

Description

The Integrity-One™ Power System is the next generation solution for today's power system needs. Using a modular design, the system is easily upgradeable for future growth. With a capacity up to 1250 amps, the Integrity-One system is ideal for either central office or cell site applications. This system includes multiple options for user-friendly local and remote access.

Basic design concepts allow the user to develop system configurations that meet initial network capacity requirements with minimum installation costs while allowing future capacity expansion through module additions or multi-bay configurations. This is accomplished by a wide variety of hot swappable modules, rectifiers and distributions.

Standard features in each Integrity system include an advanced microprocessor controller (PCS). This controller offers an extensive list of monitoring and control features that can be accessed locally or remotely through the standard RS232 connection or through the optional Power-One Network Interface box, which allows communication through Ethernet and SNMP protocols. External reporting can also be accomplished by using on-board Form-C contacts.

In addition to the three systems listed here, other layouts and individual components are also available for integration into customer provided equipment racks, cabinets, outdoor enclosures, or other power requirements. Please contact Power-One for assistance with your unique requirements.



Features

- Modular systems from 50-1250A
- Up to 91% efficient
- Intelligent, programmable controller
- Front access distribution panels with optional load shedding
- Local and remote programming and monitoring
- Hot-swappable rectifiers
- User-selectable alarm parameters
- 208/240 VAC input
- Extensive battery testing and monitoring
- Programmable temperature compensation
- Compatible with PowCom™ PC-based software

The Integrity-One system is available in three different configurations allowing customers to choose the solution that is right for them. Each system uses the same basic components, including:

- System Interface Shelf
 - Alarm Output Connections
 - Network Interface (Optional)
 - Battery LVD (Optional)
- PCS Controller
- PMP25 Rectifier Modules
- SDS / PDS Distribution Shelves
- Single or Individual Rectifier AC Inputs

Full Rack System

The Integrity-One full rack system allows for up to 1250A at 48V in a single bay by using combinations of Secondary or Primary Distributions. Each rack is capable of holding up to five rectifier shelves for 48V applications providing 1250A or two rectifier shelves for 24V applications providing 1100A. Multiple racks may be paralleled to produce a maximum total system capability of 5000A using a single controller in the primary rack.

Half-Height Rack System

The Integrity-One Half-Height rack system is available at up to 1100A and can be installed above existing battery stands. The Half-Height system is ideal for systems requiring extended battery backup. Up to 44 load breakers can distribute up to 500A at -48V, or up to 1000A at +24V.

Integrity-One Rack with Battery Trays

The Integrity-One System with battery trays accommodates up to two rectifier shelves and up to three battery trays creating a complete power system in a single rack. Distribution can be achieved through up to 44 load breakers or fuses (up to 100A rating).



System Components

Distribution Panels

- Hot-swappable distribution shelves
- Front, middle and rear distribution positions (waterfall effect) allow for system cable management
- SDS: Secondary Distribution Shelf
 - Rated at 500A
 - Plug in CB's up to 100A rating
 - Plug in fuses up to 100A rating
 - Accommodates up to 22 circuit breakers or fuses
- PDS: Primary Distribution Shelf (rated at 1000A)
 - Up to qty 8 single pole fuses (100-600A)
 - Up to qty 8 single pole CB's (up to 250A rating)
 - Up to qty 3 double pole CB's (up to 400A rating)
 - Up to qty 2 triple pole CB's (up to 600A rating)

System Interface Shelf

- Easy connection of system alarm signals and wiring
- Optional battery symmetry and temperature probes
- Optional Power-One Network Interface box (featuring ethernet and SNMP protocol capability)
- Optional low voltage disconnect
- Battery shunt



Integrity Shown with Optional AC Distribution Box

PCS Controller

- RS485 digital signal data bus
- Fully programmable
- 6 programmable alarms (upgradeable to 24)
- Battery test: manual or automatic
- Alarm relay test
- Adjustable battery current
- Software controlled start-up after mains outage

Rectifier Shelves

- RS485 communication bus
- 23" shelf allows up to 5 rectifiers each
- Digital current sharing
- Individual rectifier or single shelf AC feed options

PMP25 Rectifier

- 5 rectifiers into each 4U 23" shelf
- Available in 24 or 48VDC
- Thermal protection
- Fan cooled modules with speed control and alarms
- Hot-swappable
- RS485 interface
- Low weight
- Up to 91% efficiency

Integrity-One™ Power System

Rack Systems

Input

Model	Integrity-One 48V	Integrity-One 24V
Input	Single or individual	Single or individual
Inputs	Single input for every 6 rectifier positions (4 inputs for 20 rectifier cabinets)	Single input
Current (at full load)	16A per rectifier (max.)	16A per rectifier (max.)
Fuse	25A per rectifier	25A per rectifier

Output

Rectifier Modules	50-1250A	110-1100A
Voltage	48V	24V
Efficiency	>91%	>89%

Components

Controller	PCS Controller	PCS Controller
Rectifier	PMP 25.48	PMP 25.24

Compliance

EMC	EN 55022 Class B, FCC Part 15 Class B
Safety	CSA C22-2 No. 950, UC1950 and IEC60950 / EN 60950

Mechanical

Dimensions (WxHxD)	23 x 84 x 23 in. (584 x 2133 x 584mm)	23 x 46 x 23 in. (584 x 1168 x 584mm)
Mounting (rack)	23"	23"
Mounting (base)	Mounting holes provided	Mounting holes provided
Audible Noise	<60dBA	<60dBA
Operating Temperature	-25 to +60°C	-40 to +65°C
Storage Temperature	-40 to +85°C	-40 to +85°C

Note: All specifications are subject to change without notification.