

Redundant AC/DC Converter System with 200W Plug-in Modules EOL 53 Series



- Rugged industrial quality
- 3U x 19" x 14" shelf
- 200W per module or 1200W per 19" shelf
- Front panel adjustment & LED status
- Hot insertable
- N+1 redundancy
- Fully electronic protection
- Field-proven design in wide range of applications

This system is comprised of up to six rugged, industrial quality AC/DC plug in power supply modules. Each module has a built-in redundancy diode, which allows for parallel connection or N+1 redundant operation, including hot-insertion. The built-in redundancy also allows battery connection to the output for back-up purposes. Modules with different outputs can be combined in one shelf to create a multi-output system. The plug-in modules are cooled by natural air convection. Heat generating components are installed on an aluminum heatsink block, which is connected to the large heatsink on the side of each module. Modules have input and output filtering in compliance with EN 55022 EMI standards. Full electronic protection eliminates failure due to abnormal operational conditions, including application errors. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. This is a mature design with a track record in numerous applications. The system is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

115/230Vac +/- 15%
47 - 63Hz, jumper selectable
on each plug-in module
Please consult factory for other
voltages and ranges

Input Protection

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

Input Isolation

2250VDC input to chassis
4300VDC input to output,
8mm spacing
500VDC output to chassis
Isolation voltages correspond
to input/output combination

Standards

EN 60950 and corresponding UL
and CSA standards

EMI

EN 55022 Class A as minimum

Switching Frequency

55KHz +/- 3KHz

Hold Up Time

Min. 10ms at any input for 5%
drop of the output voltage

Output Voltage/Current (per module)

5V/25A, 12V/16A, 24VDC/8A,
48VDC/4A or 125VDC/1.6A
with convection cooling.
Consult factory for other voltages

Redundancy Diode

Installed on each plug-in module

Line/Load Regulation

Typically ±1% combined from no
load to full load, including
redundancy diode
(depending on output voltage)

Dynamic Response

Max 5% voltage deviation for 10%
to 50% load step, with better than
1msec recovery time

Output Ripple/Noise

Better than 1% of output voltage
peak to peak or 0.2% RMS of the
output voltage (20Hz BW)

Output Overload Protection

Rectangular current limiting with
short circuit protection (no hiccup)
Thermal shutdown with automatic
recovery in case of reduced airflow

Output Overvoltage Protection

Second regulator loop completely
stable and independent of main
regulator loop

Efficiency

85% typical depending on the
input/output configuration

Operating Temperature

0 to +50°C without derating on
standard model with convection
cooling
Extended temperature range
available

Temperature Drift

0.03% per °C over operating
temperature range

Cooling

Natural air convection

Environmental Protection

Basic ruggedizing.
Full ruggedizing and conformal
coating as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

160,000 hours at 45°C per
plug-in module.
Demonstrated MTBF is
significantly higher

Indicators

Green "OUTPUT ON" LED on
front-panel of each module
Test Points on front-panel as option

Controls

Adjustment potentiometer on
front-panel as option

Alarm Output

Form C module fail alarm on the
shelf.
Module fail alarm via optocoupler,
C-E.

Mechanical

3U x 14HP x 220mm (module)
3U x 19" or 23" x 14" (shelf)
including connections
Other front-panel widths
available.

Weight

Plug-in module: 1.2 kg (2.7 lb)

Connections:

H15 DIN connector on modules.
Terminal block for shelf
Different terminations available

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
within good engineering practice

Enhancements to these general specifications can be accommodated upon request. Specifications are 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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