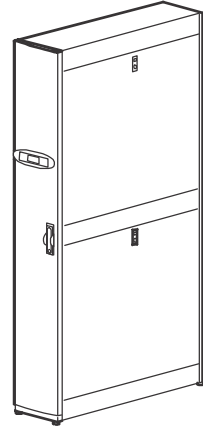




Installation

Modular Power Distribution Unit (PDU)



PDPM277H, PDPM144F

IMPORTANT SAFETY INSTRUCTIONS

⚠ ⚠ DANGER

HAZARD OF ELECTRIC SHOCK

- Only qualified personnel are authorized to connect power to the PDU.
- The PDU must be installed in accordance with the National Electrical Code or the Canadian Electrical Code and all applicable local codes.
- Turn off all power supplying this equipment before working on the equipment or before installing or removing a power module. Perform appropriate lockout/tagout procedures.

Failure to follow these instructions will result in death or serious injury.

⚠ CAUTION

UNPROTECTED OUTPUTS

Remove cover plates from the unit before cutting holes for power cable access. Metal shavings can cause serious equipment damage. A metal punch can be used to make the holes in the plates.

Failure to follow these instructions can result in injury or equipment damage.

Regulatory Agency Approval

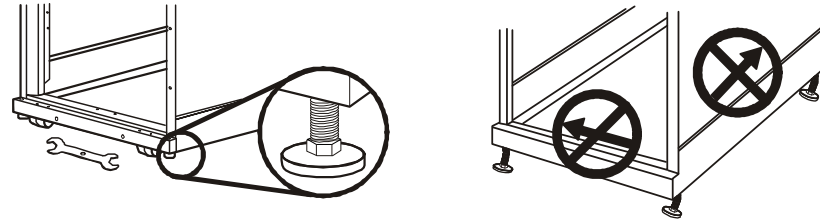
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference, when the equipment is operated in a commercial environment. This equipment generates, 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.

Level the Enclosure

The PDU must be installed on a level floor. The leveling feet will stabilize the PDU, but will not account for a badly sloped floor.

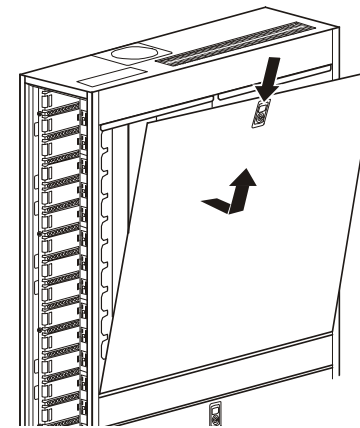


- 1 Use a 13/14 mm wrench to adjust the four leveling feet.
- 2 Ensure that the PDU is level.
- 3 Do not move the PDU after the leveling feet have been lowered.

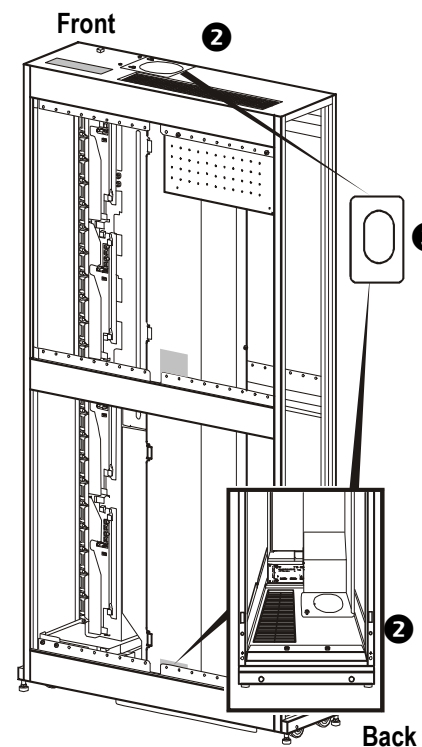
Input Cables

Prepare for the input cables

- 1 Unlock the side panel with the key (provided). Press down the lock and pull the panel out and up.

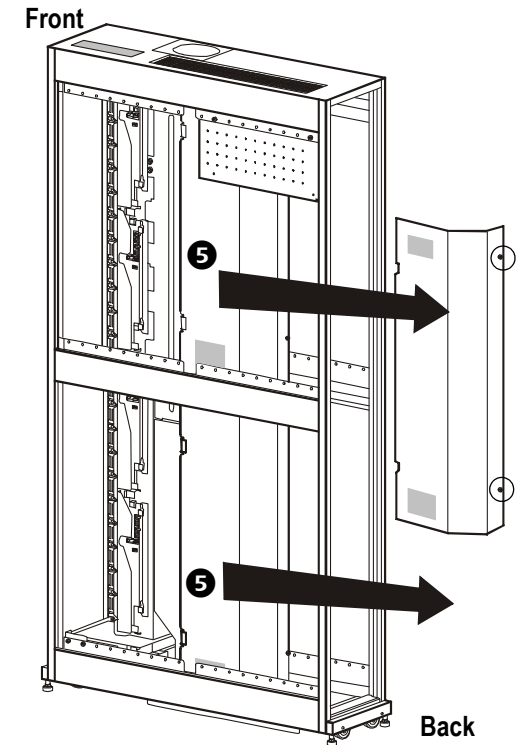


- 2 Remove the top or bottom entry plate.
- 3 Cut holes for conduits following the markings.
- 4 Reattach the plate.



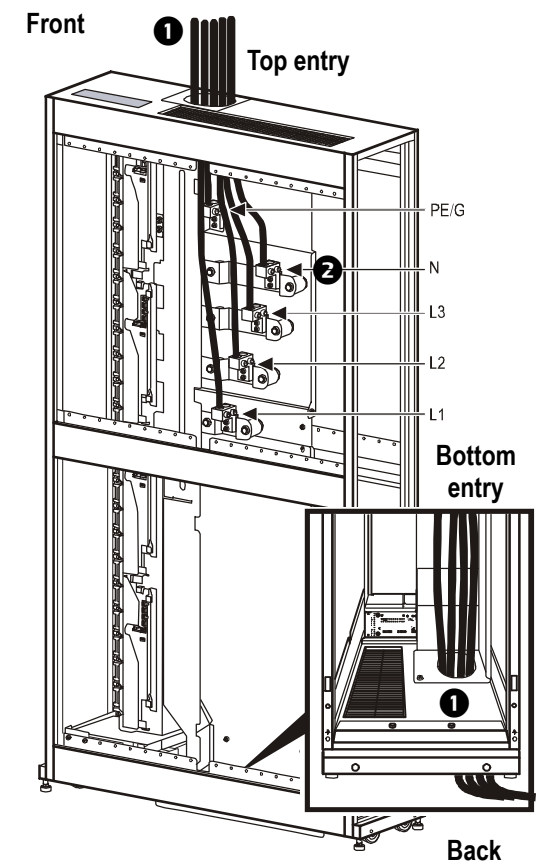
- 5 Loosen the captive screws to remove the covers for the compression terminals.

It is not necessary to remove the bottom cover unless power is brought in through the bottom of the PDU.



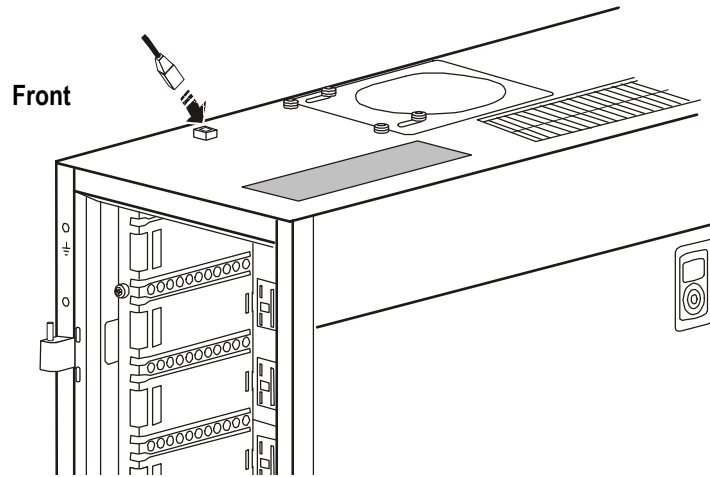
Connect input cables

- 1 Run the cables through the top or the bottom of the unit.
- 2 Connect the Protective Earth/ Ground (PE/G), Neutral (N), and Line (L1, L2, and L3) conductors to the appropriate compression terminals.
- 3 Reinstall the covers, side panels, and doors.



Communication Cables

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



Power Distribution Modules

To install the Power Distribution Modules (PDMs), see the installation sheet 990-3079.

Specifications

Input conductors

This product is rated 400 A. It must be supplied with a circuit breaker with a maximum rating of 400 A.

Note: Torque Input conductors to 31.1 Nm (275 lb-in) using an 8 mm (5/16 in) Allen (hexagonal) wrench.

AC Input	
Nominal voltage	415/240 V, 3 Ø + N + G 120/208 V, 3 Ø + N + G 3/N/PE ~ 400/230 V
Frequency	47-63 Hz
Upstream circuit breaker	400 A
Maximum continuous current	400 A
Maximum main input conductor size	500 MCM

AC Output	
Nominal voltage	415/240 V, 3 Ø + N + G or 3 x 240 V 1 Ø+N+G 120/208 V, 3 Ø + N + G or 3 x 120 V 1 Ø+N+G 3/N/PE ~ 400 V or 3 x 1/N/PE ~ 230 V
Maximum continuous current	400 A
Voltage configuration	3 W + N + PE or 3 x (1 W + N + PE), based on attached APC Power Distribution Modules
Full load rating	288 kW @ 415 V 3 PH 277 kW @ 400 V 3 PH 144 kW @ 208 V 3 PH

AC Output	
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	24
Maximum power distribution poles	72

Maximum input conductor size

For North America, if supplied by a 400 A circuit breaker, it is recommended that conductors are sized in accordance with the following table.

400 A, 75°C Conductors		
Wiring System	Copper	Aluminum
3 CCC, 30°C Ambient	Ø&N = 500 MCM G = 3 AWG	Ø&N = (2) 4/0 AWG G = (2) 3 AWG
4 CCC, 30°C Ambient	Ø&N = (2) 4/0 AWG G = (2) 3 AWG	Ø&N = (2) 350 kcmil G = (2) 1 AWG

Notes:

CCC = Current-Carrying Conductors
 AWG = American Wire Gauge
 (2) = two conductors per terminal
 kcmils (MCM) = Thousands of Circular Mills

Ø = Phase conductor
 N = Neutral conductor
 G = Ground conductor

For countries outside of North America, if supplied by a 400 A circuit breaker, it is recommended that conductors are sized in accordance with the following table.

400 A, Conductors				
Install. Method	Copper, PVC Insulation, 30°C Ambient mm ²	Copper, XLPE or EPR Insulation, 30°C Ambient mm ²	Aluminum, PVC Insulation, 30°C Ambient mm ²	Aluminum, XLPE or ERP Insulation, 30°C Ambient mm ²
B1	Ø&N = (2) 95 PE = (2) 50	Ø&N = 240 PE = 120	Ø&N = (2) 150 PE = (2) 95	Ø&N = (2) 95 PE = (2) 50
B2	Ø&N = (2) 120 PE = (2) 70	Ø&N = (2) 95 PE = (2) 50	Ø&N = (2) 240 PE = (2) 120	Ø&N = (2) 120 PE = (2) 70
C	Ø&N = 240 PE = 120	Ø&N = 185 PE = 95	Ø&N = (2) 150 PE = (2) 95	Ø&N = (2) 95 PE = (2) 50
E	Ø&N = 240 PE = 120	Ø&N = 185 PE = 95	Ø&N = (2) 120 PE = (2) 70	Ø&N = 240 PE = 120
F (Trefoil)	Ø&N = 185 PE = 95	Ø&N = 150 PE = 95	Ø&N = (2) 95 PE = (2) 50	Ø&N = 240 PE = 120
F (Flat)	Ø&N = 185 PE = 95	Ø&N 120 PE = 70	Ø&N = (2) 95 PE = (2) 50	Ø&N = 185 PE = 95

Notes:

Ø = Phase conductor
 N = Neutral conductor
 PE = Protective Earth conductor

PVC = Polyvinylchloride
 XLPE = Cross-linked polyethylene
 EPR = Ethylene propylene rubber

Environment and Compliance

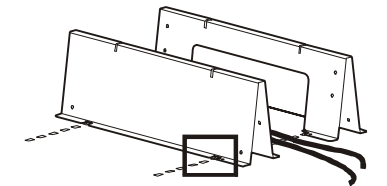
Environment and Compliance Section	
Operating Environment	Protected from water and conductive contaminants
Temperature	Operating: 0 to 30°C / 32 to 86°F Operating (derated): 0 to 40°C / 32 to 104°F Storage: 0 to 45°C / 32 to 113°F
Humidity	Operating: 0 to 95%, non-condensing Storage: 0 to 95%, non-condensing
Elevation	Storage: 10 000 m / 3,000 ft
Certification	Certified by VDE to IEC 60439-1 Listed (US) and cUL (Canada) by Underwriters Laboratories Inc. to UL 60950
Conditional Short-Circuit Current Rating (I _{CC})	10 kA
Rated Impulse Withstand Voltage (U _{CC})	4 kV
Rated Diversity Factor	0.6

Note: Circuit breakers and conductor ampacity are derated in accordance with the national electrical code and IEC 60364-5-53.

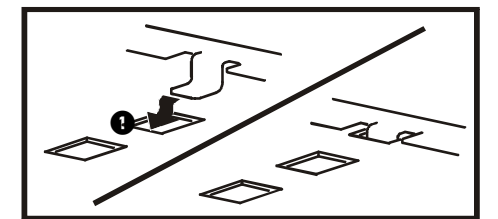
Appendix

Shielding Troughs (Optional)

Snap a Schneider Electric shielding trough into slots (●) on the roof of the PDU. The tabs at the base of the trough must fit securely into the slots.



Note: Align the PDU trough with troughs installed on top of adjacent enclosures.



Worldwide Customer Support

For customer support, go to www.apc.com/support/contact.

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