RDS240 ULTRA SLIM 240 WATT DIN RAIL SWITCHING POWER SUPPLIES UP TO 92 % EFFCIENCY

UNIVERSAL INPUT

FEATURES

- 150% of rated power for up to 4 sec. ensures reliable startup of heavy loads.
- Wide Range Input 90 – 264 VAC. No manual switching.
- Input Filtering. Power Factor meets EN61000-3-2
- Ultra Slim compact size
- Output voltage adjustable
- Overload and Short Circuit Protections
- "DC OK" visual indicator LED and Output Monitor signal
- Industrial design and construction quality
- Low EMI meets EN55022, FCC-15B, EN55024 standards
- Certified to UL508, TUV and CE safety standards
- Certified to UL1604 Hazardous Locations standard

DESCRIPTION

A system power solution. "Series 3" DIN Rail power supplies offer high quality performance and value. They are "parallel capable" to permit load sharing and increased reliability for industrial and critical system applications.

State of the art technology. "Series 3" Ultra Slim models offer up to a 50% reduction in width and provide superior performance. Switching technology and small compact high-frequency transformers achieve high DC regulation and stability in small lightweight packages.

Easy installation, safety and reliability. These supplies incorporate a rugged metal case and a secure metal DIN Rail mounting clip. DIN screw terminals are easily accessible and ensure a safe and reliable installation. (2)

INPUT SPECIFICATIONS

Input Voltage	90 to 264 VAC (auto select).
Input Frequency	47 to 63 Hz
Input Current (1)	3.0A @ 110 VAC 1.0A @ 220 VAC
Inrush Current (1)	< 30 A
Power Factor	Conforms to EN61000-3-2 (harmonics)
Internal Fuse Protection	Included

GENERAL SPECIFICATIONS

Construction	Industrial, rugged metal case.
Connectors / Terminals	Screw terminals
DIN Rail Mounting Bracket	Metal, Secure snap-on spring-loaded clip
Adjustable Settings	Output voltage adjustable
Efficiency (1)	88 to 92% depending on model
Parallel Operation	Use with external diode
Indicators	”DC-OK” LED, and monitor signal

OUTPUT SPECIFICATIONS

Total Output Power	Refer to Rating Chart for each model
Output Voltage / Current	Refer to Rating Chart for each model
Output Adjustability	Refer to Rating Chart for each model
Output Peak Power	150% of rated rower for up to 4 sec max. (varies depending upon model)
Minimum Load	No minimum load required
Hold Up Time	≥ 20 mSec
Line Regulation	< ± 0.5%
Load Regulation, Drift	< ± 1%
Over / Undershoot	< 500mV for 50%-100% load change, @ 0.2A / µSec
Ripple and Noise	< 100 mV pk-pk (50mV for 12V model)
Damage Protections:	Continuous Protection & auto recovery.
Short Circuit:	Auto recovery
Overvoltage:	Above 110% to 130% of max rating
Overcurrent:	Above 110% to 130% of max rating
Reverse Voltage Protection	<16 V, <35 V, < 63 V respectively for 12 V, 24 V, 48 V models (1)

ENVIRONMENTAL

Operating Temperature	–20 °C to +60 °C. From 50ºC to 60ºC, de-rate linearly from 100% to 90% load.
Storage Temperature	–40 °C to +85 °C
Operating Humidity	5% to 90% RH, non-condensing
Vibration & Shock	IEC68-2-6 and IEC68-2-27

EMC and SAFETY (2)

EMI Standards	EN55022, FCC-15B, EN55024
Safety Standards	UL508, EN60950-1 (TUV), CE
Hazardous Location Standard	UL1604 Class 1, Div 2, A,B,C,D
Harmonic Distortion	Meets EN61000-3-2

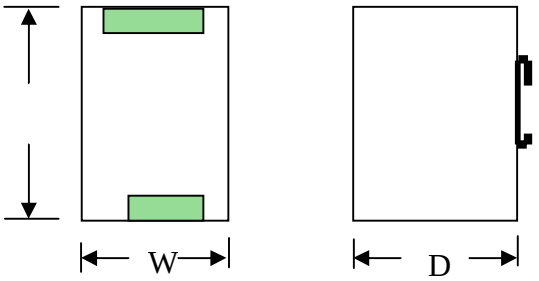
NOTES

1. Depends upon specific model selection, output voltage, and/or upon 120 or 240 VAC operation.
2. Products are rated for industrial environments and are not to be used nor are warranted in aerospace, medical or lifesafety applications.

OUTPUT VOLTAGE / CURRENT RATINGS

MODEL	OUTPUT VOLTAGE	ADJUST RANGE	*CURRENT*	MAX OUTPUT POWER
RDS240-12-1PH	12 V nominal	12 – 15 V	15 – 12 A	180 W max
RDS240-24-1PH	24 V nominal	24 – 28 V	10 – 8.8 A	240 W max
RDS240-48-1PH	48 V nominal	48 – 56 V	5.0 – 4.3 A	240 W max

MECHANICAL SPECIFICATIONS



RDS240 Series-3

WIDTH	HEIGHT	DEPTH

NOTES

DEPTH excludes the 0.3125” (9mm) DIN Rail mounting bracket.
WEIGHT is ‘net’, excluding packaging/shipping.
Recommended clearances at higher ambient operating temperatures for proper airflow and heat dissipation: 25mm sides, 70mm top/bottom

PIN ASSIGNMENTS

CONNECTOR	TERMINAL	TYPE	RECOMMENDED WIRE SIZE
AC Input (3)	N, L, ⏚	Screw Terminals	22 – 10 AWG (0.3 – 5.2 mm^2 solid wire)
Output DC (4)	+, +, –, –	Screw Terminals	22 – 10 AWG (0.3 – 5.2 mm^2 solid wire)
DC-OK (2)	(relay contacts)	Screw Terminal	22 – 10 AWG (0.3 – 5.2 mm^2 solid wire)

NOTES

1. TERMINALS - Two positive "+" and two negative "–" DC output terminals on the unit, are respectively connected in parallel inside the unit. They actually belong to the same output pole. It is recommended that both "+" and both "–" output terminals be connected to the load.
2. PARALLEL OPERATION TO INCREASE OUTPUT POWER. The same models must be used and the output voltages of all units must be set to the same value. The load connection wires are recommended to be of the same gauge and length. Add an isolating diode or DC fuse at the positive outputs of each of the units. Check all earth leakage currents.
3. PARALLEL OPERATION FOR REDUNDANCY APPLICATION. To increase reliability of system, two units of the same model may be used for redundancy operation. In normal operation, each unit supplies 50% of load current. When a failure occurs on unit 1, then unit 2 immediately and automatically overrides unit 1 to continue the operation and supply 100% of the load current. All load connection wires should the same gauge and length and unit output voltages must be set as close as possible to the same value. Add a fuse or decoupling diode at the positive outputs of the two units. Check all earth leakage currents.
4. "DC OK" LED INDICATOR. The indicator lights up indicating the unit operate is operating normally. The indicator flashes indicating the output voltage is over normal value or a load shortcircuit, overload or overheat condition exists. The indicator turns off indicating a power failure or there is no AC input.
5. ACTIVE "DC OK" OUTPUT SIGNAL TERMINAL. This is similar to the "DC OK" LED that indicates the operating status of the unit. Users may connect an external indicator or the equivalent (40mA) between the terminals for remote monitor.