

Stay Powered always...



PRODUCT BROCHURE



POWER SOLUTIONS

TECHNOVISION ENERGY PVT. LTD.

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## PROFILE

TechnoVision Energy Private Limited is a professionally managed organization engaged in manufacturing high-tech products using Power Electronics, Embedded & Real time systems for mission critical applications. Our spectrum of activities include- Product application study, Design & Development of prototype, Product testing and enhancement & Manufacturing.

Our exhaustive experience in Power Electronics domain has resulted in development of feature rich products. Product design team at TechnoVision is equipped with the hardware knowledge, Component & Interface Knowledge, necessary tools for designing of product. Our team designs products effectively & economically to meet the price, aesthetics & feature requirements of our end customers.

## OUR PRODUCT RANGE IS

Online UPS both Single Phase & Three Phase models	1 KVA to 100 KVA
Servo Stabiliser	1 KVA to 200 KVA
Industrial Inverters	5 KVA to 100 KVA
Line Interactive UPS	600 VA to 3 KVA
Battery Charger	12V to 360 VDC
AC AC converters	1 KVA to 100 KVA
DC DC converters	Customised
LPG & CNG Electronic Controllers	For 3 & 4 Wheelers
Real Time Battery Monitoring System	12V to 384 VDC

Products designed by us meet the necessary Industry standards and have wide acceptability in the market because of the user friendliness & smooth life they offer during the operation for years. As the technology adopted is emerging and efficient our customers always get their investments protected against technology up gradation in the market.

Technology evolves rapidly. To leverage the technological upgrades quickly, companies have to reduce the time to adopt. Additionally, highly cost competitive markets require the cost to be reduced without compromising on the quality & feature of their products. We at TechnoVision plan to extend our products and services to our customers to gain a competitive edge.

TechnoVision Energy Pvt. Ltd is a comprehensive solution for Power Electronics product requirements of companies planning to safe guard their mission critical application.

## ON LINE UPS

### RANGE

1 Ø Input — 1 Ø Output	1 KVA to 10 KVA
3 Ø Input — 1 Ø Output	7.5 KVA to 100 KVA
3 Ø Input — 3 Ø Output	10 KVA to 100 KVA

Series

## a - PFC

### TECHNICAL SPECIFICATION : 1Ø - 1Ø

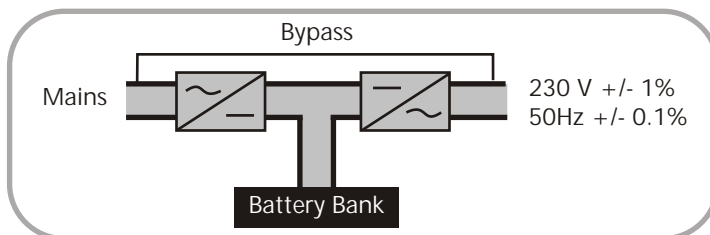
MODEL	1 - 1	1 - 2	1 - 3	1 - 5	1 - 6	1 - 7.5
(Range KVA)	1	2	3	5	6	7.5
<b>INPUT</b>						
Input Voltage	Single phase 230 VAC, 50 Hz nominal (3 Wire)					
Input Voltage Range	160 - 270 VAC					
Input Frequency Range	45 - 55 Hz					
<b>OUTPUT</b>						
Out put voltage	1 phase 230V +/-1% or 220V +/- or 110 V +/-1% (only one)* (provide ground)					
output frequency	50 Hz +/- 0.1% or 60 Hz +/- 0.1% optional (only one)					
Output Power factor	0.8 lagging to unit					
<b>INVERTER</b>						
Technology	Micro Processor Based High Frequency PWM, IGBT					
Output over loading	100% - continuous & 120% / 150% for 15 mins. / 30 seconds					
Crest factor	Better than 3					
Inverter Efficiency	> 90%					
THD	< 2% for liner load & < 3% for nonliner load					
Wave form	Pure sine wave					
Transient Response	+/- 5% recovers with in 5 msec for 0 - 100% load					
Power Walk-in	20 Secs					
EMI / EMC	As per FCC class A					
Noise (audible)	< 50 dB at 1 meter					
Charger	CVCC type operates in Boost, Float & Trickle mode					
<b>BATTERY</b>						
Type*	SMF, Tubular, Calcium etc.					
DC bus	36	96	96	180	180	180
Isolation	Total Isolation between input & output for protection against surges & sags					
Protection	Input U/O voltage, Over load, Short Ckt., DC U/O, Battery Low					
Operating Temp & RH	0 - 50°C & 95% (Non Condensing)					
Front Panel display	Battery level, Fault diagnostic, Alarm (LCD Optional)*					
Chassis design	IP 21					
Cooling	Forced Air					
Bypass	Manual bypass switch					
Static bypass	Optional Feature*					
Communication Interface	RS-232, SNMP for Windows & Linux (Optional Feature)*					

## TECHNICAL SPECIFICATION : 3Ø - 1Ø

MODEL	3-7.5	3-10	3-15	3-20	3-25	3-30	3-40	3-50	3-75	3-100
(Range KVA)	7.5	10	15	20	25	30	40	50	75	100
<b>INPUT</b>										
Input Voltage	Three phase 415 VAC, 50 Hz nominal 4 Wire & ground									
Input Voltage Range	355 - 455 VAC									
Input Frequency Range	45 - 55 Hz									
<b>OUTPUT</b>										
Out put voltage	1 phase 230V +/-1% or 220V +/- or 110 V +/-1% (only one)* (provide ground)									
output frequency	50 Hz +/- 0.1% or 60 Hz +/- 0.1% optional									
Output Power factor	0.8 lagging to unit									
<b>INVERTER</b>										
Technology	Micro Processor Based High Frequency PWM, IGBT									
Output over loading	100% - continuous & 120% / 150% for 15 mins. / 30 seconds									
Crest factor	Better than 3									
Inverter Efficiency	> 90%									
THD	< 2% for liner load & < 3% for nonliner load									
Wave form	Pure sine wave									
Transient Response	+/- 5% recovers with in 5 msec for 0 - 100% load									
Power Walk-in	20 Secs									
EMI / EMC	As per FCC class A									
Noise (audible)	< 60 dB at 1 meter									
Charger	CVCC type operates in Boost, Float & Trickle mode									
<b>BATTERY</b>										
Type*	SMF, Tubular, Calcium etc.									
DC bus	360						360 / 384			
Isolation	Total Isolation between input & output for protection against surges & sags									
Protection	Input U/O voltage, Over load, Short Ckt., DC U/O, Battery Low									
Operating Temp & RH	0 - 50°C & 95% (Non Condensing)									
Front Panel display	Battery level, Fault diagnostic, Alarm (LCD Optional)*									
Bypass	Static + Manual bypass switch provided									
Chassis design	IP 21									
Cooling	Forced Air									
Interface	RS-232, SNMP for Windows & Linux (Optional Feature)*									



BLOCK DIAGRAM



### TECHNICAL FEATURES

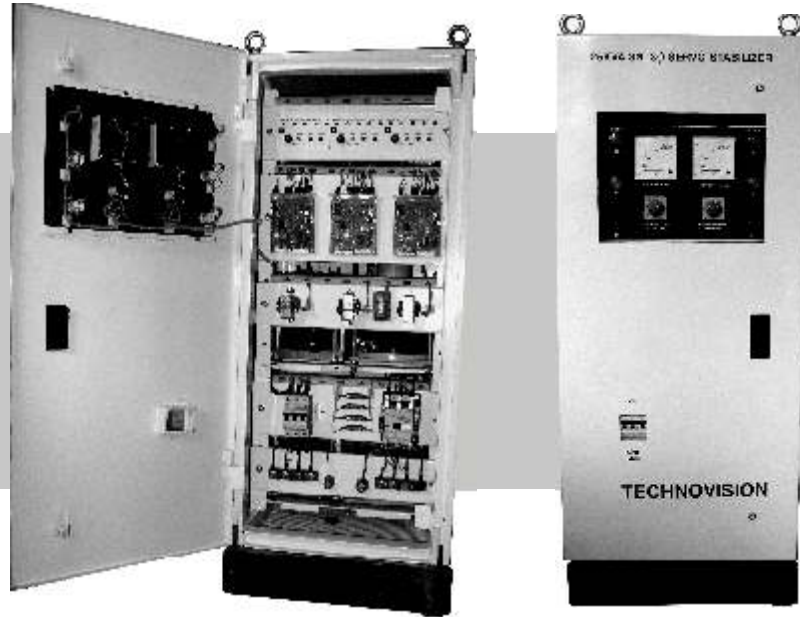
- Micro Processor Based IGBT Technology
- Smart charging enhances the battery life
- Modular Design
- Greater than 90% efficiency helps conserve energy
- RS-232, SNMP Interface enhances the control on UPS
- Handles high inrush current where non-liner load is operated
- Friendly user interface on the front panel helps the user
- Low operating noise
- Less than 2% harmonics allows delicate equipments to be powered

## SERVO STABILISER

### RANGE

1 Ø = 1 KVA to 15 KVA  
3 Ø = 5 KVA to 200 KVA

Our Stabilisers help you maintain the o/p voltage with a tolerance of 1% works with efficiency better than 98%



### Technical Specification

No.	Specifications	1 Phase	3 Phase
1	Ratings	0.5 KVA to 15 KVA	3 KVA to 500 KVA
2	Input Voltage	170- 270 VAC	360- 460 VAC
3	Output Voltage	230 VAC +/- 1%	415 VAC +/- 1%
4	Operating frequency	50 Hz	50 Hz
5	Response time	<3 msec	<3 msec
6	Rate of Correction	15 to 40 V / Sec	12 to 60 V / Sec
7	Efficiency	> 98 %	> 98 %
8	Wave form Distortion	Nil	Nil
9	Effect on Power Factor	Nil	Nil
10	Operating Temperature	0-55 Degree C	0-55 Degree C
11	Duty of operation	Continuous at 100%	Continuous at 100%
12	Cooling	Forced Air Cooling	Air Cooling up to 100 KVA Oil Cooling after 100 KVA

### Protections

UNDER / OVER VOLTAGE	By Telay / Contactor	Contactor
Over Load Protection	Fuse / MCB	MCB / MCCB
Single Phasing Preventer	NA	Provided
Neutral Lift Protection	Optional	Optional
EMI / RFI filters	Optional	Optional
By Pass Switch	Optional	Optional

## Indications

Mains On	Provided	Provided
Under / Over Voltage	Provided	Provided
Voltmeter	0 300 VAC	0 500 VAC
AMP meter	Optional	Optional
Alarm Optional	Optional	Optional

## Salient Features

- Maximum Efficiency
- No waveform distortion & phase shift
- No effect on frequency
- Extremely fast rate of correction

Automobile & Engineering, Hospitals, Labs, Food Processing, Air Conditioning & Refrigeration, Telecom, Software, B.P.O. / ITES, STUDIO's

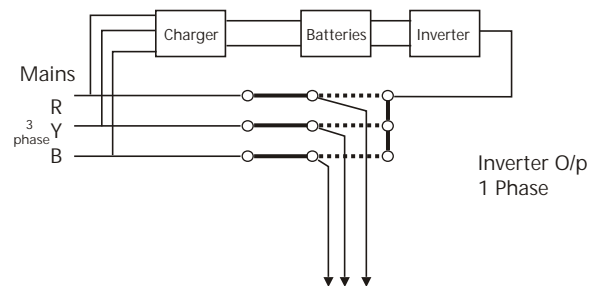
## INDUSTRIAL INVERTORS

### RANGE

1 Ø = 5 KVA to 50 KVA  
3 Ø = 10 KVA to 100 KVA



Industrial Inverter Block Schematic of 3 Ph I/p-1ph O/p



Output load Distributed in 3 circuits  
With all single phase load only.

### TECHNICAL FEATURES

- Pure Sine wave out put
- Contractor Based Change over
- IGBT - PWM Micro Controller based Technology
- Soft Start
- For prolonged backup time

### APPLICATIONS

- Industrial Lighting
- Machines & Equipments
- Elevators

## LINE INTERACTIVE UPS

### RANGE

600VA to 3 KVA

### PRODUCT SPECIFICATIONS

Off Line UPS

Extended Battery Backup



SR NO	DETAILS	SPECIFICATIONS
1.	NOMINAL INPUT VOLTAGE	230 VAC
2.	WIDE INPUT VOLTAGE RANGE	170 VAC TO 270 VAC
3.	NOMINAL INPUT FREQ	50 Hz
4.	INPUT FREQ RANGE	45 Hz TO 55 Hz
5.	ACCURATE OUTPUT VOLTAGE	230 VAC +/- 10 % WHEN ON MAINS MODE. CAN VARY FROM FULL LOAD TO NO LOAD WHEN ON INVERTER MODE.
6.	ACCURATE OUTPUT FREQ	50 Hz +/-2 %
7.	LATEST TECHNOLOGY	PWM BASED MOSFET
8.	UNBELIVABLE OUTPUT WAVEFORM	MODIFIED SINE WAVE
9.	TRANSFER TIME	MAINS TO INV-4TO 5MSEC INV TO MAINS-4TO 5MSEC
10.	INDICATIONS	MAINS ON (Green) Inverter ON (Yellow) Trip ON (Red)
11.	SAFETY PROTECTIONS	INPUT OVER VOLTAGE INPUT UNDER VOLTAGE OUTPUT OVER LOAD DC UNDER VOLTAGE OUTPUT SHORT CIRCUIT
12.	ALARMS WARNING	MAINS FAIL (Slow beeping) Battery low warn (Fast beeping)
13.	BYPASS	MANUAL BYPASS PROVIDED
14.	BATTERY CHARGER	CVCC TYPE CHARGER
15.	CHASSIS COLOUR	STEELGREY
16.	COOLING FACILITY	FAN PROVIDED IN UNITS OF 1KVA AND HIGHER RATING

## BATTERY CHARGER

(FCBC) - Float Cum Boost Charger

### TECHNICAL SPECIFICATION

- I/P Voltage :
  - 170 to 270 - 1Ø
  - 355 to 455 - 3Ø
- I/P Frequency:  
50 HZ (47 TO 53 HZ)
- Output Voltage :  
12V to 384 VDC
- Output Current :  
0 to 100 A
- Output Ripple & Noise:  
± 1%
- Output Hold Up Time:  
20 µSEC
- Technology;  
Twelve Pulse Charger
- Charger Type :  
CVCC
- Protection:
  - Output Short circuit
  - Output Over voltage
  - Output Under voltage
  - Over temperature
  - Input Over voltage
  - Input Under voltage
  - Output Over load
- Output Turn On Time:10 SEC
- Indications:
  - Mains On
  - DC Ok
  - Input Over voltage
  - Input Under voltage
  - Output Over voltage
  - Output Under voltage
  - Over temperature
- Meters Used: Anaog Voltmeter & Ammeter For Output Voltage & Current Measurement
- Breakdown Test:
  - Between I/P & O/P 1200VAC FOR 1 MIN
  - Between I/P & CHASSIS 1200VAC FOR 1 MIN
- Insulation Test:
  - Between I/P to O/P AT 500VDC >10 M Ω
  - Between I/P to CHASSIS AT 500VDC >10 M Ω
  - Between Chassis to O/P AT 500VDC >10 M Ω
- Cooling Facility; Forced Air Cooling
- Colour: Munshell Gray



## AC - AC Converter

Many applications require & different AC voltage like 110 VAC, 50Hz single phase or 220V for 3 phase

We provide solutions for this application also through double conversion technology. Other products are voltage & frequency converters from standard level to various levels desired.

### RANGE

1 KVA to 10 KVA	1 phase
5 KVA to 100 KVA	3 phase

## DC - DC Converter

Some mission critical applications need high DC Voltage levels to be converted to lower DC Voltage levels

We have an expertise in this field

## LPG & CNG Electronic Controllers

By using Micro Controllers & power circuit we have designed, manufactured & supplied thousands of electronic controllers for 3 & 4 wheelers which work on LPG & CNG fuels. These controllers play a very important role in choosing the flow of fuel to the engine.

Our efficient & rugged designed products are widely accepted in India & abroad

## Real time Battery Monitoring System

Batteries are Electro - Chemical products. It is difficult to understand the charge level left in the batteries during the discharge cycle

Our real time Battery Monitoring system with the help of complex algorithm & control circuit provides accurate results on the real-time performance of the batteries in a bank. It helps the user to understand the backup time left, health of the Batteries etc.



ON LINE UPS



SERVO STABILISER



INDUSTRIAL INVERTORS



LINE INTERACTIVE UPS



BATTERY CHARGER



POWER SOLUTIONS

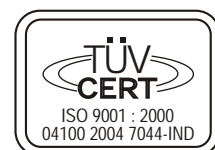
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