Minipack

Rectifier Module 48V, 800W WIR

Compact and cost effective rectifier module

The fan cooled Minipack rectifier module has been specifically optimized for a wide range of system sizes. Realization of Minipack systems is possible by fitting up to 4 or 6 rectifiers across 2U 19" shelf including controller and distribution or 2 rectifiers in a compact 1U system.

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APPLICATIONS

Wireless, fiber and fixed line communication

Today's communications demand state of the art, cost efficient and compact DC power systems. Minipack delivers power density of 14W/in3 and superb reliability at lowest lifetime cost.

Broadband and network access

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

PRODUCT DESCRIPTION

The Minipack is a battery charger and rectifier for stand-alone use or 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 enhances flexibility.

KEY FEATURES

- HIGHEST EFFICIENCY IN MINIMUM SPACE
  Resonant topology makes the module efficiency industry leading and contributes to the rectifier's ultra-compact dimensions.
- DIGITAL CONTROLLERS
  Controller is digitalized, enabling excellent monitoring and regulation characteristics. Thus, the number of component has been reduced by 40% - for highly reliable, long life, trouble free DC power systems.
- HEAT MANAGEMENT
  Front-to-back air flow with optimal thermal design gives the module the most suitable working environment and no limitations in the scalability of the desired system solution.
- UNIQUE CONNECTION
  A true plug-and-play connection system: time-to-install and cost-reducing solution.
- GLOBAL APPROVALS
  Minipack is CE marked, UL recognized for worldwide installation.

MINIPACK RECTIFIER MODULE

(RECTIFIER MODULE)

AC INPUT

Voltage	85-300 VAC (Nominal 150 – 276 VAC) Linear derating below 150VAC
Frequency	44 to 66Hz
Maximum Current	Input: 7.5 A_{rms} maximum at 100VAC input and 640W load Earth leakage: 1.7mA at 250Vac/50Hz
Power Factor	0.98 at 30% load or more
THD	< 2.5% at nominal input and full load
Input Protection	Transient protection Mains fuse in both lines

DC OUTPUT

Voltage	o Nominal output: 53.5 VDC o Float/Boost range: 48 – 57.6Vdc o Standby test range: 43.5 – 48Vdc
Ouput Power	800W at nominal input / 640W at 100VAC
Maximum Current	16.7 Amps at 48 VDC and nominal input
Current Sharing	±5% of maximum current from 10% to 100% load
Static voltage regulation	±1.0% from 5% to 100% load
Dynamic voltage regulation	±5.0% for 25-100% or 100-25% load variation, regulation time < 10ms
Hold up time	> 20ms; output voltage > 43.5 VDC at 80% load
Ripple and Noise	< 100 mV peak to peak, 20 MHz bandwidth < 2 mV_{rms} psophometric
Output Protection	o Overvoltage shutdown o Short circuit proof o Blocking diode o High temperature protection

OTHER SPECIFICATIONS

Efficiency	Typ. 91% at 60-100% load
Isolation	o 3.0 KVAC – input and output o 0.5 KVDC – output earth o 1.5 KVAC – input earth
Alarms	o Low mains shutdown (<85VAC) o Overvoltage shutdown on output o High temperature shutdown o Rectifier Failure o Low voltage alarm at 43.0V o CAN bus failure
Warnings	o Rectifier in power derate mode o Remote battery current limit activated o Input voltage out of range, flashing at overvoltage o Loss of CAN communication with control unit, stand-alone mode
Visual indication	o Green LED: ON, no faults o Yellow LED : rectifier warning o Red LED: rectifier failure
Operating temp.	-40 to +75°C (-40 to +167°F) Derating above +55°C linear to 280W/200W at +75°C with 230/100VAC input
Storage temp.	-40 to +80°C (-40 to +176°F)
Cooling	1 fan (front to back airflow)
Fan Speed	Temperature and current regulated
MTBF	> 400, 000 hours Telcordia SR-332 Issue I, method III (a) (Tambient : 25°C)
Acoustic Noise	< 50dBA at nominal input and full load, $T_{ambient}$ < 30°C
Humidity	o Operating: 5% to 95% RH noncondensing o Storage: 0% to 99% RH non-condensing
Dimensions	42.5 x 88.9 x 250mm (1.67 x 3.5 x 9.84") (wxhxd)
Weight	1.08 kg (2.38lbs)

APPLICABLE STANDARDS

Electrical safety	o IEC 60950-1 o CSA 22.2 o UL 60950-1
EMC	ETSI EN 300 386 V.1.3.2 (telecommunication network) EN 61000-6-1 (immunity, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-3 (emission, light industry) EN 61000-6-4 (emission, industry)
Harmonics	EN 61000-3-2
Environment	o ETSI EN 300 019-2 (-1, -2, -3) o RoHS compliant o ETSI EN 300 132-2

ORDERING INFORMATION

Part No.	Description
241117.130	Minipack 48/800WIR

Advice Electronics Ltd

Advice Building,16 Atir Yeda St., Kfar Saba, 4464321, Israel • Tel:+972-3-9000910 • sales@advice.co.il • www.advice.co.il