

Powerpack 480

48 VDC, 200A Rectifier Module



480 VAC, 3-phase AC-DC rectifier module

The Powerpack rectifier is optimized for medium and large system applications. Power bays that utilize the Powerpack rectifier are available in DC output capacities up to 3000 amps.

Applications

Wireless, fiber and fixed line communication

Today's communications demand state of the art, cost efficient and compact DC power systems. Powerpack offers a high power density in a compact form factor.

Broadband and network access

Increasing network speed demands flexible and expandable DC power solutions. Powerpack is your key building block for future needs.

Product Description

The Powerpack is a battery charger and rectifier for working in parallel as part of a DC power system controlled and monitored by the Smartpack. Digital communication over CAN bus with Smartpack simplifies system design and improves flexibility.

Key Features

High efficiency

Rectifier technology utilizes soft switching and three-level boost converter that make the module efficiency industry leading and compact size.

Local module monitoring

Display and push buttons gives easy local monitoring of individual rectifier as an addition to the Smartpack monitoring.

Heat management

Front-to-back air flow with chassis integrated heat-sinks and chimney gives the module the best reliable working environment.

Unique connection

It is a real plug-and-play connection system that shortens installation time and reduces total cost. User friendly handles lock the module to the shelf.

Global approvals

Powerpack is CE marked, UL recognized and NEBS certified for worldwide installation.

Powerpack 480 Rectifier – 48 VDC, 200A

Technical Specifications

AC Input	
Voltage	Nominal: 430 – 530 VAC 3ph (Y) Tolerances: 260-550 VAC 3ph (Y)
Frequency	45 to 66Hz
Maximum Current	16.5 A _{RMS} maximum at nominal input and full load
Power Factor	> 0.99 at 50% load or more @480 VAC
Total Harmonic distortion (THD)	< 5% at 50% load or more @480 VAC
Input Protection	<ul style="list-style-type: none"> ○ Varistors for transient protection ○ Mains fuse in all lines

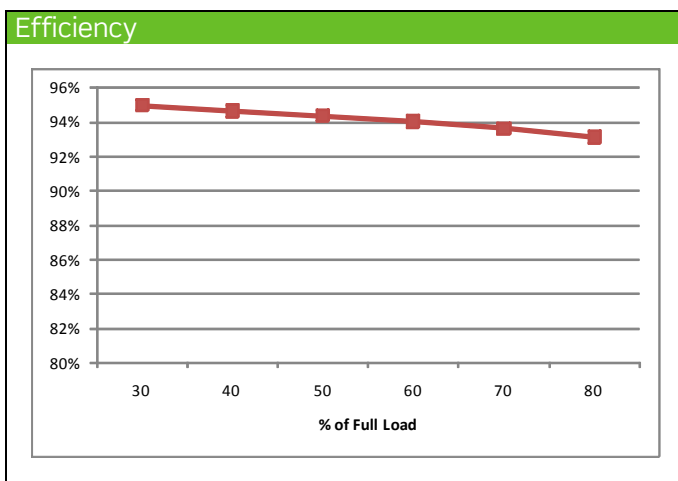
DC Output	
Voltage	53.5 VDC (adj. range: 43-58.5 VDC)
Output Power	11 kW at nominal input, 10kW at 400 VAC. Derating below 430 VAC
Maximum Current	230 Amps at 48 VDC and nominal input
Current Sharing	±3% of maximum current from 10 to 100% load
Static voltage regulation	±0.5% at 0-100% load
Dynamic voltage regulation	±3.5% for 10-90% or 90-10% load variation, regulation time < 10ms
Hold up time	> 20ms; output voltage > 44 VDC at full load
Ripple and Noise	<ul style="list-style-type: none"> ○ < 100 mV peak to peak, 30 MHz bandwidth ○ < 2.0 mV RMS psophometric
Output Protection	<ul style="list-style-type: none"> ○ Overvoltage shutdown (level adjustable) ○ Overload and Short circuit proof ○ High temperature protection

Applicable Standards	
Electrical safety	<ul style="list-style-type: none"> ○ IEC 60950-1 ○ UL 60950-1
EMC	<ul style="list-style-type: none"> ○ ETSI EN 300 386 V.1.3.1 (telecommunication network) ○ EN 61000-6-3 (emission, light industry) ○ EN 61000-6-2 (immunity, industry) ○ NEBS Telcordia GR-1089 CORE
Harmonics	EN 61000-3-2
Environment	<ul style="list-style-type: none"> ○ ETSI EN 300 019-2 (-1, -2, -3) ○ ETSI EN 300 132-2 ○ NEBS Telcordia GR-63 CORE Zone 4

Specifications are subject to change without notice

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Other Specifications	
Efficiency	Efficiencies exceeding 94%
Isolation	<ul style="list-style-type: none"> ○ 3.0 kVAC – input / output ○ 1.5 kVAC – input / earth ○ 1.0 kVDC – output / earth
Rectifier Alarms	<ul style="list-style-type: none"> ○ Low mains alarm ○ High mains alarm ○ Low output voltage alarm ○ Over voltage shutdown alarm ○ Current limit alarm ○ Current sharing alarm ○ Fan Alarm ○ Temperature alarm ○ Rectifier failure alarm
Visual indications	<ul style="list-style-type: none"> ○ Green LED: ON, no faults ○ Red LED: rectifier failure ○ Yellow LED blinking: no communication ○ Yellow LED solid: derating power
User interface	<ul style="list-style-type: none"> ○ LCD and 3 push buttons ○ ON/OFF switch
Operating temp	-10 to +70°C (-40 to +158°F) Derating above +55°C (+131°F)
Storage temp	-25 to +85°C (-13 to +185°F)
Cooling	Fans (front to back airflow) ball bearing
Fan Speed	Temperature regulated
MTBF	> 200,000 hours Telcordia Issue I, method III (a) at 20°C ambient
Acoustic Noise	< 72dBA, compliant to ETS 300 753
Humidity	<ul style="list-style-type: none"> ○ Operating: 5% to 95% RH non-condensing ○ Storage: 0% to 99% RH non-condensing
Dimensions	23" x 2U x 19.69" (W x H x D)
Weight	40.8 lbs. (18.5 kg)



Ordering Information

Part no.	Description
241246.000	Powerpack 48/11kW 3ph 480/400VAC