



MODERN ELECTRIC SYSTEMS

Power Solution Provider





QUALITY

ISO 9001 : 2015 Certified Company

CE Certified Company

Our works are equipped with the latest world class instruments for manufacturing and testing of transformers up-to 1000KVA. We have strict quality norms and a separate quality department ensures quality at each stage of manufacturing.

Each product is subjected to tests conforming to IS : 2026 / IEC : 60076 or relevant standards by qualified and skilled engineers using precision grade instruments.

ABOUT US

We, Modern Electric Systems have been manufacturing low tension transformers and other power conditioning equipment. Since 2020, when we started manufacturing transformers, we have built ourselves a name that is well-known in the international market and is well recognised and this has been only made possible because of the high efficiency of our products and services. We have established ourselves in the market in a way that sub-pars a lot of manufacturers and we stand out because of the unbeatable standards and high quality of the products and services.

OUR PRODUCTS

TRANSFORMERS

1. Isolation Transformers with Soft start system
2. Auto Transformers
3. K-rated Isolation Transformers
4. Control Transformers
5. Current Transformers(CT's)

HARMONIC SOLUTION

1. Drive AC Input/ Output Chokes
2. Input/ Output Harmonic Chokes
3. Power factor Correction Reactors
4. Shunt Reactors

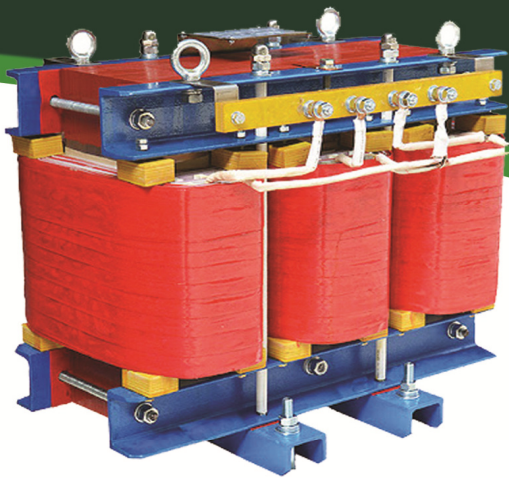
VOLTAGE REGULATORS

1. Servo Controlled Voltage Stabilizers
2. Static Voltage stabilizers
3. AC- DC Converter (DC Power Supply)

PANELS

1. Control Panels
2. VFD(Variable Frequency Drive) Panels
3. APFC Panels
4. LT Panels
5. Metering Panels
6. Power Distribution Panels





ISOLATION TRANSFORMERS

An isolation transformer is one whose input windings and output windings are electrically isolated, permitting its use in transforming alternating current (AC) electrical power from one side to the other while avoiding accidental contact with charged objects. In order to reduce the effects of power line problems such as noise, spikes, surges, transients and neutral, MODERN ELECTRIC SYSTEMS manufactures and exports various types of isolation transformers at competitive prices.

Rating Available: 1 KVA to 1000 KVA

Single and Three Phase / Air and Oil Cooled

(Special Input and output Voltage ranges also available on request)

ISOLATION TRANSFORMER WITH SOFT START SYSTEM

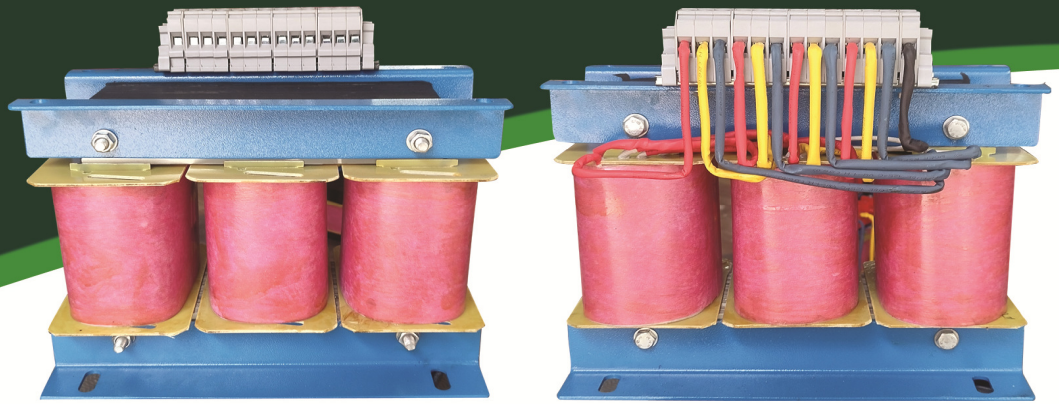
A soft start helps to limit transient voltages, while also protecting against sudden surges of power that accompany both normal operation, and power outages. Reduce risk to personnel and limit personal harm. Major equipment can be very dangerous, and there's always a risk involved with using it.

MES, doing Two type of Soft start to the Transformers.

1. Auto soft start system
2. Manual Soft start system

KVA RATING	MODEL NUMBER	DIMENSION DETAILS			WEIGHT(Kgs)
		LENGTH in mm	WIDTH in mm	HEIGHT in mm	
1KVA	MES-IT-1KVA	300	200	350	25
2KVA	MES-IT-2KVA	300	200	350	35
3KVA	MES-IT-3KVA	300	250	350	45
5KVA	MES-IT-5KVA	320	350	360	65
10KVA	MES-IT-10KVA	360	320	550	90
15KVA	MES-IT-15KVA	380	400	600	140
25KVA	MES-IT-25KVA	470	420	600	160
50KVA	MES-IT-50KVA	600	450	650	295
100KVA	MES-IT-100KVA	620	450	650	490
150KVA	MES-IT-150KVA	740	500	850	525
200KVA	MES-IT-200KVA	880	550	850	650
250KVA	MES-IT-250KVA	950	550	950	850
350KVA	MES-IT-350KVA	950	650	1150	980
500KVA	MES-IT-500KVA	1150	700	1300	1100
750KVA	MES-IT-750KVA	1350	850	1500	2050
1000KVA	MES-IT-1MVA	1500	850	1500	2250

** Dimensions will vary depends upon current rating.*



AUTO TRANSFORMERS

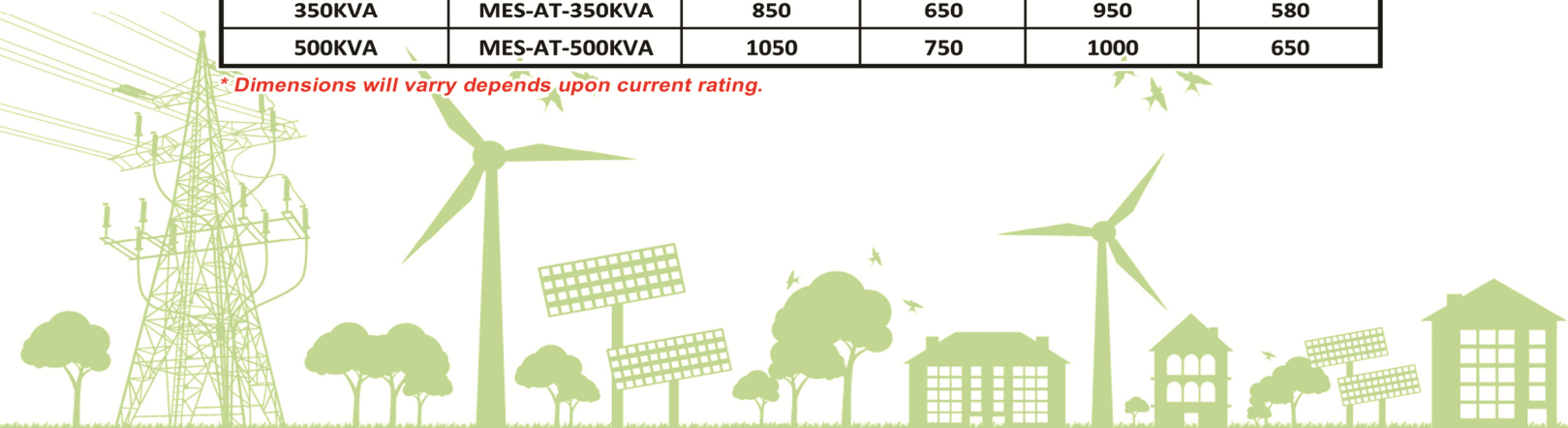
An autotransformer is a type of transformer that uses a single winding to perform both the functions of a primary and secondary winding. In an autotransformer, a portion of the winding is shared between the primary and secondary circuits, allowing for a smaller and more cost-effective design than a traditional two-winding transformer.

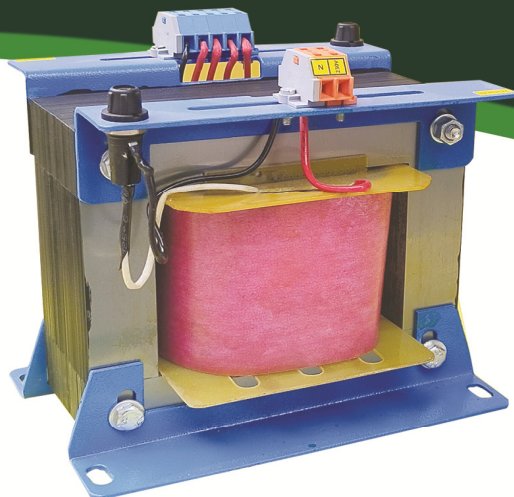
Autotransformers are also able to provide greater flexibility in voltage regulation, as they can be designed to provide a range of voltage ratios. This makes them an ideal choice for applications where precise voltage regulation is required, such as in electrical distribution systems.

Overall, auto transformers are a versatile and cost-effective solution for many applications where voltage transformation is required. With their high efficiency, compact design, and flexibility in voltage regulation, they are an ideal choice for a wide range of electrical distribution

KVA RATING	MODEL NUMBER	DIMENSION DETAILS			WEIGHT(Kgs)
		LENGTH in mm	WIDTH in mm	HEIGHT in mm	
1KVA	MES-AT-1KVA	240	200	280	18
2KVA	MES-AT-2KVA	300	225	340	25
3KVA	MES-AT-3KVA	300	250	340	35
5KVA	MES-AT-5KVA	320	300	350	45
10KVA	MES-AT-10KVA	360	350	450	60
15KVA	MES-AT-15KVA	450	400	500	85
25KVA	MES-AT-25KVA	450	400	550	110
50KVA	MES-AT-50KVA	600	450	650	125
100KVA	MES-AT-100KVA	650	500	700	250
150KVA	MES-AT-150KVA	740	600	850	275
200KVA	MES-AT-200KVA	740	600	850	380
250KVA	MES-AT-250KVA	850	650	950	410
350KVA	MES-AT-350KVA	850	650	950	580
500KVA	MES-AT-500KVA	1050	750	1000	650

** Dimensions will vary depends upon current rating.*





CONTROL TRANSFORMER

A control transformer is an isolation transformer that provides good voltage regulation, and is also designed to provide a high degree of secondary voltage stability (regulation) during a brief period of overload condition (also referred to as “inrush current”). Control transformers are also known as Machine Tool Transformers, Industrial Control Transformers or Control Power Transformers.

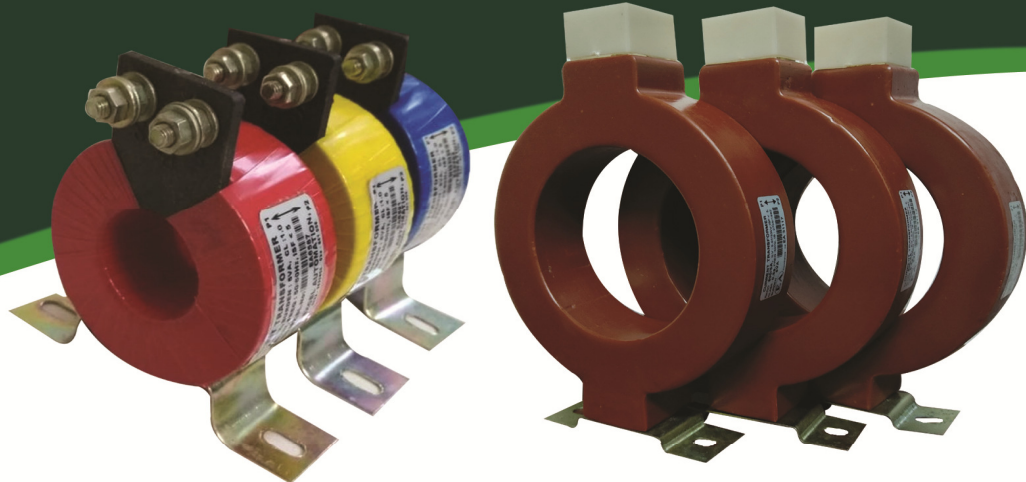
Control Transformers are useful where the available voltage must be changed to accommodate the voltage required by the load. For many electrical circuits, the National Electrical Code (NEC) requires a separately derived neutral secondary connection provided by Delta-Wye connected transformers.

Transformers are manufactured in a variety of choices to meet many applications. Dry-type transformers are offered encapsulated, ventilated or non-ventilated, 600 Volt Class, isolation type, single and three phase Indoor type.

General purpose transformers can be located close to the load. No vaults are required for installation and no long, expensive feeder lines are needed. Common applications include inductive and resistive loads such as motors, lighting and heating.

KVA RATING	MODEL NUMBER	DIMENSION DETAILS			WEIGHT(Kgs)
		LENGTH in mm	WIDTH in mm	HEIGHT in mm	
50VA	MES-CTR-50VA	110	65	115	2.5
100VA	MES-CTR-100VA	110	70	115	3.5
150VA	MES-CTR-150VA	130	100	120	3.5
200VA	MES-CTR-200VA	130	110	120	4.5
250VA	MES-CTR-250VA	130	120	120	5.5
350VA	MES-CTR-350VA	130	150	120	7.5
500VA	MES-CTR-500VA	170	130	160	9
1KVA	MES-CTR-1KVA	170	170	170	15
1.5KVA	MES-CTR-1.5KVA	170	220	170	18
2KVA	MES-CTR-2KVA	185	175	225	25
3KVA	MES-CTR-3KVA	185	190	225	32
5KVA	MES-CTR-5KVA	240	280	300	45
7.5KVA	MES-CTR-7.5KVA	300	300	380	60
10KVA	MES-CTR-10KVA	320	300	400	90
15KVA	MES-CTR-15KVA	450	300	400	110
20KVA	MES-CTR-20KVA	500	350	550	125

* Dimensions will vary depends upon current rating.



CURRENT TRANSFORMERS

A current transformer is specially made to provide a current in its secondary that is approximately proportional to the current flowing in its primary. Current Transformer (CT) has a lot of performance specifications which includes primary and secondary current, insulation voltage, VA burden, and accuracy class. The primary current is the measured current, while the secondary current is a high range of current outputs. When CT is connected to a power source, it is called insulated. The accuracy class is the degree of certainty to which the ideal value agrees with the measured current. The maximum load that a device can support is called a burden. It is measured in Volt-Ampere (VA).

Primary Features

1. Current transformer windings are manufactured from electrolytic high conductivity copper which is covered with insulation
2. Zero phase angle error Moisture-proof
3. Customized Current Transformers available

Specifications:

Specifications are defined as per the product ordered by the client.

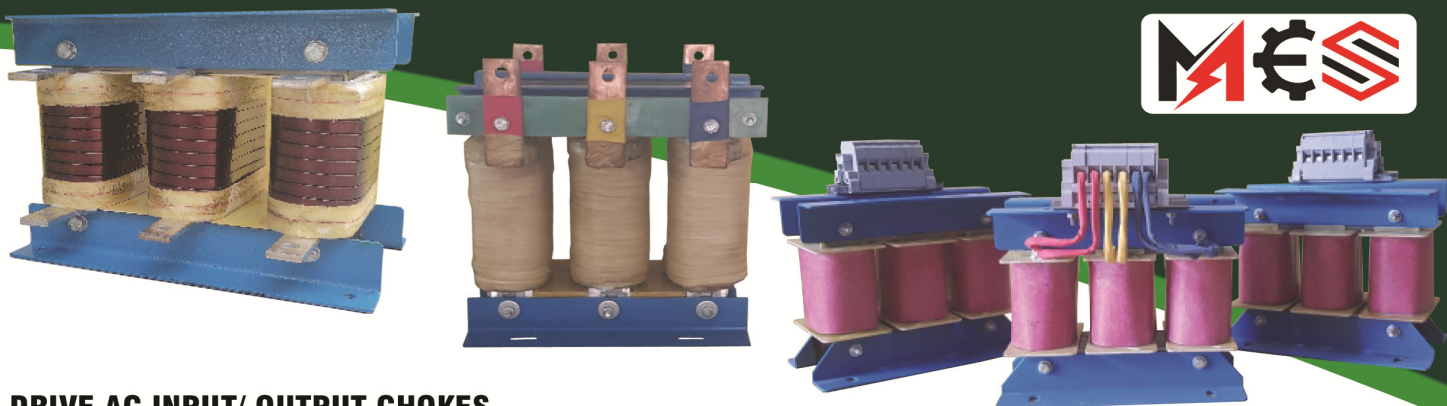
Range:

Range is defined as per the product requirement of the client.

Applications:

1. Control the flow of electricity
2. Used in industrial, commercial and residential sectors
3. By providing exceptional high efficiency, international quality and best rated performance standards, we have become one of the most valuable Current Transformer Manufacturers in India.





DRIVE AC INPUT/ OUTPUT CHOKES

Input chokes can be used to reduce the supply line harmonic currents and voltage distortion generated by almost all inverter drives on the market today. Invertek Drives have selected a range of chokes matched to the Opti drive range to provide the best reduction in supply current harmonics whilst also providing enhanced protection for the Opti drive against transient voltages ('spikes') or other mains borne interference.

Input chokes are available for the complete range of Opti drive products, and are recommended for use in all installations and in particular:

- where the local mains supply quality may be poor or unknown
- where high current switching loads such as large DC drives or soft starts are operating
- where the mains supply impedance is low
- in remote areas prone to lightning strikes
- Reduce power supply harmonic currents
- Reduce the overall input current to the drive
- Provide additional protection against mains borne voltage spikes.

OUTPUT CHOKE (LOAD REACTOR)

Use this as an output choke for long cable runs up to 150 meter cable run is the accumulated actual cable length, connected to inverter output terminals feeding single or multiple motors. This product can be used to reduce motor noise and will help to reduce voltage resonance at the motor, when it occur.

Output choke help to reduce this peak voltage, and increase the rise time, to reduce the stress applied to the motor insulation and prevent damages.

Output choke may be used to protect variable frequency drives and motors. Ac output choke install on the output side converter, the motor can be reduced noise and vibration when the inverter and motor-line longer, can inbuilt the surge wire

KVA RATING	MODEL NUMBER	DIMENSION DETAILS			WEIGHT(Kgs)
		LENGTH in mm	WIDTH in mm	HEIGHT in mm	
0.37KW/0.5HP	MES-CH-0.5HP	145	80	130	1.1KGS
0.5KW/1HP	MES-CH-1HP	145	80	130	1.5KGS
1KW/1.5HP	MES-CH-1.5HP	145	85	130	2.25KGS
1.5KW/2HP	MES-CH-2HP	160	85	130	2.7KGS
2.2KW/3HP	MES-CH-3HP	160	100	130	3KGS
3.7KW/5HP	MES-CH-5HP	160	125	140	4KGS
5.5KW/7.5HP	MES-CH-7.5HP	160	140	140	5KGS
7.5KW/10HP	MES-CH-10HP	160	130	150	7.5KGS
11KW/15HP	MES-CH-15HP	215	140	200	9KGS
15KW/20HP	MES-CH-20HP	215	170	200	10KGS
18.5KW/25HP	MES-CH-25HP	215	185	200	13KGS
22KW/30HP	MES-CH-30HP	215	185	200	15KGS
37KW/50HP	MES-CH-50HP	240	225	275	17KGS
55KW/75HP	MES-CH-75HP	300	250	350	20KGS
75KW/100HP	MES-CH-100HP	300	250	350	22KGS
110KW/150HP	MES-CH-150HP	300	300	350	55KGS
150KW/200HP	MES-CH-200HP	340	300	400	75KGS
185KW/250HP	MES-CH-250HP	340	350	450	110KGS
225KW/300HP	MES-CH-300HP	340	350	450	125KGS
375KW/500HP	MES-CH-500HP	400	400	450	145KGS

* Dimensions will vary depends upon current rating.



VOLTAGE REGULATORS

SERVO CONTROLLED VOLTAGE STABILIZERS (SCVS)

A servo-controlled voltage stabilizer (SCVS) is a regulator designed with microcontroller to automatically maintain constant voltage level. In most industries, a minor fluctuation in voltage can cause the connected equipment to malfunction or breakdown. The basic use of SCVS is to control fluctuation and to provide a constant output Voltage with +/- 1% accuracy.

SCVS is supplied in following types according to its input and output Supply as:

3PHASE TO 3PHASE SCVS

3PHASE TO 1PHASE SCVS

1PHASE TO 1PHASE SCVS

KEY HIGHLIGHTS:

- Microcontroller Based Fully Digital
- Customized Compact Designs of Cubicles
- Cost effective prices
- Isolation with Excellent mechanical and short-circuit strength due to the VPI Process
- Isolated Local Ground Bonded Neutral
- Better Correction Rate better than 18 V/sec.
- Cooling: Natural Air / Oil.
- Under / Over Voltage & Overload Protection through microcontroller.
- Overload & short - circuit protection through Input Breakers
- More than 95% efficiency.
- Input EMI / RFI Filter
- More added features, as customer's requirement.

3PHASE TO 3PHASE SCVS

I/O Phase	3Ph to 3Ph
Power Range	3KVA to 300KVA
I/P Supply Range	380V-480V L-L 340V-480V L-L 295V-480V L-L / As Customer's requirement
O/P Supply Range	415V/400V L-L / As Customer's requirement
Frequency	50Hz/ 60Hz
Cooling Type	Dry Type/Air Cooled

3PHASE TO 1PHASE SCVS

I/O Phase	3Ph to 1Ph
Power Range	1KVA to 100KVA
I/P Supply Range	340V-480V L-L / As Customer's requirement
O/P Supply Range	110V/220V/230V/240V L-N / As Customer's requirement
Frequency	50Hz/ 60Hz
Cooling Type	Dry Type/Air Cooled



Isolation Transformer Details

Insulation Class	Class H/ Class F
Cooling Type	Dry Type/Air Cooled / Air Natural / Air Forced
Conductor	Strips/Wires of Copper or Aluminum as per customer's requirement
Core	CRGO or CRNGO type

Cubicle Details

Cubicle Size	Standard Designs available or As Per Customer's Requirement
Cubicle Material	CRCA
Ingress Protection	IP20/ IP40/ IP41/ IP52/ IP55 or as Per Customer's Requirement
Powder Coating type	Structure/ Matte- Finished/ Glossy
Powder Coating Colour	RAL 7035/ 7032/ 7021/ 9005/ IS5: 631, As per Customer's requirement

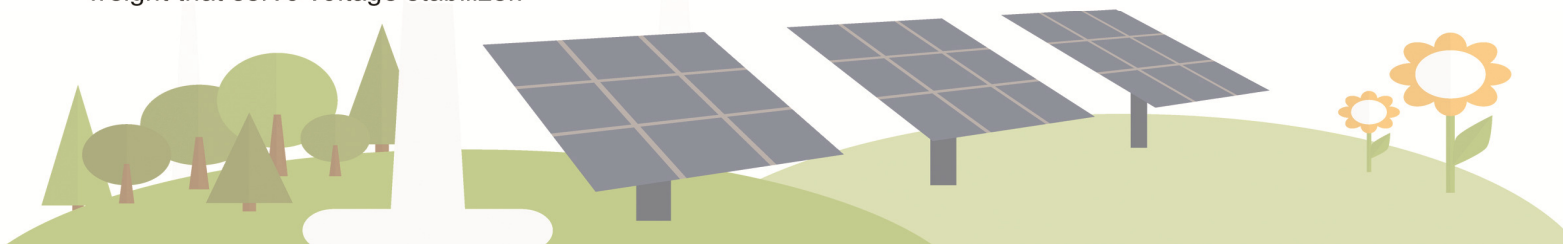
1PHASE TO 1PHASE SCVS

SCVS Details

I/O Phase	1Ph to 1Ph
Power Range	1KVA to 100KVA
I/P Supply Range	185V-275V L-N / As Customer's requirement
O/P Supply Range	110V/220V/230V/240V L-N / As Customer's requirement
Frequency	50Hz/ 60Hz
Cooling Type	Dry Type/Air Cooled

STATIC VOLTAGE STABILIZERS

Static Voltage Stabilizer or Static voltage regulator is same as servo voltage stabilizer but without any moving part. In Servo Stabilizer correction in output voltage achieve with help of moving tap by servo motor hence correction in voltage takes time. But in Static voltage regulator there is no moving part. Correction in voltage is achieves purely with help of electronic circuits hence it call as static. Static Voltage regulators are basically SMPS based which uses IGBT. Static Voltage stabilizer is new generation of voltage stabilizer based on PWM (Pulse Width Modulation technic). Advantage of static voltage regulator other fast regulation is it achieves regulation without distortion in output waveform. As mentioned before Static voltage stabilizer uses IGBT as power switches. In normal PWM method voltage regulation done by converting input DC voltage to inverter. Input DC voltage achieved by converting AC into DC which mean with help of double conversion. But in case of static voltage regulator there is no need for double conversion where PWM in done directly in AC-to-AC switching and that of without harmonic distortion. Since circuit is fully electronic (no moving partes) or static there will not be any wear and tear of part as in case of servo stabilizer. Voltage correction speed of static voltage regulators can be upto 500 times faster than servo stabilizer. All Capacities of Static stabilizer are same operating principle and in different rating of Static voltage regulator different is only PCB board. It is compact in size and much lighter in weight that servo voltage stabilizer.





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