PRODUCT SPECSHEET

PRODUCT: **TSi HPS VRP**
CATEGORY: **STATIC VOLTAGE STABILIZER**
MODEL: **THREE PHASE 5KVA TO 50KVA, ±20%**

TSi Power Pvt Ltd, 154-55, Siddhi Industrial Infra Park, Waghodia,
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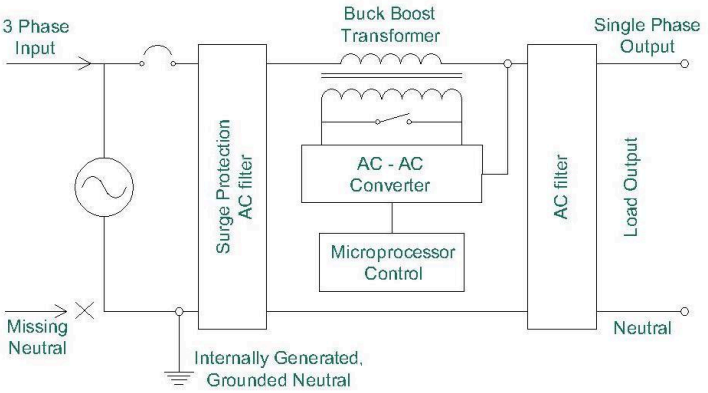
The **TSi HPS VRP series** is a cost-effective three phase precision AC voltage regulator with inbuilt Healthy Phase Selection (HPS) system which selects the best incoming voltage phases, ignores incoming neutral and provides a stabilized single-phase output with a fresh grounded neutral. This ensures maintenance-free operation of electronic equipment over a wide range of input voltage range even in situations of phase loss and broken input neutral.

TSi HPS VRP series is designed to provide precision power with a typical response cum correction time of 20 milliseconds to comply with the requirements of the ITIC curve for power supply to electronics. This has revolutionised the industry, as the existing technologies become either obsolete or extremely expensive. Hence, we don't call them our competitors. They are simply 'wrong solutions' for the existing power problems.

How does the TSi HPS VRP work?

The high frequency Insulated Gate Bipolar Transistor (IGBT) driven converter takes the incoming AC power, measures it against the nominal voltage reference and adds or subtracts voltage to achieve a precisely regulated 230V output. The automatic bypass will be activated when there is a fault condition. Green LEDs are used to indicate Normal (regulating mode) operation.



In events of an unhealthy/missing incoming phase, HAPS VRP automatically shifts to the next available healthy phase and continues to provide uninterrupted useful output power.

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Features & Benefits -

- ➔ HPS VRP can work without incoming neutral. It creates its own perfectly grounded neutral.
- ➔ Ability to provide healthy single-phase output even in case of absence of one of the three input phases. Thus, it can work and provide uninterrupted pure power with any of the two incoming phases.
- ➔ Provides optimum voltage compensation, sag control, swell control, spike & noise control.
- ➔ Provides output voltage to within +/- 1% for superior regulation.
- ➔ No change in wiring is required. Input will be three phase 4 wire and output will be single phase 3 wire.
- ➔ No distribution of load is required.
- ➔ Static technology results in quiet operation, high product up-time & low maintenance.
- ➔ Internal surge voltage protection assures trouble-free operation.
- ➔ AC input circuit breakers and load over current protection prevents costly equipment damage.
- ➔ Tight control over electronic card failures, data corruption and machine breakdowns result in higher productivity, lower operating costs, and greater consumer comfort.
- ➔ Lightweight and compact size makes for ease of installation.

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The TSi Philosophy - Powering Happiness

TSi Power is a renowned and a trusted name in the power conditioning industry. Since 2011, we have built a workplace that *nurtures* happy employees to *create* great products, in turn, making *happy customers*. Our founders strongly believe and have cultivated this within the company. There's a reason why we have become one of the *world's most trusted* power conditioners.

Powering Happiness is both our business goal and our work culture.

Our Facility in Vadodara, India

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TECHNICAL SPECIFICATIONS - HPS-5000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	5
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	16
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	22
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x720
Unpacked Weight (approx.)	90 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-7500-9319-200M

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ELECTRICAL	
Capacity (in KVA)	7.5
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	23
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	33
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x720
Unpacked Weight (approx.)	130 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-10000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	10
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	31
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	44
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x720
Unpacked Weight (approx.)	140 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-15000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	15
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	47
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	65
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x720
Unpacked Weight (approx.)	145 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-18000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	18
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	56
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	78
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x775
Unpacked Weight (approx.)	170 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-25000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	25
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	78
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	109
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 660x660x775
Unpacked Weight (approx.)	180 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-30000-9319-200M

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ELECTRICAL	
Capacity (in KVA)	30
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	94
AC Input Connector	L1, L2, L3, Neutral & Ground input wires. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	130
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output wires. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	4 High Quality Castor wheels | 2 with brakes
Overall Dimension (approx.)	As per Dimension Diagram of Cubical Type 888x888x838
Unpacked Weight (approx.)	200 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-40000-9319-200MP

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ELECTRICAL	
Capacity (in KVA)	40
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	125
AC Input Connector	L1, L2, L3, Neutral & Ground input BUSBAR. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	174
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output BUSBAR. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	Pad mounted
Overall Dimension (approx.)	As per Dimension Diagram of Panel Type 888x888x838
Unpacked Weight (approx.)	250 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-45000-9319-200MP

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ELECTRICAL	
Capacity (in KVA)	45
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	141
AC Input Connector	L1, L2, L3, Neutral & Ground input BUSBAR. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	196
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output BUSBAR. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	Pad mounted
Overall Dimension (approx.)	As per Dimension Diagram of Panel Type 850x820x2150
Unpacked Weight (approx.)	300 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

TECHNICAL SPECIFICATIONS - HPS-50000-9319-200MP

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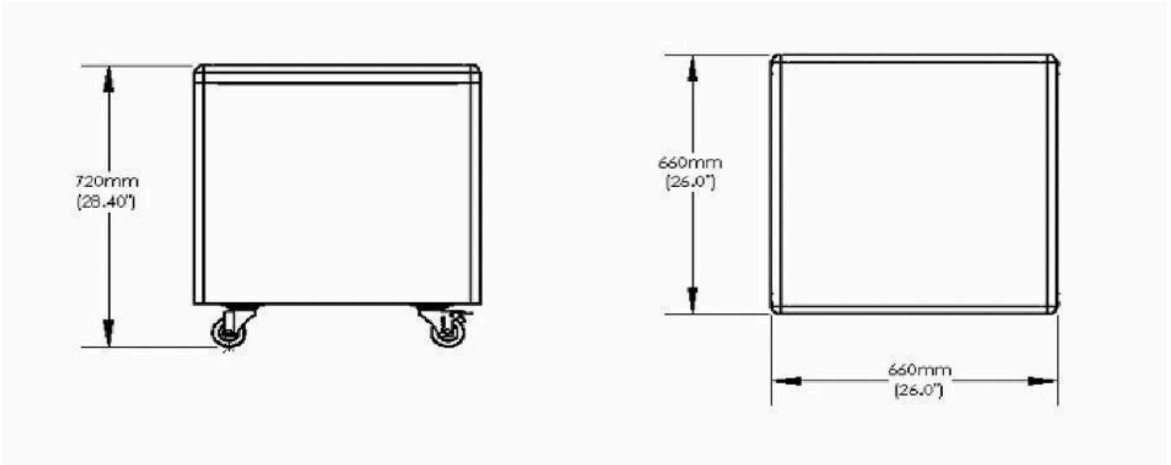
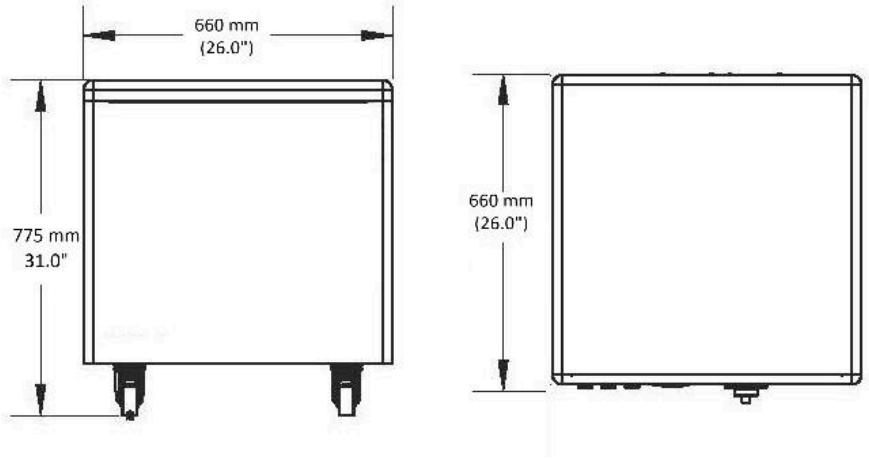
ELECTRICAL	
Capacity (in KVA)	50
Switching Technology	20 kHz IGBT AC chopper/inverter
Voltage Compensation Time	20 ms typical
AC INPUT	
Nominal Input Voltage (V)	Three phase 400
Designed Input Voltage Range (V) (voltage regulation accuracy of +/-1%)	320 - 480
Input Voltage Range (V) (for relaxed output regulation within functional range of 200-250V P-N)	277 - 520
Nominal Operating Frequency	47 – 63 Hz
Maximum Rated Input Current (A)	156
AC Input Connector	L1, L2, L3, Neutral & Ground input BUSBAR. Input neutral will not be used.
Overload & Short Circuit Protection	Through suitably rated input circuit breaker
AC OUTPUT	
Nominal Output Voltage (V)	Single phase 230
Efficiency	Typical 96% (under 20 – 100 % load condition)
Output Voltage Compensation Range	+/- 1 %
Maximum Rated Output Current (A)	217
System Status Indicator	Green LED ON-Normal operation | Amber LED ON-Bypass operation | Red LED ON-Fault
Output Connector	L1, L2, L3, Neutral & Ground output BUSBAR. Fresh output neutral provided.
Surge Protection	Class II Surge Protection
PHYSICAL	
Cabinet Construction	RAL 7035 light grey powder coated CRCA cabinets
Automatic AC-AC Converter Bypass	Standard, will get activated when there is a fault condition
Cabinet Weather Protection Ratings	IP 20 (for use in protected indoor environments)
Display	Digital output voltage display through selector switch
Mounting	Pad mounted
Overall Dimension (approx.)	As per Dimension Diagram of Panel Type 850x820x2150
Unpacked Weight (approx.)	350 kg
ENVIRONMENTAL	
Cooling Method	Forced air
Operating Temperature Range	0 to + 45 °C
Operating Humidity Range	10 to 90% relative humidity (non-condensing)
Note: HPS VRP works with broken input neutral & one missing phase.	

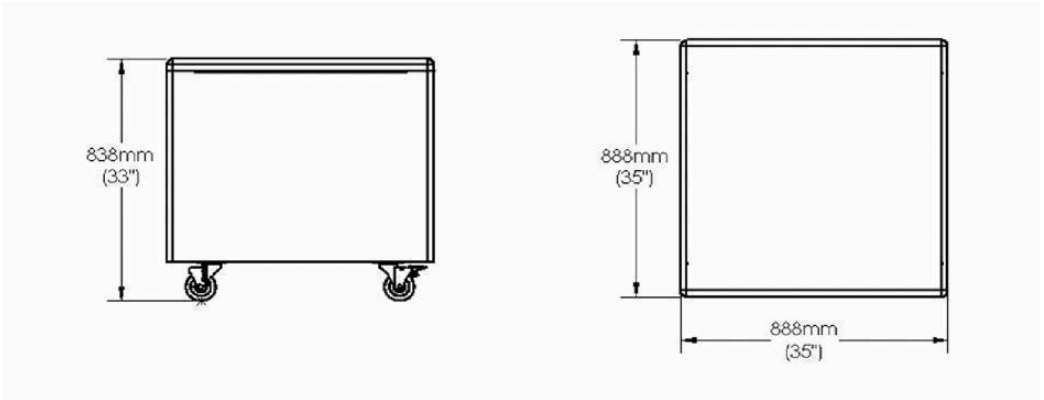
CUBICAL TYPE | 660 x 660 x 720 (in mm)



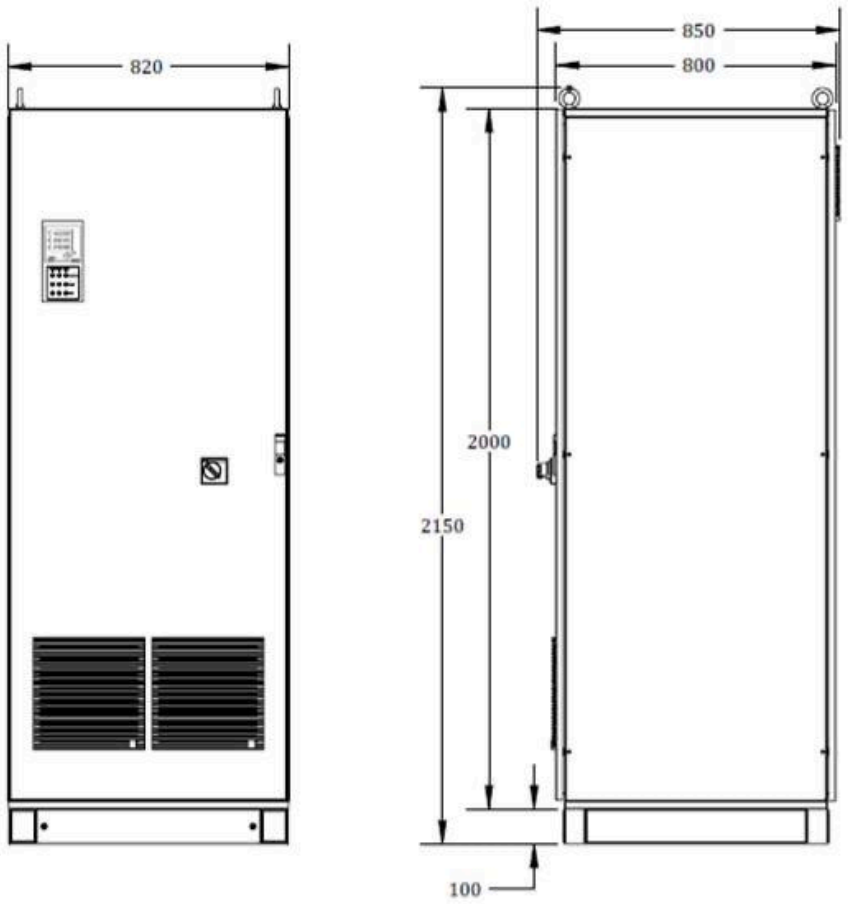
CUBICAL TYPE | 660 x 660 x 775 (in mm)



CUBICAL TYPE | 888 x 888 x 838 (in mm)



PANEL TYPE | 850 x 820 x 2150 (in mm)



Contact Us

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Contact us for a **free demo trial** or a **customised quote** or just a hello!

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