

MGE Power Management Modules

“Power Distribution to critical loads with continuous power.”

30/50/75/100/125/150/200/225/ 300 kVA



MGE's Power Management Module integrates isolation, electronic grade grounding, and distribution for up to 252 output breakers in a single system. The result is a simple, versatile solution for constructing high reliability distribution systems.

- > Accommodates up to 252 breakers
- > Easily expandable using the Remote PMM
- > Computer grade high K-factor isolation transformer, double shielded for very low noise (EMI/RFI)
- > Electronic quality grounding (ensures ground point)
- > Panel board main breaker high current monitoring and alarm

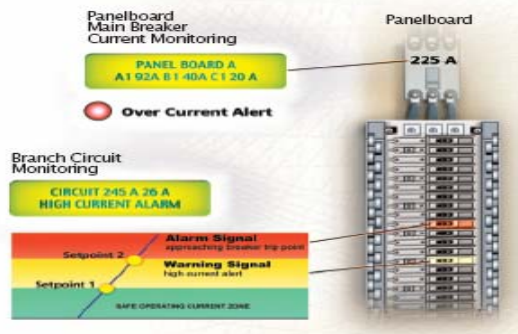
MGE PMM Features

Breaker Current Scanning Technology ~ A new level of reliability

Combining the MCM with Innovative Reliability Enhancement Monitoring Systems and advanced breaker scanning technology virtually eliminates 3 of the 4 primary points of failure. Together these systems help prevent distribution load losses before they happen, optimizing distribution reliability and current utilization by:

- > Alerting operators before breakers are at risk of tripping
- > Providing detailed current information for phase balancing and circuit management
- > Accurately indicating which circuits have available capacity

Main Circuit Breaker Monitoring: Distribution panel boards are equipped with 225A main breakers, but typically feed in excess of 500A worth of distribution circuit breakers putting the main breaker at risk of tripping as load densities increase. Current on the main input breaker is monitored to prevent over current conditions, which can result in catastrophic trips.



MGE's PMM transformers incorporate a host of unique features that contribute to unsurpassed reliability and performance eliminating the final single point of failure. Manufactured by APC in our own state-of-the-art facility, all APC transformers include:

- ▶ Dual copper shields between windings virtually eliminate EMI and RFI noise from being transmitted to the critical loads.
- ▶ 220° C rated Nomex™ insulation between windings eliminates the risk of internal shorting.
- ▶ Solid bus bar tabs ensure maximum surface area for solid life-time input/output connections.
- ▶ Very low impedance for lower voltage harmonics and superior voltage regulation.
- ▶ High efficiency for significant operating cost savings.
- ▶ Harmonic reduction topology significantly reduces the third harmonic for cleaner power.
- ▶ K-20 design handles high harmonic load content without thermally stressing the transformer.

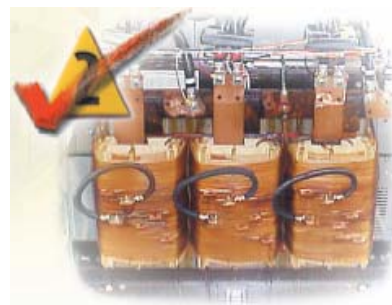
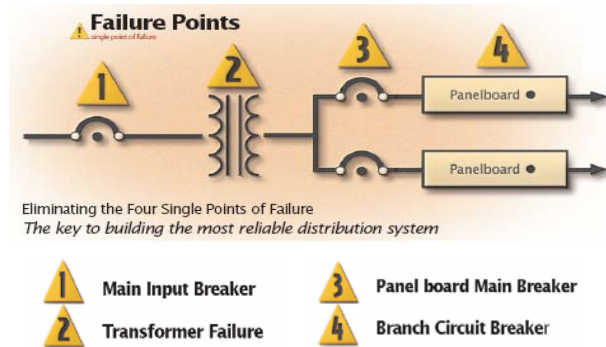
The MGE capitalize board Main Circuit Breaker Monitoring System

Continuously scans the panel board main breaker current, alarming when it approaches trip levels. Individual panel board phase currents are also displayed, optimizing panel board capacity and simplifying the balancing of phases.

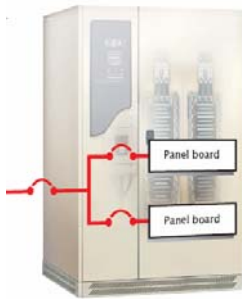
Branch Circuit Current Monitoring: Accidental tripping of branch circuit breakers due to overloading is a leading threat to reliability. The Branch Circuit Current Monitor scans the current of all panel board branch circuits, alarming when current levels exceed a user programmable set point before the circuit breaker is at risk of tripping. Branch circuit currents can also be viewed on the local LCD or downloaded onto a PDA via the PMM's IR port.

Only APC eliminates the four single points of failure on a distribution system

There are four single points of failure that can compromise any distribution system. APC has taken a unique approach to negate the failures associated with all four points making the **Power Management Module (PMM)** the most reliable critical power distribution system available. The **four potential points of failure** to your distribution system are:



MGE PMM Features & Services



PMM Topology

The All In One Solution

The PMM integrates isolation, monitoring and ample distribution capacity into one small cabinet greatly simplifying your power distribution.

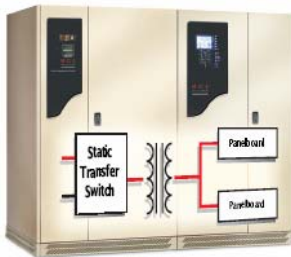
Easy to Wire

From the removable dead front covers to the spacious landing and raceway area, wiring the PMM is far easier than traditional PDUs.

Expandability

The PMM can be outfitted with main frame distribution breakers that can feed stand alone Remote PMM panel boards for expanded distribution capacity.

PMM Plus



PMM Ultra



Optimized critical power availability

The PMM Plus and PMM Ultra integrate the Power Management Module with MGE's Epsilon Static Transfer Switch to provide dual input distribution with automatic source selection. Automatically sensing power quality deficiencies, the STS seamlessly transfers to an alternate input power source in under four milliseconds.

Total Harmonic Management Solutions

Harmonics commonly reflected from computer and electronic loads can cause disturbances throughout your distribution system. The PMM's optional Harmonic Management Transformer traps harmonics reflected by distribution loads, significantly reducing the harmonic content of your distribution system.

PMM with integrated Harmonic Management Transformer



Maintenance contracts

A maintenance contract on your PMM ensures a smooth running system allowing you to focus on your core business. A maintenance partnership with the company that manufactures and installs your PMM systems provides continuity and service levels no one else can meet. APC by Schneider is pleased to offer the industry's most comprehensive, efficient and cost effective maintenance programs designed in an à la carte fashion to tailor the program to your specific needs. While you can custom build a maintenance program specific to your site, APC has devised 3 basic packages(ULTRA, PREMIER , SELECT) that cover a majority of the needs of our customers. However, even these three packages can be customized to your precise specifications and budget.

Technical characteristics

Optional

- > Copper transformer (where not standard)
- > Input junction box w/ 10' cable and line side TVSS
- > Manual restart
- > Harmonic cancellation transformer
- > High KAIC input CB
- > 4 x 225 A mainframe CB (in place of 42 pole panel board)
- > TVSS (load side -100 kA)
- > Remote EPO
- > Floor stands (12" or 18")
- > Isolated ground (per panel board)
- > Locking door
- > Remote PMM distribution module
- > Seismic bracket
- > Transient suppression plate

Optional Power Monitoring & Communications

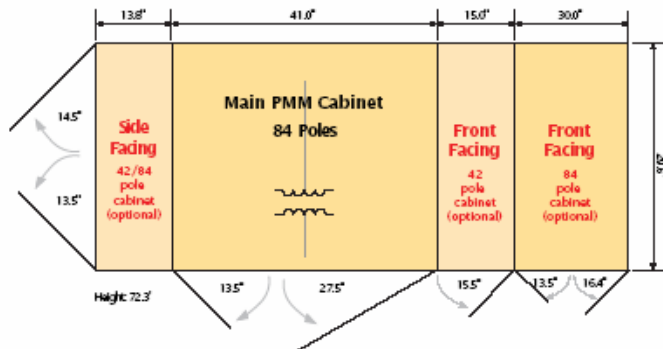
- > MCM meter (output/load side)
- > PM800 meter (output/load side)
- > Input (line side) monitoring Power logic CM4000 premium monitoring (web enabling option)
- > DMMS300 (output/load side)
- > Panel board main circuit breaker current monitoring
- > Branch circuit breaker current monitoring

Output Distribution Panel boards:

- > 42 pole panel board with 225 A main breaker. Accommodates SquareD QOB breakers & QO breakers
- > Neutral: 450 Amp (200 % rated),

| Rated power (kVA) | 30 | 50 | 75 | 100 | 125 | 150 | 200 | 225 | 300 |
|-------------------------------|---|------|------|------|--------------------------|-------|-------|-------|-------|
| Normal AC supply input | | | | | | | | | |
| Input Voltage (208/120 VAC) | X | X | X | X | | | | | |
| Input Voltage (208 VAC) | X | X | X | | | | | | |
| Input Voltage (480 VAC) | X | X | X | X | X | X | X | X | X |
| Input Voltage (600 VAC) | | X | X | | X | X | | X | |
| Input Voltage (380 VAC) | | | X | | | X | | X | |
| Frequency (Hz) | 60Hz, ±5Hz / 50 Hz (380 VAC) | | | | | | | | |
| Number of phases | 3 Wire + G (3Ø), 4 Wire + G transformer less models only) | | | | | | | | |
| Output Rating | | | | | | | | | |
| Output Voltage (VAC) | 208/120 VAC | | | | | | | | |
| Number of phases | 4 Wire + Ground with full load | | | | | | | | |
| Efficiency | > 96 - 97% | | | | | | | | |
| Environment | | | | | | | | | |
| Cable Connection | Top or bottom input/output cable entry available | | | | | | | | |
| Ventilation | Convection cooled | | | | | | | | |
| Operation | | | | | | | | | |
| Heat Rejection (BTUs/hr) | 3200 | 5300 | 8000 | 8800 | 10900 | 13100 | 13900 | 15700 | 20900 |
| Standards | | | | | | | | | |
| Approvals | UL 60950 (supersedes UL/CSA 950) | | | | | | | | |
| Dimensions 42/84 poles | | | | | | | | | |
| Weight (lbs.) (208/120 VAC) | 675 | | | | | | | | |
| Weight (lbs.) (208 VAC) | 1075 | 1200 | 1325 | | | | | | |
| Weight (lbs.) (480 VAC) | 1075 | 1200 | 1525 | 1575 | 1825 | 1900 | 2250 | 2325 | 3365 |
| Weight (lbs.) (600 VAC) | | 1200 | 1525 | | 1825 | 1900 | | 2325 | |
| Weight (lbs.) (380 VAC) | | | 1525 | | | 2075 | | 2450 | |
| 126/168 pole add 250 lbs | | | | | 210/252 pole add 500 lbs | | | | |

PMM Dimensions



The standard 42" PMM cabinet contains two x 42 pole panel boards. Up to four extra panel boards (252 poles total) can be added using either front facing or side facing cabinet configurations. 4 x 225 A distribution breakers may be substituted for 42 pole panel boards.