600W, MODULAR POWER SUPPLY SYSTEM WITH PFC-INPUT FOR RAILWAY AND INDUSTRIAL APPLICATIONS
BR3U-3PFC280-24BD

- Universal AC input 90VAC-264VAC
- Delivers 200W per plug-in module with convection
- Distributed output; N+1 redundant
- Fully protected
- Made in North America

This shelf is a modular AC/DC power supply system with power factor corrected modules. The system is comprised of three, 200W PFC280 plug-in units, allowing for output power of up to 600W or 400W with N+1 redundancy. The standard plug-in modules are rated for 0°C to 50 °C for full specification with convection cooling and 0°C to 70°C with forced air cooling. The shelf has six distribution breakers on the front panel. Each breaker is equipped with an alarm contact which indicates tripping only. No alarm is generated if the breaker is turned-off manually. The breaker alarms are summarized into one Form C output, with a second Form C alarm output provided for the module alarms. Additional structural elements are added for increased ruggedness. Each plug-in module is supported by four guide rails. Suitable for a wide range of rugged applications, the BR3U-3PFC280-24BR features full electronic protection, high efficiency and low output noise.

SPECIFICATIONS

Input Voltage
Universal 90 … 264VAC
47 - 63Hz
Input current 8.1Arms max.

Input Protection
Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified voltage input minimum will not damage the unit

Power Factor
Provided by the plug-in modules
Min. 0.97 at full load for the entire input range. Meets EN61000-3-2

Isolation
2250VDC input to chassis
4300VDC input to output
8mm spacing
500VDC output to chassis

Standards
Designed to meet EN 60950
and EN 50155 trackside application.
Ground leakage current
exceeds 3.5mA with 3 modules installed.

Immunity
Meets criteria of EN50155 and EN50121-3-2 according to the following standards:
EN 61000-4-2 (ESD)
EN 61000-4-3 (RF Immunity)
EN 61000-4-4 (Fast Transients)
EN 50155 (Surge)
EN 61000-4-6 (Conducted Immunity)
EN 50155 (Voltage Variations)

EMI
EN55022 Class B

Output Voltage/Current
24V +/- 0.2V / 8.3A per plug-in module. Total 25A with 3 modules or 17A with (n+1) redundancy.

Line/Load Regulation
+/- 2% combined from 10% load to full load including breakers & internal wiring

Output Distribution
6 circuits with 10A breakers

Output Ripple / Noise
Better than 30mVrms or 200mVpp (20MHz BW)

Output Overload Protection
10A circuit breakers installed on each output
The plug-in modules have rectangular current limiting with short-circuit protection (no hiccup)
Current limit typically set for 12A ±1A on each module

Output Overvoltage Protection
Installed on each plug-in module
Second regulator loop.
Typically set at 30V ±2V on each module

Efficiency
Min. 80% at full load with PFC280 modules

Operating Temp. Range
0°C to 50 °C for full specification with convection cooling and 0°C to 70°C with forced air cooling.

Temperature Drift
0.03% per °C over operating temp. range

Cooling
Convection cooling.
Additional system air flow is required for operation at elevated temperatures

Environmental Protection
Basic ruggedizing
Conformal coating of sensitive areas to withstand high humidity

Humidity
95% non-condensing

MTBF
Min. 150,000 hours at 45°C for each plug-in module

Indicators
Power ON LED installed on each module

Control Input
None

Alarm Output
Two Form C contacts
- Module Fail Alarm
- Breaker Trip Alarm

Package / Dimensions
Eurocard Shelf
3U x 19" x 340mm including connectors and handles
Plug-in module size: 3Ux12HPx280mm

Weight
7.94 kg (17.5 lbs.) with 3 modules

Connections
Input: Phoenix PCV 4/3.G-7,62
Mating PC4/3-STF-7,62
Outputs: Phoenix PCV4/4.G-7,62
Mating PC4/4-STF-7,62
Alarms: Phoenix MSTBV2.5/3-GF-5.08
Mating MSTB2.5/3-STF-5.08

RoHS Compliance
(Directive 2002/95/EC)
According to requirements

Warranty
Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications subject to change.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility.

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