

VRP

Fail-safe

PWM automatic voltage regulator

With precision

VRP Model

VRP-2000-0268

2000 W
230 V \pm 3%
9 A
Single phase

VRP-3000-0268

3000 W
230 V \pm 3%
13 A
Single phase

VRP-5000-0268

5000 W
230 V \pm 3%
22 A
Single phase

Precision PWM voltage regulator with automatic bypass

Precision fast - PWM AC mains voltage correction

The single-phase VRP is an automatic precision AC voltage regulator which allows trouble free operation of electronic equipment over a very wide mains AC voltage range of 184 - 276 V.

Typical applications

Typical equipment applications include, but are not limited to: CNC equipment, medical imaging, analytical / laboratory instruments, telecommunications, wireless sites, broadcast transmitters, semiconductor production, industrial automation and digital printing / graphics.

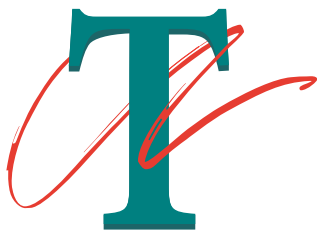
How the VRP Series works

The high frequency insulated gate bipolar transistor (IGBT) driven converter takes the incoming AC power, measures it against the nominal voltage and adds or subtracts voltage, 20,000 times per second, to achieve the nominal output voltage \pm 3%.

The automatic bypass will be activated when there is a fault condition. Green LED ON indicates normal operation; yellow LED ON indicates start-up or bypass; red LED ON indicates a fault condition.



Rear ISO view with cover removed.



TSi POWER

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Features and Benefits

- VRP's low weight makes installation easy.
- Connected equipment will not shut down even if the VRP fails due to the automatic bypass feature.
- Since the VRP does not switch any components in the power path, it is compatible with all loads.
- The ultra-low impedance of the VRP assures stability even with the most demanding loads.
- The quiet operation of the VRP makes the installation as unobtrusive as possible.
- Outstanding voltage regulation makes the VRP the choice for critical equipment.
- Input and output by means of either hardwire or NEMA receptacles provides flexible choices.
- Two-year limited warranty on parts and labor.

SPECIFICATION	VRP-2000-0268	VRP-3000-0268	VRP-5000-0268
ELECTRICAL			
Capacity in VA (watts)	2 kVA (2000 W)	3 kVA (3000 W)	5 kVA (5000 W)
INPUT			
Voltage range	184 - 276 V		
Frequency	47 - 63 Hz		
Current	12 A	17 A	28 A
Overcurrent protection	Circuit breaker		
Circuit breaker rating	15 A	20 A	30 A
AC input connection	Hardwire input terminals		
OUTPUT			
Voltage range	230 V \pm 3 %		
Current	9 A	13 A	22 A
AC output connections	Hardwire output terminals		
LED indicators: Green/Yellow/Red	Regulation / Bypass / Fault		
Power efficiency @ 230 V	98 %		
Power efficiency in max. Boost	96 %		
Surge voltage let-through	<300 V [Line-Neutral (or dual phase)] @ 1.2 x 50 μ s		
MECHANICAL			
Dimensions: mm (in)	156.2 mm (6.149") H x 278.5 mm (10.965") W x 378.4 mm (14.899") D		
Weights: kg (lbs)	13.6 kg (30 lbs)	16.78 kg (37 lbs)	20.41 kg (45 lbs)
Wall / Floor mounting kit	MK-5000C (optional)		
ENVIRONMENTAL			
Ambient temperature	0° to +40° C (32° to +104° F), Humidity: 0 - 95 % Non-condensing		
Cooling method	Forced air		
SAFETY			
Safety	Conforms to EN 60950-1, EN 61000-6-2 and EN 61000-6-4 RoHS compliant, per EU Directive 2002/95/EC, Restrictions of Hazardous Substances		
WARRANTY			
Warranty	Two-year limited warranty covers parts and labor.		

TSi Power's ongoing product improvement process makes specifications subject to change. Other companies product names herein are for identification purposes only and may be trademarks of their respective companies.



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VRP system architecture

