Technical Specifications

Configurable Power Distribution Unit

InfraStruxure PDU, 150 kVA, 416A, 480V:208V Isolation Transformer, 84 Poles, 1 Subfeed

Schneider Electric

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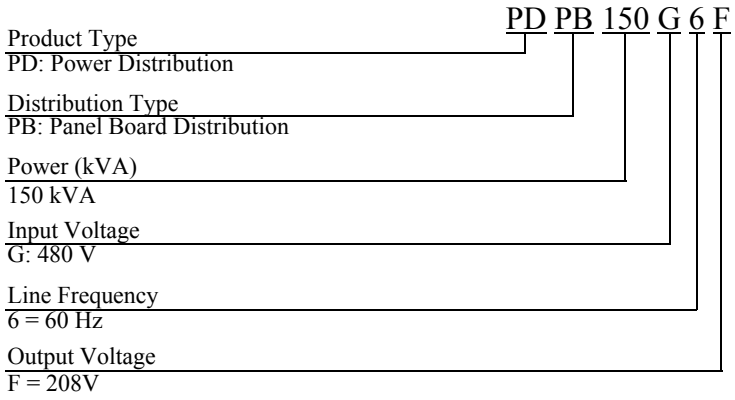
Technical Data

Model Nomenclature

Configurable PDU Model Number parameters:



Communication and Management

Display Interface

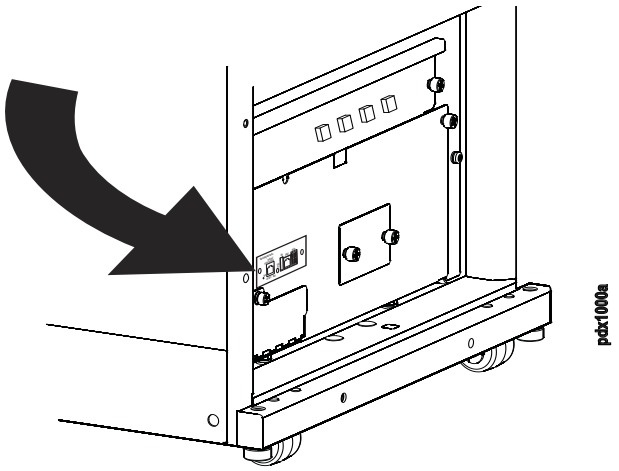
❶	Normal LED	Green = no alarms are present.
❷	Check Log LED	Green = a new event has been added to the log.
❸	Warning LED	Yellow = there are one or more active warning alarms in the system.
❹	Critical LED	Red = there are one or more active critical alarms in the system.
❺	LCD Screen	Displays alarms, status data, instructional help, and configuration items.
❻	UP and DOWN keys	Used to scroll through menu items.
❼	ENTER	Press to display new screens, open menu items, and finalize selections.
❽	? - HELP	Press to open content-sensitive help.
❾	ESC	Press to return to the previous screen.

List Of Alarms

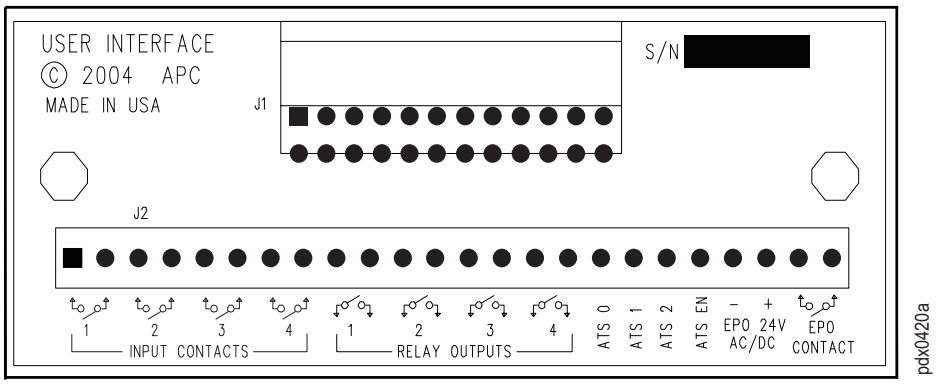
- **Cooling** Fan Failure
- **High** Subfeed Current
- **High** Total Output Current
- **High** Output Voltage
- **Low** Subfeed Current
- **Low** Total Output Current
- **Low** Output Voltage
- **Maximum** Subfeed Current
- **Max** Total Output Current
- **Max** Output Voltage
- **Minimum** Subfeed Current
- **Min** Total Output Current
- **Min** Output Voltage
- **Output** Frequency
- **Subfeed** Breaker Open
- **Transformer** Overheating

Network Management Card

The system is equipped with one embedded network management card for remote monitoring and control of an individual PDU by connecting it directly to the network.



Input and Output Contacts



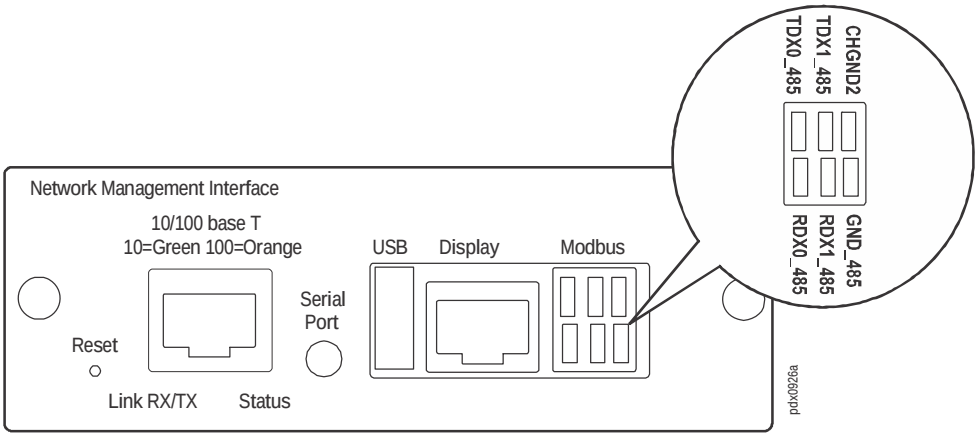
Note:
Input Contacts are “Normally Open.”
Available Output Contacts: SPST N/O, 1A@30VDC
Wiring: 12 AWG to 30 AWG is recommended.

User Interface Relay Outputs

Nominal Switching Capacity	1A @ 30VDC
Surge ratings	Surge withstand voltage up to 2500 VAC, meets FCC Part 68 and Telecordia

Modbus

The 150kVA InfraStruxure PDU supports 2-Wire or 4-Wire Modbus RS485, as well as Modbus TCP.



Compliance

- UL Listed
- cUL
- OSHPD

Facility Planning

Input Specifications

Input	Copper or Aluminum Wiring
Grid System	3W + G
Input Mains	Single
Mains Input Nominal Voltage	480 V
Input Power (W)	150,000 W
Nominal Mains Input Current (A)	186 A
Max Continuous Current (A)	186 A
Main Upstream Current Protection (A)	250 A
Maximum Short Circuit Withstand Level*	65 kA
** The maximum available fault current was not evaluated by Underwriters Laboratories.*	
Nominal Frequency (Hz)	60 Hz
Mains Input Terminal Hole Size	24.1 mm x 30.2 mm (0.937 in. x 1.189 in.)
Mains Input Terminal Cable Size	Copper or Aluminum; Single Conductor: 600 kcmil to 4 AWG Dual Conductor: 250 kcmil to 4 AWG
Mains Input Terminal Torque	550 in/lb

Output Specifications

Subfeed Output Wiring	Copper or Aluminum wiring
Grid System	Dependent on Distribution Breaker
Distribution Breaker Wiring	Copper or Aluminum
Distribution Panels x Amperage	2 x 225 A
Breaker Positions per Panel	42
Poles	84
Overload Protection	Yes
Max Distribution Breaker Size*	150 A
**Optional Branch Current and Power Monitoring (BCPM) can monitor breakers up to 100A.*	
Current Capacity of Factory Installed Breakers (A)	15A, 20A, 30A, 50A, 60A
Full Load Power Rating	150 kW
Nominal Output Current	416 A
Max Continuous Output Current (100% rated input breaker)	416 A
Overload	Dependent on Breakers
Max Total Current Draw per Phase	225 A
Output Current Protection	Square D QO, QOB, QH, QHB (15 - 150A)
Subfeed Output Current	125 - 400 A
Nominal Output Voltage	208 V

Efficiency & Heat Dissipation Specifications

PDU Load* (%)	25%	35%	50%	75%	100%
Efficiency (%)	98.10%	98.40%	98.30%	98.00%	97.70%
Input Watts (W)	38,226	53,354	76,297	114,796	153,531
Load Watts (W)	37,500	52,500	75,000	112,500	150,000
Watt Losses (W)	726	854	1,297	2,296	3,531
Heat Dissipation (BTU/hr)	2,479	2,914	4,427	7,836	12,052
**All data is at Power Factor (PF) 1.0 load.*					

Breakers

Main Input Breaker

Location	Rear
Short-Circuit Capacity	65 kAIC
Type	Square D

Max Input Conductor Size - Recommended Conductor Sizes per Phase

This product may cause radio interference, in which case, the user may be required to take additional measures. Recommended Conductor Sizes per Phase/Neutral.

All wiring must comply with all applicable national and/or local electrical codes.

Conductor sizing in this manual is based on Table 310-16 of the National Electrical Code (NEC) with the following assertions.

- 90°C conductors (THHN) for 75°C termination
- 3 current carrying conductors
- An ambient temperature of 30°C
- Use only copper conductors

If the ambient room temperature is greater than 30°C, larger conductors are to be selected in accordance with the correction factors of the NEC.

Equipment Grounding Conductors (EGC) are sized in accordance with NEC Article 250-122 and Table 250-122.

Grounding Electrode Conductors (GEC) are sized in accordance with NEC Article 250-66 and Table 250-66.

Main Input: 480 VAC

Note: Main Input Breaker is 100% rated.

Main Input	OCPD 80%	30C	40C	EGC	GEC
Copper (Cu)	250A	1 x 250 kcmil	1 x 300 kcmil	4AWG	2AWG
Aluminum (Al)	250A	1 x 350 kcmil	1 x 400 kcmil	2 AWG	1/0

Subfeed	# Current Carrying Conductors	30C	40C	PE
Copper (Cu)	3	2 x 3/0	2 x 4/0	3 AWG
Copper (Cu)	4	2 x 250 kcmil	2 x 300 kcmil	3 AWG
Aluminum (Al)	3	2 x 250 kcmil	2 x 300 kcmil	1 AWG
Aluminum (Al)	4	2 x 350 kcmil	N/A	1 AWG

Panelboard Breakers

Short-Circuit Capacity	65 kAIC
Type	SquareD J-Frame
Branch circuit breakers are UL listed series combination rated with main input circuit breaker to 65 kAIC.	

Subfeed Breaker

Supported Subfeeds	1
Subfeed Breaker Amperage	400 A

Distribution Breaker

Minimum / Maximum Size Supported	10 - 150 A
Current Capacity of Factory Installed Breaker Options (A)	15A, 20A, 30A, 50A, 60A
Short Circuit Capacity	10 kAIC

Environmental Data

Operating Temp	0° - 40°C (32° - 104°F)
Storage Temp	(-25)° - 65°C ((-13)° - 149°F)
Operating Humidity	5 - 95%, non-condensing
Storage Humidity	5 - 95%, non-condensing
Operating Elevation	0 - 10,000 ft
Storage elevation	0 - 50,000 ft
Operating Environment	Protected from Water and Conductive Contaminants
Storage Environment	Protected from Water and Conductive Contaminants
Airflow/cooling requirement	Front to rear airflow
Conditional Short-Circuit Current Rating (ICC)	65 kAIC
Audible noise @ 3ft from surface	74 dBA

Transformer Specifications

Size	150kVA
Type	Dry
Configuration	Delta-Wye
Input Voltage	480 V
Input Current	186 A
Inrush Current	< 10 x Nominal Input Current Per Phase
Output voltage	208 V
Output current	416 A
Weight	417.3 kg (920.0 lb)
Impedance	3 - 6%
Frequency	60 Hz
Frequency range	57 Hz - 63 Hz
Noise	< 50 dBA @ 1m at full load
Standards	TP-1, UL 1561
Windings	Copper Only; No Aluminum
Insulation class	180°C (356°F) minimum
Ventilation	Forced Air Convection
Temperature Sensors	Yes
Efficiency	98.3% @ at 35% of Nameplate load

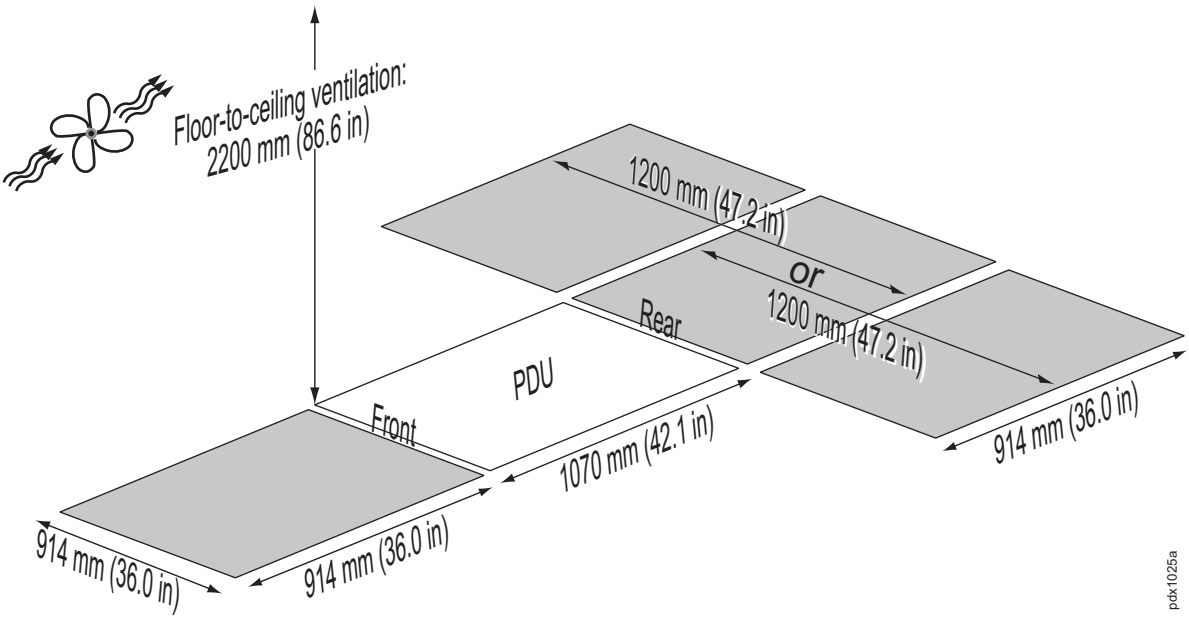
Dimensional Data

Physical Dimensions

Unpackaged dimensions (H × W × D)	2057.4 x 609.6 x 1066.8 mm (81 x 24 x 42 in.)	
Shipping Dimensions (H × W × D)	(2209.8 x 1168.4 x 1219.2 mm) (87 x 46 x 48 in.)	
Minimum Weight (PDU unpopulated)	816.5 kg (1800 lb)	
Estimated Weight (PDU fully populated)	1043.3 (2300 lb)	
Minimum Shipping Weight (PDU unpopulated)	861.8 kg (1900 lb)	
Estimated Shipping Weight (PDU fully populated)	1088.6 kg (2400 lb)	
Note: Weight will vary from unit to unit due to differences in cable requirements.		
Center of Gravity (unpopulated PDU)	X-direction from side	300 mm (11.8 in.)
	Y-direction from front	847 mm (33.3 in.)
	Z-direction from floor	610 mm (24.0 in.)

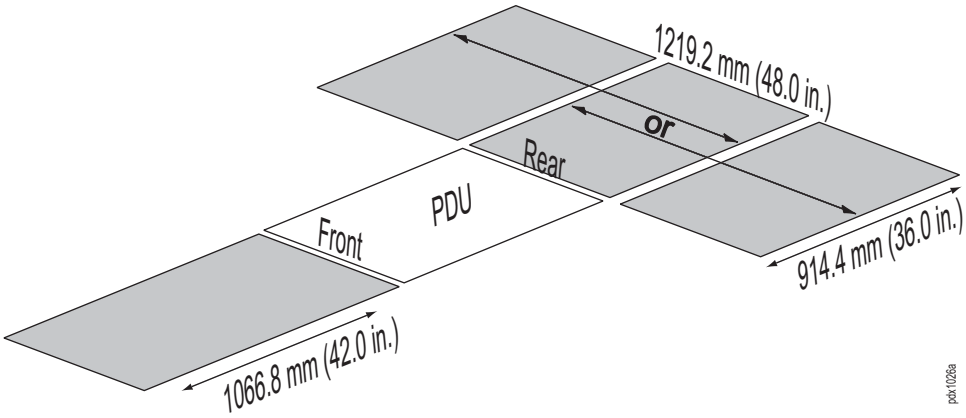
Free Space Around PDU

Air Flow Requirements



Top (Floor to Ceiling Ventilation)	2200mm (86.6 in.)
Front clearance (depth x width)	914 x 914 mm (36 x 36 in.)
Rear Clearance	914 x 1200 mm (36 x 47.2 in.)
Note: Installation must follow all local, state, and national codes.	

Installation and Maintenance Accessibility Recommendations

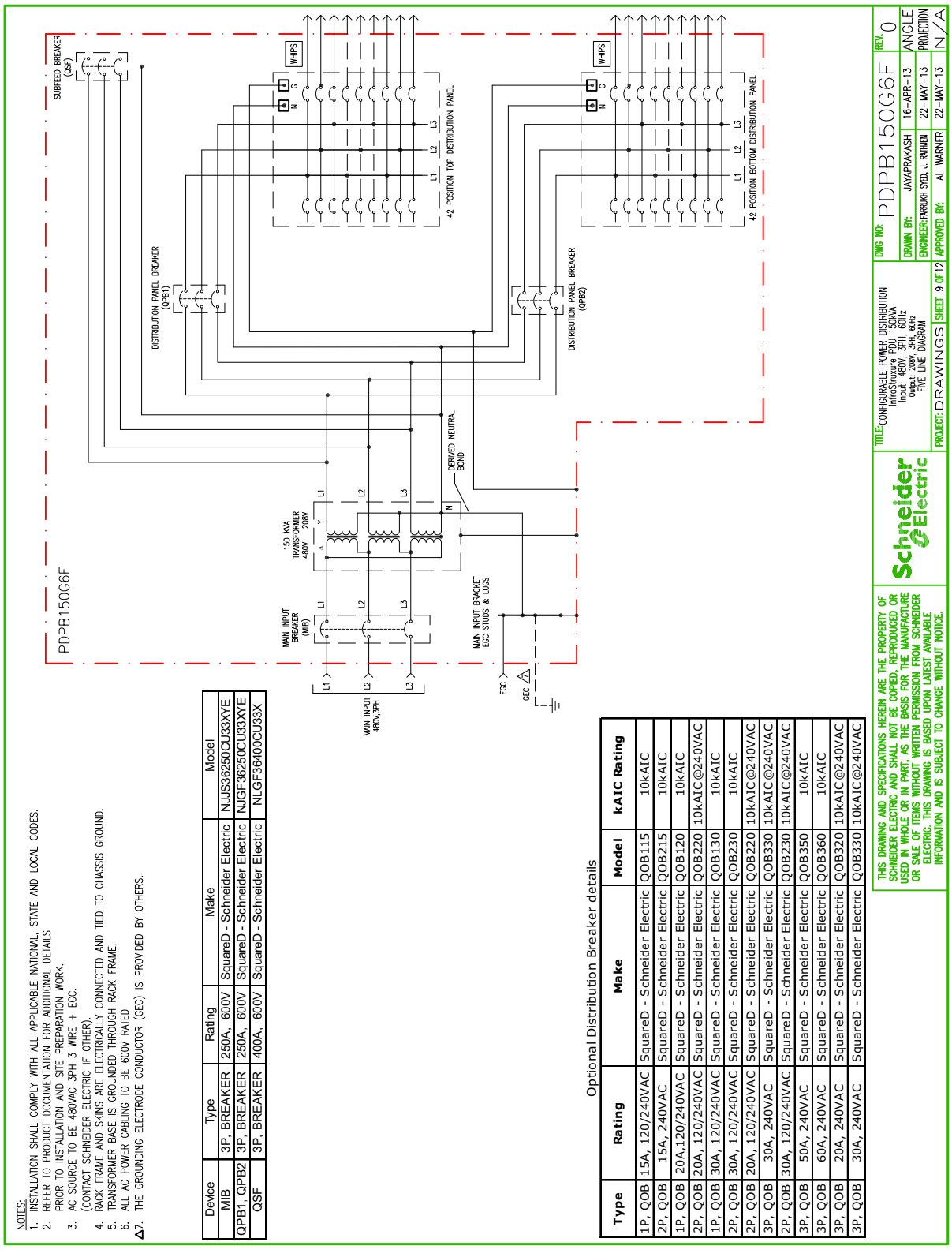


Front Clearance	1066.8 mm (42 in.)
Rear Clearance*	1219.2 mm (48 in.)
**Laterally, from either side of the back of the unit, as illustrated in figure above.*	
Color	Black
Input Power Entry Cable Route	Top and Bottom
Output Power Exit Cable Route	Top
Conduit Size	Defined by Input Wiring
Top and Bottom Plate Hole Size for Conduit (Input)	175 mm x 127 mm (6.9 x 5.0 in.)
Hole Size in Top Plate for Conduit (Subfeed)	210 mm x 127 mm (8.3 x 5.0 in.)
Note: Installation must comply with applicable national, state, and local electrical codes.	

Drawings

Note: These drawings are for reference ONLY - subject to change without notice.

Note: A comprehensive set of drawings is available on the APC Web site: www.apc.com



Device	Type	Rating	Make	Model
MIB	3P, BREAKER	250A, 600V	SquareD - Schneider Electric	NJJS36250CU33XYE
QPB1, QPB2	3P, BREAKER	250A, 600V	SquareD - Schneider Electric	NJGF36250CU33XYE
QSF	3P, BREAKER	400A, 600V	SquareD - Schneider Electric	NLGF36400OCU33X

Type	Rating	Make	Model	kAIC Rating
1P, QOB	15A, 120/240VAC	SquareD - Schneider Electric	QOB115	10kAIC
2P, QOB	15A, 240VAC	SquareD - Schneider Electric	QOB215	10kAIC
1P, QOB	20A,120/240VAC	SquareD - Schneider Electric	QOB120	10kAIC
2P, QOB	20A, 120/240VAC	SquareD - Schneider Electric	QOB220	10kAIC@240VAC
1P, QOB	30A, 120/240VAC	SquareD - Schneider Electric	QOB130	10kAIC
2P, QOB	30A, 120/240VAC	SquareD - Schneider Electric	QOB230	10kAIC
2P, QOB	20A, 120/240VAC	SquareD - Schneider Electric	QOB220	10kAIC@240VAC
3P, QOB	30A, 240VAC	SquareD - Schneider Electric	QOB330	10kAIC@240VAC
2P, QOB	30A, 120/240VAC	SquareD - Schneider Electric	QOB230	10kAIC@240VAC
3P, QOB	50A, 240VAC	SquareD - Schneider Electric	QOB350	10kAIC
3P, QOB	60A, 240VAC	SquareD - Schneider Electric	QOB360	10kAIC
3P, QOB	20A, 240VAC	SquareD - Schneider Electric	QOB320	10kAIC@240VAC
3P, QOB	30A, 240VAC	SquareD - Schneider Electric	QOB330	10kAIC@240VAC

Options

Hardware Options

Breaker & Cord Set Compatibility Chart, 208Y/120V Regions

The Schneider Electric Configurable Power Accessories specified are intended for use in 208V Configurable PDUs. They can be installed in the 150kVA InfraStruxure PDU (PDPB150G6F).

Voltage	Amperage	Make	Model	Poles	Compatible Cord Set
240VAC	15A	Square D	QOB215	2P	3 Wire NEMA L6-15
120/240VAC	15A	Square D	QOB115	1P	3 Wire NEMA L5-15
240VAC	20A	Square D	QOB320	3P	5 Wire NEMA L21-20
120/240VAC	20A	Square D	QOB220	2P	4 Wire NEMA L14-20
120/240VAC	20A	Square D	QOB120	1P	3 Wire NEMA L5-20
120/240VAC	20A	Square D	QOB220	2P	3 Wire NEMA L6-20
240VAC	30A	Square D	QOB330	3P	4 Wire NEMA L15-30
120/240VAC	30A	Square D	QOB230	2P	4 Wire NEMA L14-30
120/240VAC	30A	Square D	QOB130	1P	3 Wire NEMA L5-30
240VAC	30A	Square D	QOB330	3P	5 Wire L21-30
120/240VAC	30A	Square D	QOB230	2P	3Wire NEMA L6-30
240VAC	50A	Square D	QOB350	3P	4 Wire Hubbell CS8364C
240VAC	60A	Square D	QOB360	3P	4 Wire IEC 309 60A
Breaker Type: QOB					
Breakers are UL Listed, CSA certified by Square D by Schneider Electric					
Configurable PDU and its Factory-installed Breakers and Cord Sets are UL Listed.					
The short-circuit withstand rating of all breakers is 10 kAIC.					

Seismic Kit

- For OSHPD pre-approval, you must purchase "*Seismic Kit for 600 mm Symmetra PX 100 and Symmetra PX 250/500 Frames (SYOPT600)*."

Configuration Options

- 42-pole branch current power monitoring (BCPM)
- 84-pole branch current power monitoring (BCPM)
- Branch Breakers without Cordsets. (See *Hardware Options → Breaker & Cord Set Compatibility Chart, 208Y/120V Regions* for list of Breakers.)
- StruxureWare Data Center Expert Compatible
- Seismic Bracket Kits Available
- 300 mm Maintenance Bypass Panel

Warranty

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