F-5U	1
Literature kit rack-mount PDU	0L 1532	1
Label kit rack-mount PDU	0M-8909	
Rail stationary black	870-8197D-001	2
Rail adjustable black	870-8198D-001	2
Tray support chassis rack-mount PDU	870-14067	1
Screw M6x12 phil flat head	803-0608	6
Nut M6 flanged hex	803-2406A	6
Washer M6 black plastic cup	803-0009B	14
Screw M6x16 phillips/slot	803-0616B	14
Nut cage M6 14/16 swg	803-0006A	6
Bracket tie-down rear rack-mount PDU	870-14158	2
Plate blank cover brain PCB	870-14159	1

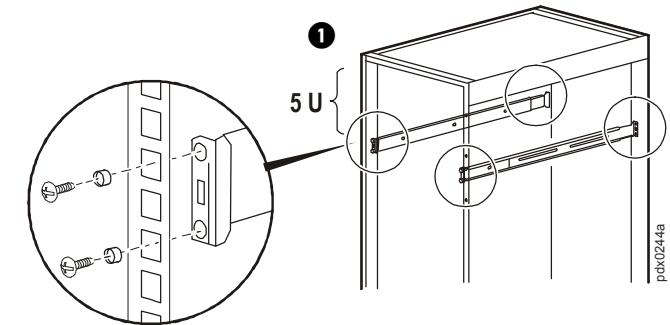
## How to perform a Total Power Off

- 1 Set all the APC Power Distribution Modules (PDM) to the OFF position.
- 2 Set the utility/mains circuit breaker to the OFF position.
- 3 If the utility/mains is an UPS, set the UPS and its circuit breaker supplying this product to the OFF position.
- 4 Disconnect the input conductors from the utility/mains or the UPS.

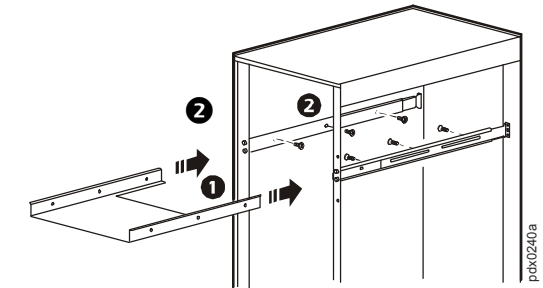
## Installation

### How to install the PDU

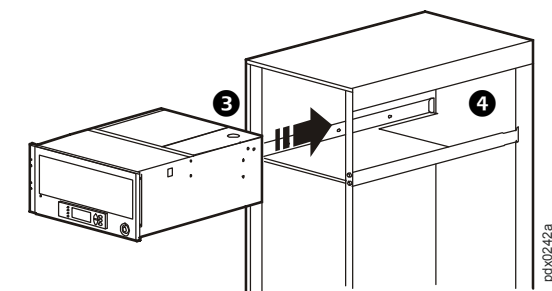
- 1 Install the mounting rails in the enclosure by using the screws provided. The PDU requires a 5U space from the top of the enclosure.



- 2 Slide the support tray into the mounting rails and secure it with the screws provided.



- 3 Slide the PDU on to the support tray and secure it to the front posts of the enclosure with the screws provided.
- 4 Slide the bracket tie-downs onto the guide pins on the side of the PDU and secure the tie-downs to the back posts of the enclosure with the screws provided.



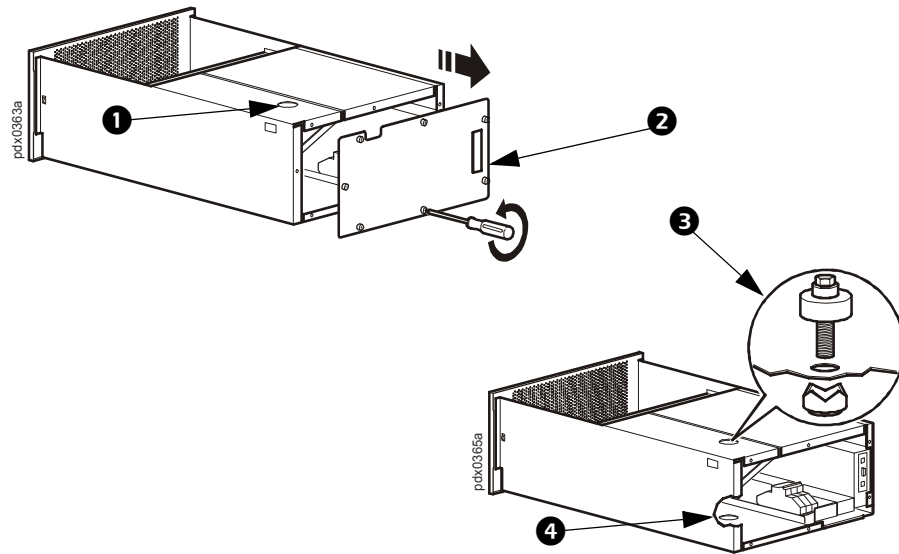
# Input cables

## Enlarge the knock out hole for larger conduit



**Note:** The cutout on the top (or bottom) cover plate may need to be enlarged depending on the installation requirements.

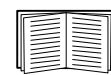
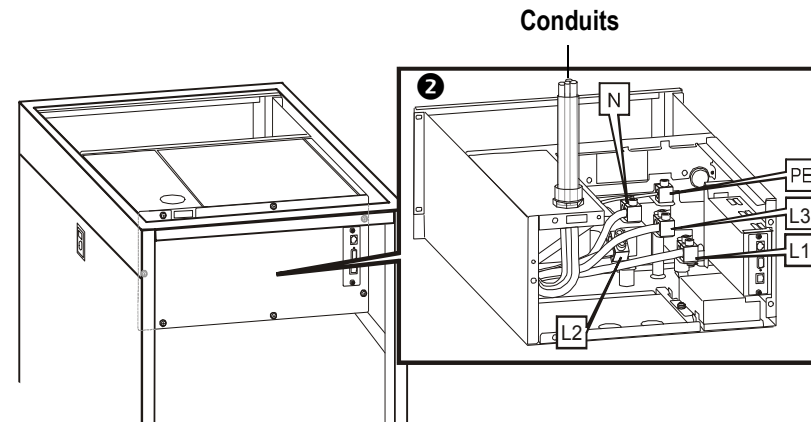
- 1 If the conduit size for your installation is too large for the conduit access knock out, the hole must be enlarged.
- 2 Loosen the seven screws and remove the back panel.
- 3 Use an electrician's punch to enlarge the knock out hole to the size needed.



- 4 If power is run from the bottom of the rack, enlarge the knock out hole in the bottom of the unit.

# Install input cables

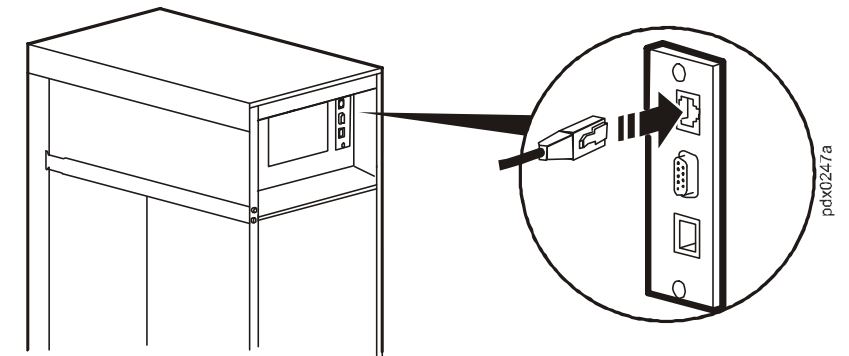
- 1 Loosen the seven screws and remove the back panel to gain access to the compression terminals (the top and bottom cover plates can be removed if necessary for easier access).
- 2 Connect the Protective Earth/Ground (PE/G), neutral (N), and line (L1, L2, and L3) conductors to the appropriate compression terminals and conduits.
- 3 Reinstall the any panels that were removed.



Please refer to the Power Distribution Modules Installation sheet for information on how to install APC Power Distribution Modules (PDMs).

# Communication cables

Connect one end of the communication cable to the port on the back of the unit and the other to the local area network.



# Specifications

## Input conductors

This product is rated 200 A. It should be supplied with a circuit breaker with a maximum rating of 200 A.

For North America, if supplied by a 200 A circuit breaker, it is recommended that conductors are sized in accordance with Table 3.

For countries outside of North America, if supplied by a 200 A circuit breaker, it is recommended that conductors are sized in accordance with Table 4.



**Note:** Input conductors are to be torqued to 31.1 Nm (275 lb-in) using a 8 mm (5/16 in) Allen (hexagonal) wrench.

**Table 1**

### AC Input

Nominal voltage	400 V 3 PH 208 V 3 PH
Frequency	47-63 Hz
Voltage configuration	3 W + N + PE
Maximum upstream circuit breaker	200 A
Maximum continuous current	160 A
Maximum continuous current with 100% rated circuit breaker	200A
Maximum main input conductor size	250 mcm

**Table 2**

### AC Output

Nominal voltage	230 V/400 V 3 PH 120 V/208 V 3PH
Maximum continuous current	200 A
Voltage configuration	3 W + N + PE or 3 x (1 W + N + PE), based on attached APC Power Distribution Modules
Full load rating	138 kW @ 400 V 3PH 72 kW @ 208 V 3 PH
Output power cable connections	Various, based on attached APC Power Distribution Modules
Output power cable lengths	Various, based on attached APC Power Distribution Modules
Maximum APC Power Distribution Modules	6
Maximum power distribution poles	18

**Table 3**

### 200 A, 75°C Conductors

Wiring System	Copper	Aluminum
3 CCC, 30°C Ambient	Ø&N = 3/0 AWG G = 6 AWG	Ø&N = 4/0 AWG G = 4 AWG
4 CCC, 30°C Ambient	Ø&N = 4/0 AWG G = 6 AWG	Ø&N = (2) 1/0 AWG G = (2) 4 AWG

#### Notes

CCC = Current-Carrying Conductors  
 AWG = American Wire Gauge  
 kcmils = MCM = Thousands of Circular Mils  
 Ø = Phase conductor  
 N = Neutral conductor  
 G = Ground (Equipment Grounding) conductor  
 (2) = two conductors per terminal

**Table 4**

### 200 A, Conductors

Install. Method	Copper, PVC Insulation, 30°C Ambient	Copper, XLPE or EPR Insulation, 30°C Ambient	Aluminum, PVC Insulation, 30°C Ambient	Aluminum, XLPE or ERP Insulation, 30°C Ambient
B1	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>	Ø&N = 70 mm <sup>2</sup> PE = 35 mm <sup>2</sup>	Ø&N = 150 mm <sup>2</sup> PE = 95 mm <sup>2</sup>	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>
B2	Ø&N = 120 mm <sup>2</sup> PE = 70 mm <sup>2</sup>	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>	Ø&N = 240 mm <sup>2</sup> PE = 120 mm <sup>2</sup>	Ø&N = 120 mm <sup>2</sup> PE = 70 mm <sup>2</sup>
C	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>	Ø&N = 70 mm <sup>2</sup> PE = 35 mm <sup>2</sup>	Ø&N = 150 mm <sup>2</sup> PE = 95 mm <sup>2</sup>	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>
E	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>	Ø&N = 70 mm <sup>2</sup> PE = 35 mm <sup>2</sup>	Ø&N = 120 mm <sup>2</sup> PE = 70 mm <sup>2</sup>	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>
F	Ø&N = 70 mm <sup>2</sup> PE = 35 mm <sup>2</sup>	Ø&N = 50 mm <sup>2</sup> PE = 25 mm <sup>2</sup>	Ø&N = 95 mm <sup>2</sup> PE = 50 mm <sup>2</sup>	Ø&N = 70 mm <sup>2</sup> PE = 35 mm <sup>2</sup>

#### Notes

Ø = Phase conductor  
 N = Neutral conductor  
 PE = Protective Earth conductor  
 PVC = Polyvinyl-chloride  
 XLPE = Cross-linked polyethylene  
 EPR = Ethylene propylene rubber

## Physical Dimensions, Environment and Compliance

### Physical Dimensions

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Dimensions (HxWxD)	Unit: 229 x 457 x 737 mm (9 x 18 x 29 in) Shipping: 406 x 610 x 889 mm (16.5 x 24 x 36 in)
Weight	Unit: 23.5 kg (52 lb) Shipping: 34 kg (75 lb)

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### Environment and Compliance Section

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Operating Environment	Protected from water and conductive contaminants
Temperature	Operating: 0 to 30°C (32 to 86° F) Operating (derated): 0 to 40°C (32 to 104°F) Storage: 0 to 45°C (32 to 113°F)
Humidity	Operating: 0 to 95%, non-condensing Storage: 0 to 95%, non-condensing
Certification	Certified by VDE to IEC 60439-1
Conditional Short-Circuit Current Rating (I <sub>CC</sub> )	10 kA
Rated Impulse Withstand Voltage (U <sub>CC</sub> )	4 kV
Rated Diversity Factor	0.7

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**Note:** APC's products, similar to most computing products, are designed to operate in an environment from 0 to 40°C. Most data centers will maintain an operating temperature between 0 to 30°C. Conductor Ampacity tables of the National Electrical Code (NFPA 70) and IEC 60364-5-53 are based on an environment from 0 to 30°C. If this product is installed in an environment greater than 30°C, either this product's current rating will have to be derated, or the cross sectional area of the conductors supplying it will have to increase, in accordance with the derating factors of NFPA 70 and IEC 60364-5-53.

## Regulatory Agency Approval

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference, when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Installation Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

*This Class A digital apparatus complies with Canadian ICES-003.*

*Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.*

This is a Class A Product. In a domestic environment this product may cause interference in which case the user may be required to take adequate measures.

## APC Worldwide Customer Support

For local, country-specific centers: go to [www.apc.com/support/contact](http://www.apc.com/support/contact).

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