

Modular Power Distribution

Scalable to 277 kW, 208-480 V

Safe, Efficient, Scalable 3-Phase Power Distribution



Agile, safe, efficient power distribution for IT equipment in any size data center or high density zone

- Modular and scalable
- Moves, add-ons, and changes are accomplished without downtime or hot work
- High density distribution in a sleek 12-inch enclosure or 5U shelf
- Innovative autotransformer technology (PDPM288G6H)
- Power distribution modules include cord set, circuit breaker, branch circuit monitoring, breaker position monitoring and pre-terminated connector
- Low TCO
- Rack-based for agility and aesthetics
- No rear access required

Features and Benefits

The safest method to bring ultra-high efficiency & scalability to power distribution

The APC™ Modular Power Distribution line is the world's first fully scalable and hot-swappable 3-phase power distribution system. Our Modular Power Distribution products provide cost-effective high levels of availability, and enable toolless addition of circuits and cord-sets without scheduling outages or conducting dangerous hot work.

Comprised of a UL listed "touch-safe" backplane with up to 72 poles of 3-phase power and hot-swappable power distribution modules, all engineered into the world's smallest footprint for power distribution units, this architecture can scale power distribution circuits to easily adjust to changes in demand such as data center growth or consolidation, or IT equipment upgrades that increase power density.

Through the innovative use of autotransformer technology in the 266kW Modular Power Distribution Unit design, a tenfold increase in efficiency yields greater density, reduced floor space, and much lower heat impact on today's power-hungry data center. Use of higher distribution voltage also brings smaller diameter cord-sets, further reducing first costs. For solutions where no transformer is required, a Modular Remote Power Panel or 5U Modular Rack Distribution Panel provides the modularity, scalability, and safety modern data centers require.

The Modular Power Distribution family delivers the highest efficiency power distribution in a mere 300-millimeter enclosure or 5U shelf, while greatly decreasing the floor-space required for high availability applications. Other features include power distribution modules providing branch current and breaker positioning monitoring, pre-terminated cord-sets, and quick status LEDs.

What is Modular Power Distribution?

Modular Power Distribution is a solution comprised of a Modular RPP or Modular PDU and one or more Power Distribution Modules (PDMs):

Modular PDU or RPP

The source of amperage for the distribution, housing the hot-pluggable power backplane, the main circuit monitoring bus, and the support structure for the PDMs. Each Modular PDU or RPP shares the same basic design, which enables simple plug-and-play for any Distribution Modules into any Modular PDU or RPP of common voltage.

Power Distribution Modules

Each PDM consists of an industry standard circuit breaker, branch current monitoring (BCM), output cable and connector plug combined into a hot-swappable module that feeds power to IT racks.

Modular Power Distribution

Availability

Hot-scalable power distribution modules

Self-diagnosing, field-replaceable modules

Toolless module replacement

Manageability

Output metering and branch current/circuit monitoring included

Embedded network management

Remote access over HTTP, Telnet, SNMP

Local access at PowerView display interface

Configurable alarm notifications

StruxureWare™ Central compatible

Safety

Touch-safe backplane

No hot work

Isolated touch points

Positive locking mechanisms for PDMs

Approvals

UL 60950 Listed

ULc CSA 60950-1

Options

Power Distribution Modules (Contact APC or your APC reseller for details about the Power Distribution Modules available in your region)



Typical Applications

Small/medium/large data centers

High-density zones of data centers

Optional Support and Service

Start-up service

Preventive maintenance

On-site warranty extension

Advantage plans

Modular Power Distribution Features

1 Touch-safe backplane

Shields users from dangerous voltages; standardized connectors in the backplane enable users to add a new circuit without hot work or shutdowns

2 Integrated Monitoring Solution

While the legendary PowerView display provides information locally at the PDU, a Network Management Card relays vital information to the monitoring platform of choice, simplifying the task of monitoring power usage and enabling remote control of the system through a Web interface, StruxureWare™ Central, or your building management system

3 Innovative autotransformer technology

At one tenth the loss of traditional dual winding isolation transformers, efficient power usage saves money and reduces the heat penalty to existing cooling systems

4 Add circuits in less than ten minutes

Automatic recognition of the module type, ampacity, and cord length by the PDU simplifies load balancing and circuit addition

5 1-Phase and 3-Phase Power Distribution Modules

A hot-swappable latching module houses a standard circuit breaker, current transducers, and position sensors. The entire assembly is attached to a pre-terminated cord-set with multiple length options; each module is programmed to know how long its cable is

6 Locking connectors improve availability and safety

Connector safety features—including a positive locking mechanism, complete isolation at all touch-points, and robust interoperability—enable standardization across all corporate locations



Technical Specifications

	PDPM72F-5U Modular Rack Distribution Panel	PDPM144F Modular Remote Power Panel	PDPM277H Modular Remote Power Panel	PDPM288G6H PDU with Autotransformer
Input				
Voltage (nominal)	208 V 3ph	208 Y/120 V 3ph	400 V/230 V 3ph	480 Y/277 V
Input frequency	50/60 Hz	50/60 Hz	60 Hz	60 Hz
Wiring	3W + N + G	3W + N + G	3W + N + G	3W + N + G
Current	160 A continuous (200 A with 100% rated breaker)	400 A	400 A	320 A
Input wiring location	Top	Top or bottom	Top or bottom	Top
KAIC	10	10	10	10
Max. main input conductor size	250 MCM	500 MCM	500 MCM	500 MCM
Suggested maximum upstream breaker	200 A	400 A	400 A	400 A
Output				
Full load rating	72 kW	144 kW @ 208 V 3ph	277 kW @ 400 V 3ph	266 kW @ 415 V 3ph
V nom.	120 V/208 V 3ph	400 V/230 V 3ph	400 V/230 V 3ph	415 V/240 V 3ph 240 V 1ph
Max. continuous current	200 A	400 A	400 A	370 A
Max. Power Dist. Modules	6	24	24	24
Max. Power Dist. Poles	18	72	72	72
Physical				
Dimensions (H x W x D)	229 x 457 x 737 mm (9 x 18 x 29 in)	2002 x 300 x 1077 mm (78.8 x 11.8 x 42.4 in)	2002 x 300 x 1072 mm (78.8 x 11.8 x 42.4 in)	2005 x 300 x 1095 mm (78.9 x 11.8 x 43.1 in)
Shipping Dimensions (H x W x D)	406 x 610 x 889 mm (16.5 x 24 x 36 in)	2248 x 851 x 1206 mm (88.5 x 33.5 x 47.5 in)	2248 x 853 x 1207 mm (88.5 x 33.58 x 47.5 in)	2155 x 746 x 1181 mm (84.8 x 29.4 x 46.45 in)
Weight without Power Distribution Modules	23.5 kg (52 lb)	160 kg (352 lb)	160 kg (352 lb)	500 kg (1100 lb)
Shipping weight	34 kg (75 lb)	183 kg (401 lb)	183 kg (401 lb)	513 kg (1130 lb)
Compliance	UL Listed, ULc	UL Listed, ULc	UL Listed, ULc	UL Listed, ULc

*For detailed information about breaker ratings, wiring ratings, or, if applicable, transformer ratings see the Installation manual.
Preliminary – subject to change without notice