

Power Management Module

30–300 kVA

Installation and Operation

10/2017



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Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this publication.

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Important Safety Instructions — SAVE THESE INSTRUCTIONS

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service or maintain it. The following safety messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety message indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in death or serious injury**.

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

WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in death or serious injury**.

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

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in minor or moderate injury**.

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

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this type of safety message.

Failure to follow these instructions can result in equipment damage.

Please Note

Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

FCC Statement

NOTE: 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 instruction manual, 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Safety Precautions

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

All safety instructions in this document must be read, understood and followed.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Read all instructions in this manual before installing or working on this power management module.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not install the power management module until all construction work has been completed and the installation room has been cleaned.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- The product must be installed according to the specifications and requirements as defined by Schneider Electric. It concerns in particular the external and internal protections (upstream breakers, battery breakers, cabling, etc.) and environmental requirements. No responsibility is assumed by Schneider Electric if these requirements are not respected.
- After the power management module has been electrically wired, do not start up the system. Start-up must only be performed by Schneider Electric.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The power management module must be installed according to local and national regulations. Install the power management module according to:

- NEC NFPA 70, **or**
- Canadian Electrical Code (C22.1, Part 1)

depending on which one of the standards apply in your local area.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Install the power management module in a temperature controlled indoor environment free of conductive contaminants and humidity.
- Install the power management module on a non-flammable, level and solid surface (e.g. concrete) that can support the weight of the system.

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

The power management module is not designed for and must therefore not be installed in the following unusual operating environments:

- Damaging fumes
- Explosive mixtures of dust or gases, corrosive gases, or conductive or radiant heat from other sources
- Moisture, abrasive dust, steam or in an excessively damp environment
- Fungus, insects, vermin
- Salt-laden air or contaminated cooling refrigerant
- Pollution degree higher than 2 according to IEC 60664-1
- Exposure to abnormal vibrations, shocks, and tilting
- Exposure to direct sunlight, heat sources, or strong electromagnetic fields

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

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Do not drill or cut holes for cables or conduits with the gland plates installed and do not drill or cut holes in close proximity to the power management module.

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

⚠ WARNING**HAZARD OF ARC FLASH**

Do not make mechanical changes to the product (including removal of cabinet parts or drilling/cutting of holes) that are not described in this manual.

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

NOTICE**RISK OF OVERHEATING**

Respect the space requirements around the power management module and do not cover the ventilation openings when the power management module is in operation.

Failure to follow these instructions can result in equipment damage.

Electrical Safety**⚠ DANGER****HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

- Electrical equipment must be installed, operated, serviced, and maintained only by qualified personnel.
- The power management module must be installed in a room with restricted access (qualified personnel only).
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.
- Turn off all power supplying the power management module before working on or inside the equipment.
- Before working on the power management module, check for hazardous voltage between all terminals including the protective earth.
- The power management module can be connected to an upstream UPS. The UPS contains an internal energy source. Hazardous voltage can be present even when disconnected from the utility/mains supply. Before installing or servicing the power management module, ensure that the UPS is OFF and that utility/mains and batteries are disconnected.
- A disconnection device (e.g. disconnection circuit breaker or switch) must be installed to enable isolation of the power management module from upstream power sources in accordance with local regulations. This disconnection device must be easily accessible and visible.
- The power management module must be properly earthed/grounded and due to a high leakage current, the earthing/grounding conductor must be connected first.

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

Receiving, Handling and Storage

External Inspection

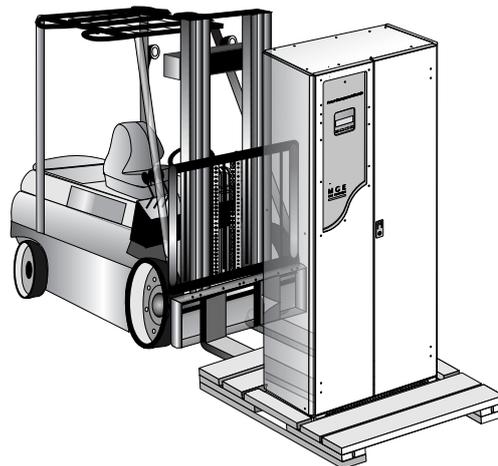
When the shipment arrives, inspect the shipping material for any signs of damage or mishandling. Check tilt and impact indicators. Do not attempt to install the system if a damage is apparent. If any damage is noted, contact Schneider Electric and file a damage claim with the shipping agency within 24 hours.

Compare the components of the shipment with the bill of lading. Report any missing items to the carrier and to Schneider Electric immediately.

Verify that labelled units match the order confirmation.

Handling

The power management module has heavy-duty casters to allow the equipment to be moved easily into position once it has been removed from the shipping truck. The main cabinet can be moved only from the rear, using a pallet jack or fork lift truck. Adjust the forks to avoid damaging the casters and the leveling jacks. Once the power management module is in its final position, the leveling jacks on all four corners should be lowered to keep the power management module in place.



Storage

If the equipment is to be stored prior to installation, it should be stored in a cool, dry, well-ventilated location that is protected against rain, splashing water, chemical agents, etc. The equipment should be covered with a tarpaulin or plastic wrapper to protect it against dust, dirt, paint, or other foreign materials.

Shipping Weights

kVA	Model numbers	PMN084 kg (lbs)	PMN126 kg (lbs)	PMN168 kg (lbs) ¹	PMN210 kg (lbs)	PMN252 kg (lbs) ²
30	PMN...-12-030	306 (675)				
	PMN...-22-030	531 (1170)				
	PMN...-42-030	531 (1170)				
50	PMN...-12-050	306 (675)				
	PMN...-22-050	581 (1280)	689 (1520)	769 (1695)		
	PMN...-42-050	581 (1280)	689 (1520)	769 (1695)		
	PMN...-62-050	581 (1280)	689 (1520)	769 (1695)		
75	PMN...-12-075	306 (675)				
	PMN...-22-075	646 (1425)	755 (1665)	835 (1840)		
	PMN...-33-075	737 (1625)	846 (1865)	925 (2040)		
	PMN...-42-075	737 (1625)	846 (1865)	925 (2040)		
	PMN...-62-075	737 (1625)	846 (1865)	925 (2040)		
100	PMN...-12-100	306 (675)				
	PMN...-42-100	760 (1675)	869 (1915)	948 (2090)	1057 (2330)	1136 (2505)
125	PMN...-42-125	923 (2035)	1036 (2285)	1120 (2470)	1234 (2720)	1318 (2905)
	PMN...-62-125	923 (2035)	1036 (2285)	1120 (2470)	1234 (2720)	1318 (2905)
150	PMN...-33-150	1095 (2415)	1209 (2665)	1293 (2850)	1406 (3100)	1490 (3285)
	PMN...-42-150	1016 (2240)	1129 (2490)	1213 (2675)	1327 (2925)	1411 (3110)
	PMN...-62-150	1016 (2240)	1129 (2490)	1213 (2675)	1327 (2925)	1411 (3110)
200	PMN...-42-200	1127 (2485)	1241 (2735)	1324 (2920)	1438 (3170)	1522 (3355)
225	PMN...-33-225	1266 (2790)	1379 (3040)	1463 (3225)	1576 (3475)	1660 (3660)
	PMN...-42-225	1208 (2665)	1322 (2915)	1406 (3100)	1519 (3350)	1603 (3535)
	PMN...-62-225	1208 (2665)	1322 (2915)	1406 (3100)	1519 (3350)	1603 (3535)
300	PMN...-42-300			1633 (3600)		1830 (4035)

1. Front facing cabinet weights provided. For PMN168 with side cabinet subtract 91 kg (200 lbs).
2. Front facing cabinet weights provided. For PMN252 with side cabinet subtract 136 kg (300 lbs).

Positioning

Junction Box

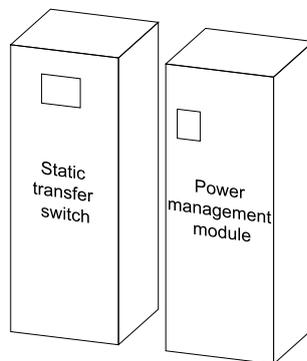
When the junction box option is ordered, it is normally shipped in advance of the power management module, and can be installed before the power management module arrives. The junction box must be placed within 2.4 m (8 ft) of the power management module, since the length of the optional supply cable is 3 m (10 ft).

Power Management Module and Static Transfer Switch

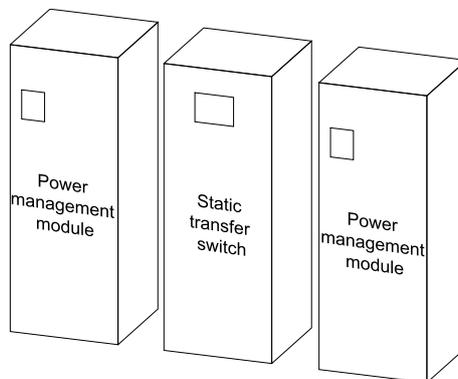
Move the power management module cabinet and any applicable options into their final location. Lower the leveling jacks on all four corners of the cabinet for proper stability. The weight must be on the leveling jacks instead of the casters.

For Plus and Ultra configurations, the cabinets must be arranged in the required positions for proper connections:

- Plus configuration: When facing the power management module from the front, the static transfer switch cabinet must be located on the left hand side.



- Ultra configuration: The static transfer switch cabinet must be located between the power management module cabinets.



The interconnection cables and side barrier(s) are supplied with the power management module cabinet(s). The interconnection brackets are supplied with the static transfer switch cabinet.

Clearance

NOTE: Clearance dimensions are published for airflow and service access only. Consult with the local safety codes and standards for additional requirements in your local area.

Front clearance	Minimum 915 mm (36 in) for normal maintenance
Side facing cabinet clearance	Minimum 915 mm (36 in) for normal maintenance
Rear clearance	Minimum 153 mm (6 in) for transformer ventilation.
Top clearance	Minimum 307 mm (12 in) for air exhaust

NOTE: Refer to installation drawings for details on your configuration.

Specifications

Input Specifications

kVA	30			50			
Voltage (V)	208/120	208/208	480/208	208/120	208/208	480/208	600/208
Input current (A)	83	83	36	139	139	60	48
Connection type	3PH+G 3PH+G+N for 208/120 V without transformer						
Input frequency (Hz)	60 (50 optional)						

kVA	75					100	
Voltage (V)	208/120	208/208	380/208	480/208	600/208	208/120	480/208
Input current (A)	208	208	114	90	72	278	120
Connection type	3PH+G 3PH+G+N for 208/120 V without transformer						
Input frequency (Hz)	60 (50 optional)						

kVA	125		150			200
Voltage (V)	480/208	600/208	380/208	480/208	600/208	480/208
Input current (A)	150	120	228	180	144	241
Connection type	3PH+G 3PH+G+N for 208/120 V without transformer					
Input frequency (Hz)	60 (50 optional)					

kVA	225			300
Voltage (V)	380/208		480/208	600/208
Input current (A)	342		271	217
Connection type	3PH+G 3PH+G+N for 208/120 V without transformer			
Input frequency (Hz)	60 (50 optional)			

Output Specifications

kVA	30			50			
Voltage input/output (V)	208/120	208/208	480/208	208/120	208/208	480/208	600/208
Output current (A)	83	83	83	139	139	139	139
Connection type	3PH+G						
Output frequency (Hz)	60 (50 optional)						

kVA	75					100	
Voltage input/output (V)	208/120	208/208	380/208	480/208	600/208	208/120	480/208
Output current (A)	208	208	114	208	208	278	278
Connection type	3PH+G						
Output frequency (Hz)	60 (50 optional)						

kVA	125		150			200
Voltage input/output (V)	480/208	600/208	380/208	480/208	600/208	480/208
Output current (A)	347	347	228	416	416	555
Connection type	3PH+G					
Output frequency (Hz)	60 (50 optional)					

kVA	225			300	
Voltage input/output (V)	380/208		480/208	600/208	
Output current (A)	342		625	833	
Connection type	3PH+G				
Output frequency (Hz)	60 (50 optional)				

Input Circuit Breaker Ratings

NOTE: Consult Schneider Electric for other input voltages than listed.

Cabinet size (A)	Interrupting rating RMS symmetrical amperes at 480 V
50	18 kA
70	18 kA
80	18 kA
90	18 kA
110	25 kA
125	25 kA
150	25 kA
175	25 kA
200	25 kA
225	25 kA
300	30 kA
350	30 kA
400	30 kA
450	30 kA
600	30 kA

Environment

	Operation	Storage
Temperature	-10 °C to 40 °C (14 °F to 104 °F)	-40 °C to 60 °C (-40 °F to 140 °F)
Altitude	152 m below to 2134 m above sea level (500 ft below to 7000 ft above sea level) without derating	152 m below to 7620 m above sea level (500 ft below to 25,000 ft above sea level)
Relative humidity	10 to 70% condensing	10 to 90% non-condensing
Audible noise (1 meter from surface)	30–50 kVA: 45 dB 51–150 kVA: 50 dB 151–300 kVA: 55 dB	

Heat Dissipation

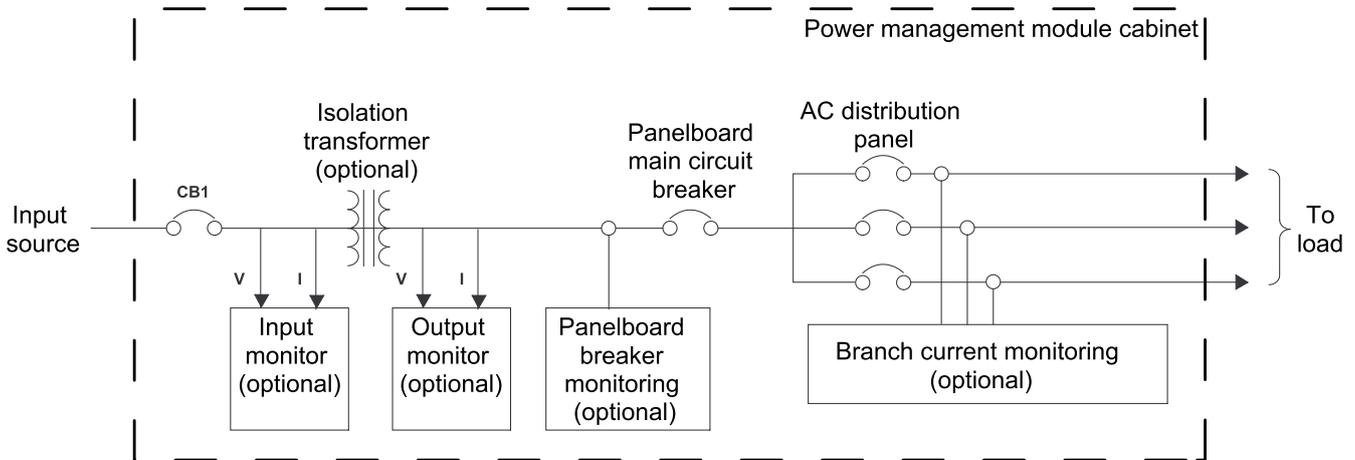
kVA	Model numbers	Input voltage (V)	BTU/hr
30	PMN...-12-030	208/120	600
	PMN...-22-030	208/208	2800
	PMN...-42-030	480/208	2800
50	PMN...-12-050	208/120	600
	PMN...-22-050	208/208	4100
	PMN...-42-050	480/208	4100
	PMN...-62-050	600/208	4100
75	PMN...-12-075	208/120	600
	PMN...-22-075	208/208	5200
	PMN...-33-075	380/208	5200
	PMN...-42-075	480/208	5200
	PMN...-62-075	600/208	5200
100	PMN...-12-100	208/120	600
	PMN...-42-100	480/208	5800
125	PMN...-42-125	480/208	6500
	PMN...-62-125	600/208	6500
150	PMN...-33-150	380/208	7300
	PMN...-42-150	480/208	7300
	PMN...-62-150	600/208	7300
200	PMN...-42-200	480/208	9700
225	PMN...-33-225	380/208	9800
	PMN...-42-225	480/208	9800
	PMN...-62-225	600/208	9800
300	PMN...-42-300	480/208	11100

Compliance

- FCC Part 15, Subpart J, Class A
- UL/cUL Listed to UL 60950 and CSA/CAN C22.2 No. 60950 (Information Technology Equipment)

Installation

One Line Diagram

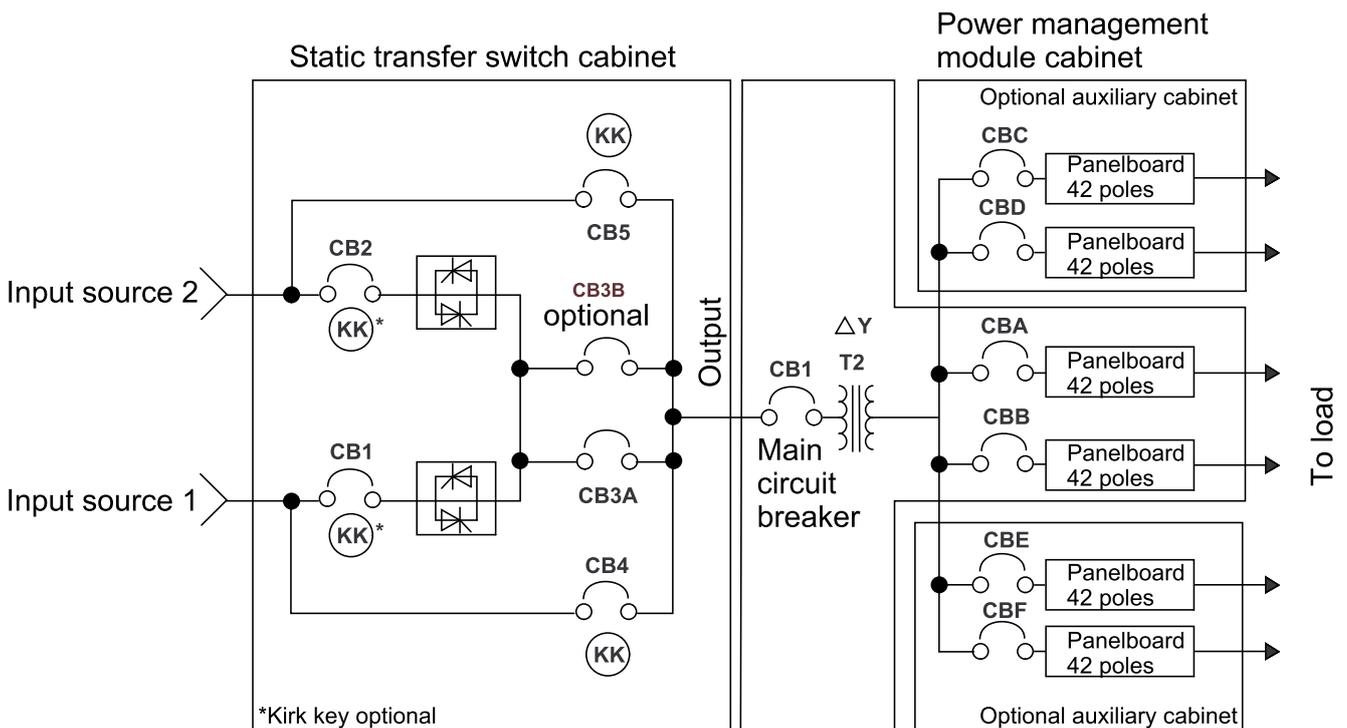


Power Management Module/Static Transfer Switch Configurations

Power Management Module Plus Configuration

In the power management module Plus configuration, the input of the power management module cabinet is supplied by the output of the static transfer switch. The dual input distribution system accepts two independent input sources feeding to the static transfer switch. If the preferred input source is not available, the static transfer switch will transfer to the alternate input source with no interruption to the load. The output power is conditioned and stepped down to distribution voltage via an isolation transformer, supplying panelboards or main frame circuit breakers.

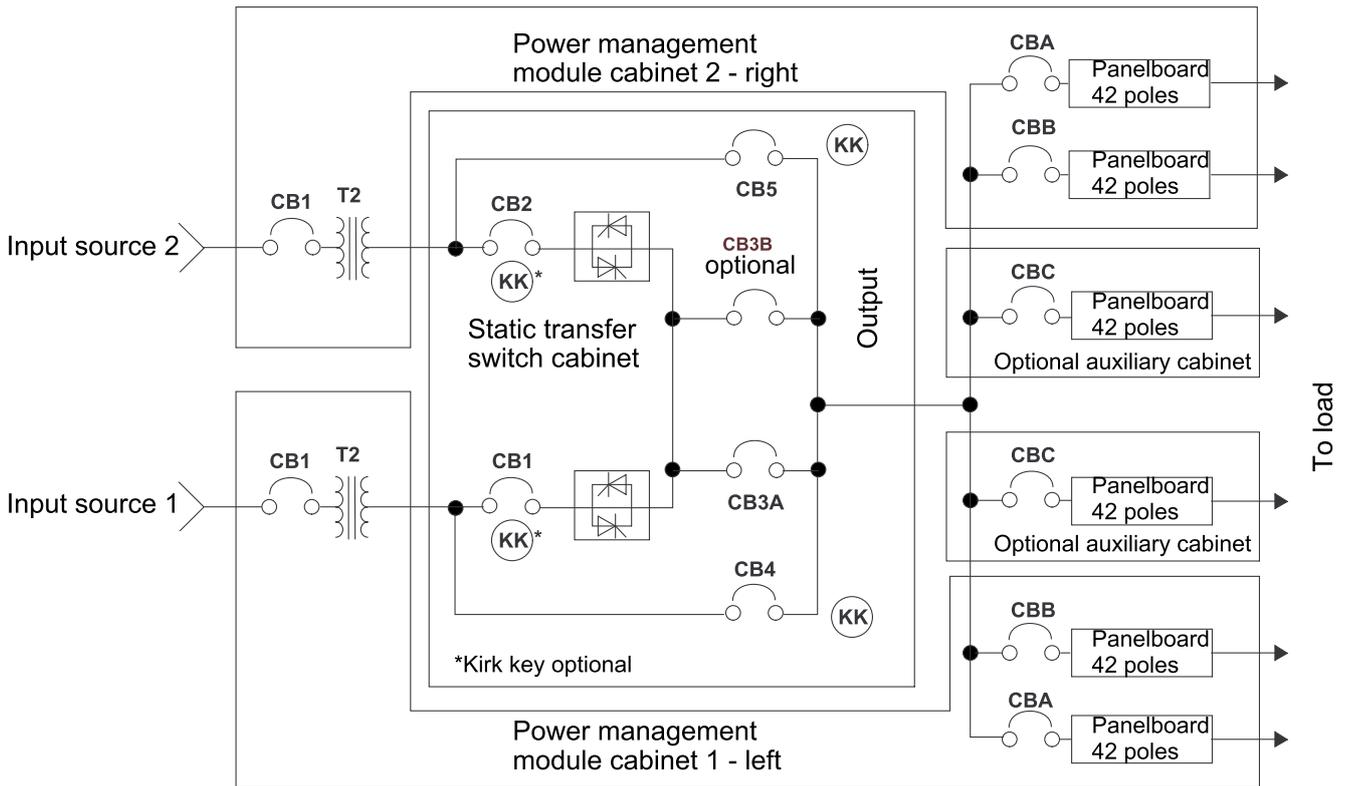
Power Management Module Plus Configuration – Diagram



Power Management Module Ultra Configuration

In the power management module Ultra configuration, an isolation transformer feeds each input source upstream of the static transfer switch. The transformer secondary output of the power management module cabinet 1 (left cabinet) supplies the source 1 input and power management module cabinet 2 (right cabinet) supplies source 2 input of the static transfer switch. If the preferred input source is not available, the static transfer switch will transfer to the alternate input source with no interruption to the load. The output of the static transfer switch connects to the output busbars of the power management module cabinet 1 and power management module cabinet 2, supplying panelboards or main frame circuit breakers.

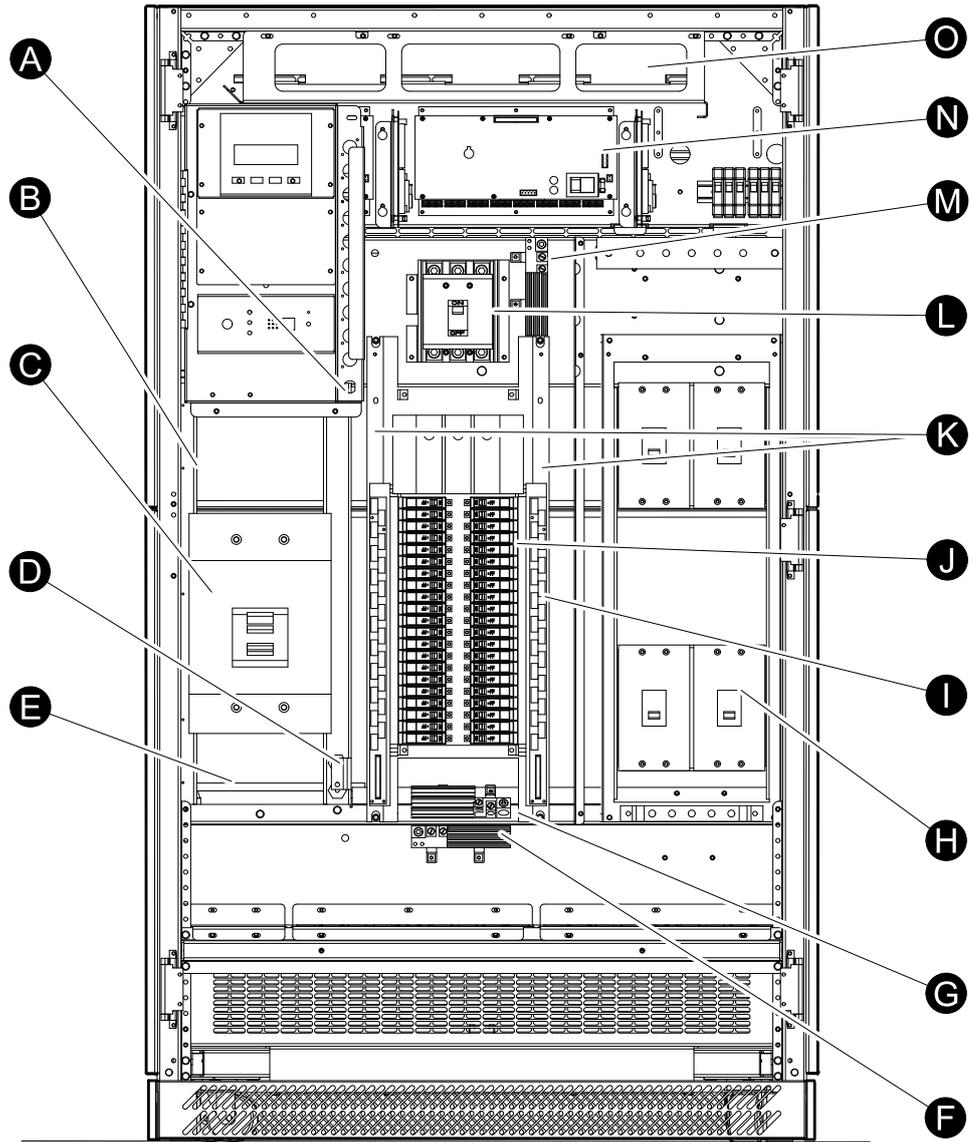
Power Management Module Ultra Configuration – Diagram



System Components

Main input circuit breaker	Sized according to your power management module system. See <i>Input Circuit Breaker Ratings, page 14</i> for ratings. Higher interrupting ratings are optional.
Panelboard main circuit breaker	Rated at 225 A with an interrupting rating of 22K A.
42–pole distribution panelboards	SquareD, type NQOM Universal
Transformer	Shielded, high-efficiency compliant to DOE 2016
Control terminal blocks (TB1, TB2)	For remote power off, alarms, and communication.
Meter (optional)	Different monitoring meters are available for the power management module. Contact Schneider Electric for options.

Power Management Module – Front View



- A. Manual restart (optional)
- B. TB1 and TB2
- C. Main input CB1 circuit breaker
- D. Input isolated ground busbar (optional)
- E. Input neutral busbar
- F. Output isolated ground (optional)
- G. Output ground (bottom cable entry only)
- H. Output cabinet circuit breakers (optional)
- I. Branch current monitor (optional)
- J. 42-pole distribution panelboard (distribution breakers optional)
- K. Output neutral
- L. Panelboard main circuit breaker 225 A
- M. Output ground (top cable entry only)
- N. Multicircuit meter (optional)
- O. Cable trough (top cable entry only)

Installation Procedures

The installation procedure described is the general requirements for the power management module installation. Specific requirements are described in the installation drawings shipped with your configuration.

1. *Connect the Ground Cables, page 19.*
2. Install the output circuit breaker.
3. *Connect the Input Cables, page 20.*
4. *Connect the Output Cables, page 20.*
5. *Connect the Control Cables (Optional), page 21.*

NOTE: Contact Schneider Electric to schedule the first start-up of the power management module. Do not allow unqualified personnel to handle or operate the equipment.

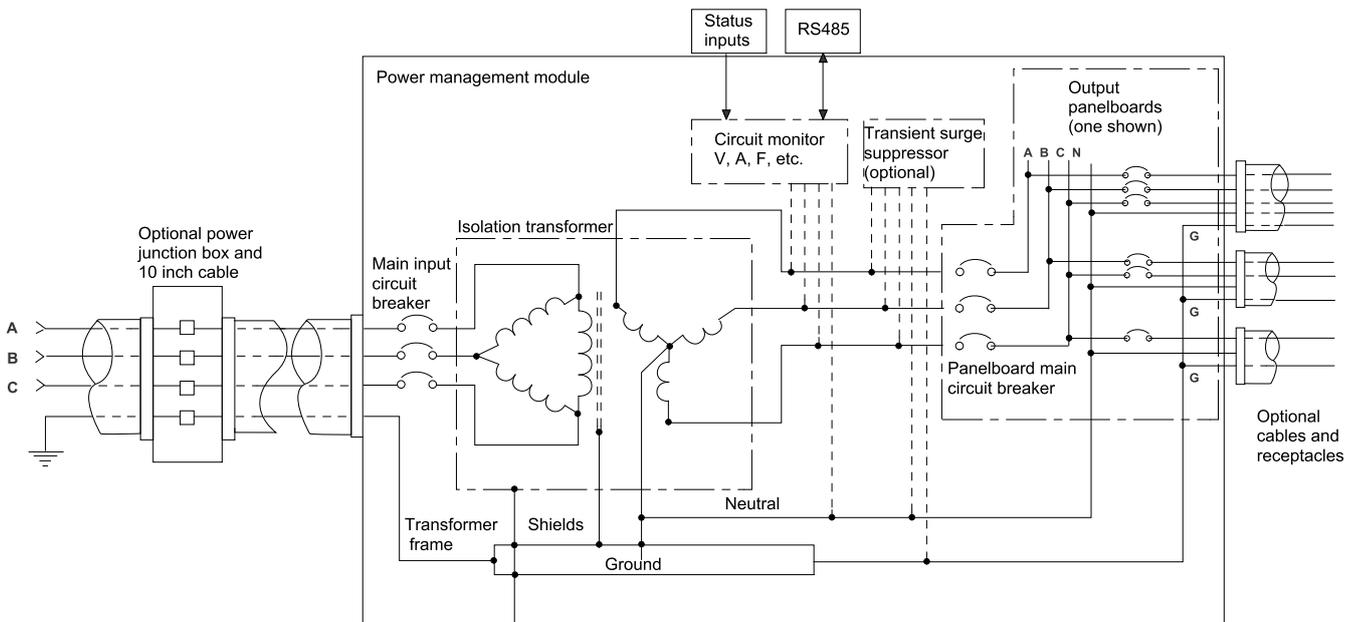
Connect the Ground Cables

NOTE: Grounding Electrode Conductors (GEC) must be sized in accordance with NEC Article 250-66 and Table 250-66.

An insulated grounding conductor must be installed as part of the input branch circuit supplying the power management module. Per the National Electrical Code, article 250, the grounding conductor is to have green insulation, with or without yellow stripes and be grounded to the utility service safety grounding point (or other acceptable building ground, such as the building frame in the case of a steel frame structure), at the service equipment entrance.

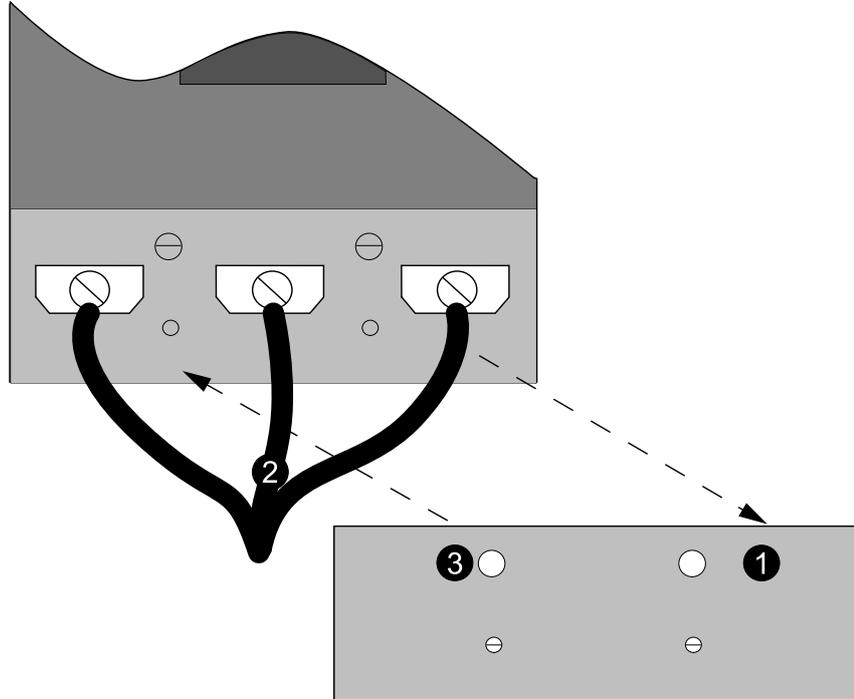
All attached plug receptacles near the power management module must be grounded in the same way. The conductors for those receptacle grounds are grounded to the safety ground (or other acceptable building ground, such as the building frame in the case of a steel frame structure), at the service equipment entrance. See grounding path below.

Power and control cables are routed through the bottom of the cabinet (cable entry through the top is an option). This is shown in detail on the installation drawing for your configuration.



Connect the Input Cables

1. Remove the cover plate from the bottom of the main circuit breaker CB1 and install input conduits.
2. Connect the input cables to the compression connectors. Phase sequence must be A, B, C.
3. Reinstall the cover plate on the bottom of the main circuit breaker CB1.

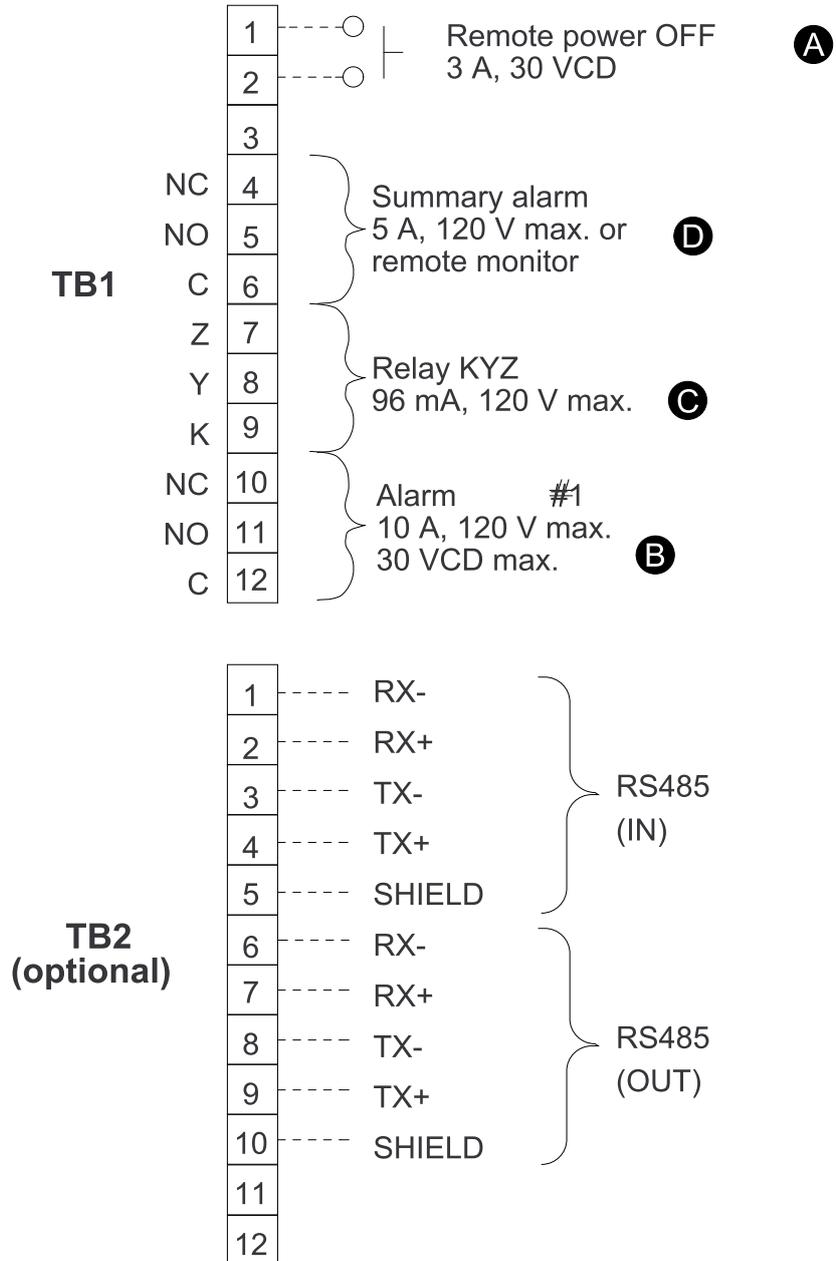


Connect the Output Cables

Conduit landings are located below each panelboard with appropriate 12.7 mm (0.50 in) and 19.05 mm (0.75 inch) knockouts. The output cables are connected to the circuit breaker configuration which has been designed, installed, and identified by you to meet the requirements of your installation. The connections to be made are either, 2-, 3-, or 4-wire and ground and are made in compression type connectors. Make the connections as required for the one, two, or three phase power. Connectors are marked on the circuit breaker and the phase sequence is A, B, C.

Connect the Control Cables (Optional)

1. Connect the control cables from external devices and monitoring meters to terminal block TB1 and TB2 in the power management module as applicable. Follow manufacturer instructions for third party devices and monitoring meters.

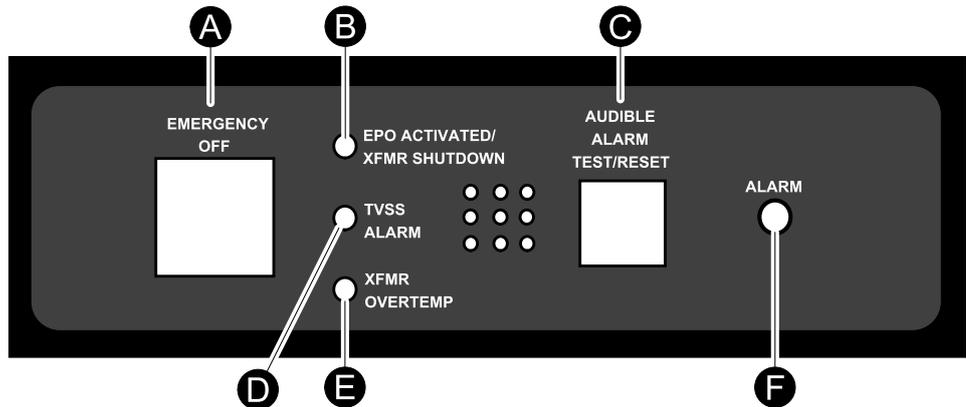


Available when RS485 feature present.

- A. Input from normally-open (NO) Form C contact closure trips main input circuit breaker.
- B. Specified alarms provide normally-open (NO) or normally-closed (NC) Form C contacts for connection to remote alarms (optional).
- C. Specified alarms provide low-power pulse output (optional).
- D. Any alarm condition provides normally-open (NO) or normally-closed (NC) Form C contacts for connection to a remote device (optional).

Operation

Overview of the User Interface



- A. The **EMERGENCY OFF** switch shuts down the power management module thereby disconnecting all power downstream of the input circuit breaker.
- B. The **EPO ACTIVATED/XFMR SHUTDOWN** LED turns ON and stays ON until reset when the EPO switch is pressed or when the transformer temperature reaches 195 °C (383 °F).
- C. The **AUDIBLE ALARM TEST/RESET** switch will silence the audible alarm until a new alarm occurs. It also functions as an LED/lamp test.
- D. The **TVSS ALARM** LED is turned ON by an alarm from the optional transient voltage suppression system.
- E. The **XFMR OVERTEMP** LED turns ON when the transformer temperature reaches 180 °C (356 °F) and stays ON until reset when the temperature reaches 195 °C (383 °F).
- F. The **ALARM** LED turned ON by any alarm condition detected by the power monitor or by an external dry contact.

Monitoring Systems

Several different monitoring systems are compatible with the power management module – contact Schneider Electric for options and details.

Start-Up the Power Management Module

NOTE: Contact Schneider Electric to schedule the first start-up of the power management module. Only qualified personnel must handle or operate the equipment.

Follow these steps any time that the system is restarted after having been shut completely down with no power applied to the system.

1. Before starting the power management module verify the following:
 - a. Upstream power circuit breaker is open.
 - b. Power cables have been properly connected to the input circuit breaker, or the junction box, if installed.
 - c. Voltage connected to the power management module matches the power management module nameplate and model number.
 - d. Equipment has been properly grounded.
 - e. All power and control connections are properly made and are tight.
 - f. Intake and exhaust ventilation areas have no obstructions that might impair proper airflow.
2. Close the upstream circuit breaker.
3. Close the main circuit breaker CB1.
4. Verify the function of any installed monitor (option).
5. Close the main panelboard circuit breakers.
6. Close individual output circuit breakers as required.

Post-requisite:

Verify normal operation of the power management module immediately after the start-up has been performed.

As a minimum, use the monitor, if installed, to verify proper readings from all circuits.

Preventive Maintenance

Perform the listed preventive maintenance every six months. The listed preventive maintenance should be considered the minimum requirements. Your installation and site may require additional preventive maintenance for optimal performance from the power management module and associated equipment.

The technician or electrician performing preventive maintenance on the power management module must read this manual thoroughly and be familiar with the indicators, controls, and operation of the equipment.

⚠ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
For Plus and Ultra configurations, the power management module equipment receives power from more than one source. Disconnect all sources to this equipment before servicing.
Failure to follow these instructions will result in death or serious injury.

⚠ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
Isolate and de-energize the equipment for all maintenance operations.
Failure to follow these instructions will result in death or serious injury.

⚠ CAUTION
Operation of the upstream circuit breaker(s) will cause power to be removed if it is present and will cause power to be applied if it is not. Make sure that all loads are prepared to have power removed (all critical circuits have been shut down), or circuits are safe for power application (no maintenance procedures are being conducted and downstream circuit breaker(s) are open and tagged) before upstream operation of the circuit breaker(s).
Failure to follow these instructions can result in injury or equipment damage.

1. Ensure that the equipment is clean and free of dust, dirt, and debris. The exterior of the cabinets can be cleaned with a mild solution of soap and water, lightly applied with a lint-free cloth.
2. Inspect the air intake and exhaust plates and clean as required. Verify that air flows freely through the equipment. Clean the air intake plates, air exhaust plates, and the cabinet interior with a vacuum cleaner.
3. Operate all circuit breaker(s) to verify that circuit breaker(s) function properly.
4. Verify that all system monitoring functions operate properly.

Troubleshooting

The following is a list of the most common situations where the equipment does not perform as intended, the most likely cause, and a possible corrective action. If the suggested corrective action does not return the equipment to normal operation, contact Schneider Electric for assistance.

Situation	Possible cause	Corrective action
The power management module has no input power.	No building power to the power management module.	Restore building power. Have a qualified technician check the wiring continuity between the power management module input junction box option and building input power panel.
	The power management module is not properly connected to the optional junction box.	Have a qualified technician check the wiring continuity between the power management module input junction box option and the building input power panel.
Specific output circuit(s) have no power.	Associated output circuit breaker(s) are OFF.	Reset the circuit breaker(s).
	The wiring between the circuit breaker(s) and the equipment is faulty.	Have a qualified technician check for wiring continuity and correct phase sequence between the circuit breaker(s) and the equipment(s).
	The equipment associated with the circuit breaker is operating above the rated load.	Schedule a load check of the equipment with a qualified technician; adjust for load balance if possible.
	The circuit breaker is inoperable.	Replace the inoperable circuit breaker.
No output from the power management module, but the monitor is active.	The main input circuit breaker CB1 is OFF.	<ol style="list-style-type: none"> Record which alarm indications are active. Reset alarm(s) and clear external signal. Check the alarm history display for reasons why the main input circuit breaker tripped. Below is a list of possible causes: <ul style="list-style-type: none"> Manual trip, due to an emergency power off (EPO) button being pushed. An alarm shutdown has occurred. Determine the cause and take corrective action before resetting the main input circuit breaker CB1. Automatic trip. An external signal was received from the building wiring via the alarm interface instructing the power management module to shunt-trip. Output overload. Schedule a load check of the power management module by a qualified technician. Inoperable circuit breaker. Replace the circuit breaker. Short circuit internal to the power management module. Troubleshoot the power management module or contact Schneider Electric.
Output from the power management module is on, but the monitor is not active.	Control power fuse(s) blown.	Replace fuse(s).
Overvoltage/undervoltage	Upstream UPS or power conditioner is inoperable	Correct problem at the power source.
	Voltage drop due to distance or excessive load on mains.	<i>Adjust the Transformer Taps, page 26.</i>

Situation	Possible cause	Corrective action
The ALARM LED is ON	The power management module is inoperable.	Review the operation of the power management module and the information available from the metering display to determine the specific nature of the alarm.
	The quality of power coming into or out of the power management module unit is not acceptable.	Review the operation of the power management module and the information available from the metering display to determine the specific nature of the alarm.
The TVSS ALARM LED is ON	The TVSS module is inoperable.	Contact Schneider Electric for service and repair of the TVSS.
The XFMR OVERTEMP LED is ON	A high temperature condition is present with the power transformer in the power management module.	Review the operation of the power management module to ensure the ventilation of the power management module is not blocked and review the information available from the metering display to determine if the unit is overloaded.
The EPO ACTIVATED/ XFMR SHUTDOWN LED is ON	The power management module has received a command to trip the input circuit breaker.	Check the remote EPO for the room or the fire control panel, or the EMERGENCY OFF switch located on the front panel of the power management module
	The transformer temperature exceeded the first stage alert (XFMR OVERTEMP LED), tripping the protective thermostat in the transformer to prevent further heating and damage to the transformer.	Call Schneider Electric for service.

Adjust the Transformer Taps

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Verify that a total power shutdown has been performed. Before changing transformer taps, verify that the overvoltage/undervoltage condition is constant. Changing transformer taps will increase or decrease the ratio of input voltage to output voltage.

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

1. Shut down and disconnect power from the equipment.
2. Adjust the transformer taps; refer to the tap adjustment table on the transformer nameplate.

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As standards, specifications, and design change from time to time,
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