

VRp

Fail-safe

PWM automatic voltage regulator

with precision

VRp model

3500-0233

3500 VA
3500 watts
input:
208/220/
230/240 vac
output:
230 vac +/-3%
single phase

*Power with a
precision attitude™*

Precision PWM automatic voltage regulator for applications such as MacDermid Colorspan® inkjet printers

Precision fast-PWM ac mains voltage correction

TSi Power's VRp automatic precision regulator line conditioner provides output voltage within plus/minus 3% of nominal, for input voltage that varies plus/minus 20%.

There is no switching of taps or otherwise a break in the power path thanks to continuous PWM switching of a buck-boost transformer.

Typical applications

Designed for applications that require absolutely stable, high-reliability power, without switching components in the power path.

Applications include, but are not limited to: MacDermid Colorspan® high-performance color wide format digital Inkjet printers, and copiers, analytical equipment, radio/TV broadcast equipment, and mobile broadcast vans, and other 230 vac loads that are 3500VA or under.

Key VRp-3500-0233 benefits

The light-weight, high efficiency VRp-3500-0233 is easy to install in any environment. The automatic bypass assures that connected equipment will not shut down, even if VRp fails. VRp is compatible with all loads as it does not switch any components in the power path. VRp's ultra-low impedance assures stability even with the most demanding loads.

How the VRp Series works

The high frequency IGBT driven converter takes the incoming ac power, measures against the nominal voltage and adds or subtracts voltage, 20,000 times per second, to achieve the nominal output voltage +/-3%.

The Automatic Bypass will be activated when there is a fault condition. Green LED indicates Normal (regulating mode operation), and the Red LED indicates a Fault condition.



Key features of the VRp Series

- Outstanding voltage regulation: under normal input range of nominal 172–276 vac, output regulation will be 230 vac +/-3%
- Fail-safe: no switching of the power path
- Fast regulation
- Automatic bypass
- Low-impedance
- Low weight
- Quiet operation
- Two year limited depot warranty, parts and labor



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VRp



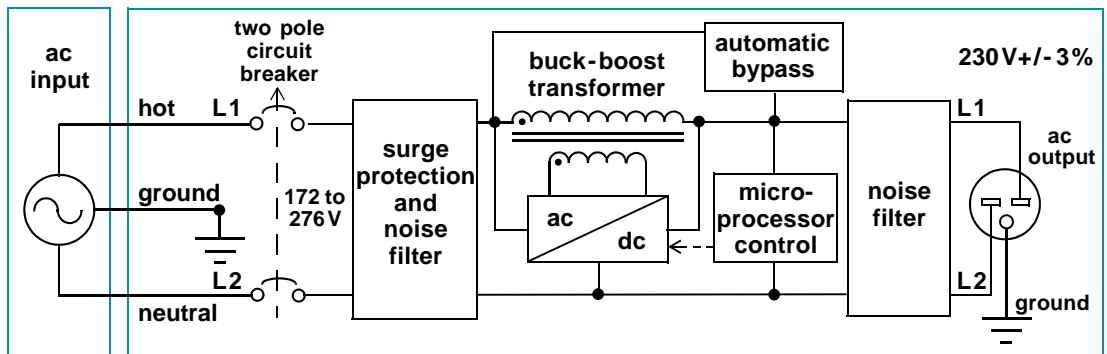
Precision automatic voltage regulator

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Specification	VRp-3500-0233
Electrical	
Capacity in VA (watts)	3.5 kVA (3500W) maximum
Regulator engine	High frequency 20 kHz IGBT driven voltage regulation converter
Input	
Nominal voltage	230 volts ac, single phase
Operating voltage	172–276 volts ac
Nominal frequency	47–63Hz
Over-current protection	magnetic circuit breaker
Circuit breaker rating	2 x 20 amperes
Inlet line, cord-plug	Detachable cord: IEC60320 C-20 inlet-connector & NEMA L6-20P plug.
Output	
Nominal voltage	230 vac
Current and efficiency	16 amperes (maximum) ~ 96% efficiency (typical)
Voltage regulation	Combined 3% maximum under to 100% load and input of 172 to 276V
Automatic bypass	Automatic bypass will be activated when there is a fault condition.
Status indicators	System status LED's provided as follows: Green LED indicates Normal (regulating mode operation); Red LED indicates Fault.
Surge test conditions	Per ANSI/IEEE C62.41-1991 6kV normal-mode injection
Surge let-through voltages	Category A3, ring wave, 200A: L-N: 30V Category B3, combination wave, 3000A: L-N: 200V Note: unit should be installed as close as possible (within 30') of the neutral-to-ground bond at the service entrance, in order to minimize potential difference between neutral and ground. A separate isolation transformer is recommended for installations where distance exceeds above, or for grounding systems without a neutral-to-ground bond.
Ac output connection	One NEMA L6-20R receptacle.
Physical/environmental	
Dimensions	282mm (11.125") wide x 162mm (6.375") high x 377 mm (14.875") deep
Weight	21.8 kg (48 lbs)
Wall/floor mounting kit	MK-5019C (optional)
Ambient temperature	0° to +25°C (32° to +77°F). 10 to 90% RH non-condensing.
Safety	
ETL Intertek mark	ETL Intertek listed (UL 60950-1, 1st Edition).
RoHS compliance	RoHS compliant per Directive 2002/95/EC. Unit does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

VRp system architecture



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