

# POWER-PLUS

## DC POWER SYSTEM



- Compact design and high power density
- High reliability
- High efficiency and high power factor
- Versatile and easy to install
- Low noise levels
- Maximum protection and safety
- Complete self-contained power system
- Application : PABX, Telecom Exchange, Microwave, Cellular Switching System, Industrial Process Control and Emergency Equipment etc.

### Power-Plus System

Power-Plus DC Power System is the latest innovative modular DC power product offered by Interlink power System Pte Ltd. Our switching mode rectifier power system is ideal for applications such as program control switching system, microwave digital system, mobile phone switching system, industrial process control and emergency equipment etc.

Our principal of design is to provide a range of equipment's in modular form which can be used as building blocks for a vast range of system solutions. Added to this is the best design capability utilizing the highly experienced resource from within our engineering and development design teams .

Supplying some of the world's major telecoms companies with a wide range of standard and custom designed products from its purpose built factory in Singapore, Power-Plus System are renowned for its high reliability, which is clearly of major importance in power supplies for telecoms systems.

Our products comfortably pass the most stringent design verification tests of manufacturers. Utilizing profession design facilities, we can offer rapid solutions to power system designs demanded by the world markets for cellular radio, cable TV, telecommunications and safety critical systems.

### High Quality Switchmode Rectifiers

Our major components are out switchmode power converts operating from single-phase mains ac power supply or generators. They provide either a nominal 12 volt, 24 volt or 48 volt output, depending on type, and are specifically designed for telecommunications loads and to maintain standby battery sets fully charged. They

are manufactured under ISO 9000 quality standard. Every stage in manufacture is subject to thorough inspection. Additionally, we have implemented an EMC strategy to ensure that our modules not only comply with current EMC standards, but in many cases far exceed the performance required. Precompliance testing is carried out using a combination of in-house test equipment and special test laboratory facilities.

### Self Contained System

Systems comprising switchmode rectifiers are completely self contained within a single enclosed cabinet or mounting shelf (depends on the size of the system), which contains rectifiers, alarm/ controls, and MCB/ interface.

### Technical Specification of Power-Plus

- Main Supply :** 220 V – 250 V Single-phase  
380 V – 415 V 3-phase, 50/60 Hz
- Paint Finish :** Light grey
- Cable Entry :** Top / Bottom subject to requirement
- Enclosures :** 19" rack type, IP20 degree of protection.  
22U to 42U high
- Low Voltage Disconnect :** Contactor provide to automatically disconnecting the battery from load at the end of discharge (optional).
- Protection :** Rectifier Input MCB's and Rectifier Output MCB's
- Terminals :** AC input, battery and load terminals.  
Earth link also included.
- Optional item :** Distribution MCB's with tripped alarm, battery MCB, Batteries etc.

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- 19" enclosed rack cabinet
- Metering : DC voltmeter and DC ammeter
- DC and AC distribution Panel
- Low voltage load disconnect
- Battery isolation switch
- Alarm dry contact
- Tripped Alarm (optional)

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### TECHNICAL SPECIFICATIONS OF SWITCHMODE DC POWER SYSTEMS

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**Input Voltage :** 176 – 264 Vac (Phase voltage), Single or Three Phase (complies to IEC 364)

**Input Frequency :** 45 – 66 Hz

**Harmonic Distortion :** 3%, complies to EN61000-3-2

**Input Power Factor :** Greater than 0.9, typically 0.98 corrected to EN61000-3-2 for output loads in excess of 50%

**Start up time :** 3 sec. From application of line input to output voltage achieving regulation

**Float Output :** -54.48 V DC

**Boost Output :** -57.6 V DC

**Reverse Quiescent Current :** 5 mA

**Recovery (within 500 mV) :** 2 msec

**Temperature coefficient :**  $\pm 0.015\%$  / °C over the operating temperature range

**Ripple and noise :** <50 mV rms, complies to ETS300386-2-3 and BTNR2511

**Efficiency :** >90%

Model	Number of Modules	Output voltage (V DC)	Output current (A DC)	Output Rating (W)
PP-48V-33A	1	- 48	33	1800
PP-48V-44A	1	- 48	44	2400
PP-48V-50A	1	- 48	50	2800
PP-48V-66A	2	- 48	66	3600
PP-48V-88A	2	- 48	88	4800
PP-48V-99A	3	- 48	99	5400
PP-48V-100A	2	- 48	100	5600
PP-48V-132A	3	- 48	132	7200
PP-48V-150A	3	- 48	150	8400
PP-48V-176A	4	- 48	176	9600
PP-48V-200A	4	- 48	200	11200
PP-48V-220A	5	- 48	220	12000
PP-48V-250A	5	- 48	250	14000
PP-48V-264A	6	- 48	264	14400
PP-48V-300A	6	- 48	300	16800

**Backup Time :** Depends on the customer's requirement

**Output Current Limit :** The system is designed to operate continuously in current limit. The current limit characteristic is constant down to 40 V DC below which the current folds back to the short circuit value.

**Output Over Voltage :** An output voltage in excess of the trip levels will cause the rectifier module to latch into a shutdown condition. The rectifier module can be reset by interrupting the mains input. The over-voltage trip is provided with discrimination so that on parallel connected rectifiers only the faulty rectifier will be shutdown.

**Thermal :** A thermal sensor monitors the internal temperature of the rectifier module, which under thermal overload conditions, will cause the unit to shutdown until the temperature has reduced to an acceptable level.

**Distribution Panel :** Input MCB and Output MCB, Battery Isolator

**Metering :** Analog DC Voltmeter and Analog DC Ammeter

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