

Power Function Manager

The Power Function Manager (PFM-400) is a system integrating component which converts ordinary power supplies (or Power Modules, shown on the opposite page) into a fully integrated and multifunctional power system. The unit provides for control, monitoring, paralleling and protection of 12, 24 or 48 VDC, positive negative or floating ground power sources.

The PFM has a heavy duty (400 amp) parallel tie point bus, digital output voltage and amperage monitoring, system and battery status lights, load distribution circuits, low voltage battery disconnect (ideal for systems with battery back-up) and summary alarm contacts, all combined in a compact, rackmount housing which serves as a master DC power management and distribution center. A high amp rackmount ground/return bus is provided.

The PFM may be used for integration, control, monitoring and protection of numerous different types of power sources, such as AC-DC rectifiers, regulated power supplies or DC-DC converters. Note: Installation of Oring diodes recommended for paralleling of most power sources. Oring diode output is standard on PM Series Power Modules.



Features/Benefits

- Provides parallel tie point for DC power modules; simplifies wiring
- 12, 24 or 48 VDC input/output; can be used with virtually any DC system
- Use with positive, negative or floating ground; no need to stock multiple units to meet different site requirements
- Digital meter displays system voltage or current via selector switch, providing easy on-site monitoring of battery and power module output
- Status lights indicate system and battery connect/disconnect status, assisting technicians in system troubleshooting
- Summary alarm contacts (form C) allow remote indication of system status
- Low voltage battery disconnect protects batteries in the event of extended AC power loss
- Manual battery disconnect switch allows service/replacement of batteries without system shutdown
- High current output bus for wiring main system load or for feeding an external distribution panel.
- Separate high amp ground bus provided
- Up to five optional isolated distribution circuit breakers with "TRIP" alarm contacts; easy front panel plug-in installation (for circuits requiring individual control/protection).



PM/PFM System

Overall Performance

- Input/Output: 12, 24 or 48 VDC nominal, positive or negative ground
- Maximum Total Current Capacity: 400 amps (max. 6 power supply/modules)
- Digital meter accuracy: 1.6% +/- one digit
- Circuit breaker voltage rating: 80 VDC (see Options for available amperages)

Protection

- Five branch circuit breakers (optional)
- Low voltage battery disconnect (See adjacent LVBD Specifications)

Mechanical/General

- Heavy duty plated copper bus bar
- Anodized aluminum front/side panels
- 19" or 23", flush or 6" forward rackmount
- Dimensions: same as PM series opposite page
- Weight: 20 lbs, 9.1 Kg.

Indicators/Alarms

- System output "OK" L.E.D. indicator
- "BATTERY ONLINE" L.E.D. indicator
- Digital volt/camp meter (selectable)
- LVBD "OPEN" L.E.D. indicator
- Form C summary alarm contacts: power module failure, LVBD activation, tripped load breaker

Low Voltage Battery Disconnect Specifications

Factory set actuation voltages:

| | 12 VDC | 24 VDC | 48 VDC |
|------------|--------|--------|--------|
| Connect | 12.4 | 24.8 | 50.0 |
| Disconnect | 10.4 | 20.0 | 40.0 |

- Min/Max Connect/Disconnect Voltages User adjustable $\pm 15\%$
- Max continuous current: 400 amps

Temperature Rating

-40° C to +60° C

Options

- Plug-in mid-trip circuit breakers with auxiliary contacts that activate "CHECK SYSTEM" indicator and summary alarm contacts. Available Amperages: 5, 10, 15, 20, 30, 40, 50, 75, 100 (specify model PBA-5, PBA-10, etc.)
- Quick connect DC wiring harness for use with Newmar 1 KW Power Modules; QCK-3, QCK-6 (page 14)
- Rear rack covers (page 14)
- Power Modules (opposite page)
- Additional Distribution: Model DST-10 (UL) or DST-20A(UL) (page 13)



NEWMAR

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Powering the Network

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