

Able Electronic Services was established in the year 2001, In the inception the product range consists of **Servo Stabilizers, Isolation Transformers, K Rated Transformer, CVT, UPS, APFC Panel, Harmonic Filter, Power Quality Studies.** From 2019 we have expanded into manufacturing of **Power conditioning Unit (IGBT Static Stabilizer).**

**STATIC STABILIZER (IGBT)**

(Power conditioning unit)



STATIC STABILIZER - INDUSTRIAL

Static Voltage Stabilizer or Static voltage regulator or IGBT Voltage Stabilizer or Power conditioning unit (PCU) is same as servo voltage stabilizer but without any moving part Like Servo Motor / Variac. But correction voltage 4000V to 8000V (20ms / within the duration of one waveform and The chopping frequency ranges around 20 KHz) regulation and protection against surges and spikes in power and basic electro-magnetic interference (EMI) filtering by use of suppression circuits. So absolute silent operation.



STATIC STABILIZER (IGBT)  
PRODUCT CATALOGUE



STATIC STABILIZER - RESIDENTIAL



STATIC STABILIZER(PCU)  
3 IN 1 OUT



1 PH STATIC STABILIZER

## STATIC STABILIZER - INDUSTRIAL



### Technical Specifications

Regulator Type	IGBT
Response Time	10 ms
Speed of Correction	20 ms - 1 cycle
Input Voltage Range	±25% / 20% / 15% / 10% of output Volts
Output	380V / 400V / 415V line voltage
Output accuracy	±1%
Frequency	47 to 53Hz
Efficiency	Above 98% (above 20% Rated Load)
Output Voltage Waveform	Free from any spikes / surge and EMI
Surge Protection	Class II 40KA
Overload Capacity	125% for 1 minute
Display / Indication	Input Voltage, Output Voltage, Output Current, Frequency, Phase Sequence, Phase Frailer, Error Log and All Trip Parameters for LCD / LED display.
Protection	Overload, Output High / Low voltage, Input High / Low Voltage, Phase Sequence, Phase Failed, short circuit protection through MCB/MCCB
Operating Temperature	0 to 60 Deg C
Cooling	Forced air
Colour	Basalt gray and LT gray
Enclosure protection type	IP 21 Indoor type
Soft Switch On	Enabled
Auto Bypass	Provided
Manuel Bypass	Provided
MII *(optional)	7" Coloured interface, Input /Output voltage, Input/ Output current, Current voltage Waveform's, Operator activity Log, Stack temperature converter current

**NOTE :**

1. Suitable for three phase unbalanced load and balanced load.
2. Suitable for 3 phase load and single phase load.
3. If any one phase failure or low/high voltage or over load entire output not enable.

## STATIC STABILIZER - RESIDENTIAL



### Technical Specifications

Regulator Type	IGBT
Response Time	10 ms.
Speed of Correction	20 ms - 1 cycle
Input Voltage Range	±25% / 20% / 15% / 10% of output Volts, for line voltage or phase voltage
Output	380V / 400V / 415V line voltage, or 220V / 230V / 240V Phase voltage
Output accuracy	±1%
Frequency	47 to 53Hz
Efficiency	Above 98% (above 20% Rated Load)
Output Voltage Waveform	Free from any spikes / surge and EMI
Surge Protection	Class II 40KA
Overload Capacity	125% for 1 minute
Display / Indication	Input Voltage, Output Voltage, Output Current, Frequency, Digital display.
Protection	Overload, Output High / Low voltage, Input High / Low Voltage, short circuit protection through MCB / MCCB
Operating Temperature	0 to 60 Deg C
Cooling	Forced Air
Colour	Basalt gray and LT gray
Enclosure protection type	IP 21 Indoor type
Soft Switch On	Enabled
Auto Bypass	Provided
Manuel Bypass	Provided

**NOTE :**

1. One phase failure /low/ high voltage another 2 phase enable.
2. Two phase failure /low/ high voltage another 1 phase enable.
3. Suitable for 3 phase (only 3 phases available) load and single phase load.
4. Each phase bypass switch and input mcb separately.

## STATIC STABILIZER (PCU) - 3 IN 1 OUT



### Features :

1. Always load share for any 2 phases (RY or YB or BR)
2. Inbuilt isolation transformer (400v/230v). So load Physically isolated from input supply (Free from surge, Spike, Electrical noise)
3. In this type of unit is specially designed for no input neutral / weak neutral /frequent neutral failure compliant site (Agri line feeders/Rural area)
4. In-built auto and manual healthy line voltage selector

### Technical Specifications

Regulator Type	IGBT
Response Time	10 ms.
Speed of Correction	20 ms - 1 cycle (above 4000V/second)
Input Voltage Range	300V – 500V (R,Y,B Only, E)
Output	220V / 230V / 240V Phase voltage (P, N, E [dedicated earth] )
Output accuracy	±1%
Frequency	47 to 53Hz
Output Voltage Waveform	Free from any spikes / surge and EMI
Surge Protection	Class II 40KA
Overload Capacity	125% for 1 minute
Display / Indication	Input Voltage, Output Voltage, Output Current, Frequency, and Parameters are Display for Digital display.
Protection	Overload, Output High / Low voltage, Input High / Low Voltage, short circuit protection through MCB.
Operating Temperature	0 to 60 Deg C
Cooling	Forced air
Colour	Basalt gray and LT gray
Enclosure protection type	IP 21 Indoor type
Soft Switch On	Enabled
Auto Bypass	Provided
Manuel Bypass	Provided

#### NOTE :

1. Unit able any 2 phase are healthy.
2. Suitable for only single phase load.
3. Genset capacity almost compatibility



## 1 PH STATIC STABILIZER



### Technical Specifications

Regulator Type	IGBT
Response Time	10 ms.
Speed of Correction	20 ms - 1 cycle (above 4000V/second)
Input Voltage Range	±25% / 20% / 15% / 10% of output Volts, Phase voltage (P, N, E)
Output	220V / 230V / 240V Phase voltage (P, N, E)
Output accuracy	±1%
Frequency	47 to 53Hz
Efficiency	Above 98% (above 20% Rated Load)
Output Voltage Waveform	Free from any spikes / surge and EMI
Surge Protection	Class II 40KA
Overload Capacity	125% for 1 minute
Display / Indication	Input Voltage, Output Voltage, Output Current, Frequency, and Parameters are Display for Digital display.
Protection	Overload, Output High / Low voltage, Input High / Low Voltage, short circuit protection through MCB/MCCB
Operating Temperature	0 to 60 Deg C
Cooling	Forced air
Colour	Basalt gray and LT gray
Enclosure protection type	IP 21 Indoor type
Soft Switch On	Enabled
Auto Bypass	Provided
Manuel Bypass	Provided

## STATIC STABILIZER SINGLE PHASE WITH BEST PHASE SELECTOR (3 IN 1 OUT)



### Technical Specifications

Regulator Type	IGBT
Response Time	10 ms.
Speed of Correction	20 ms - 1 cycle (above 4000V/second)
Input Voltage Range	±25% / 20% / 15% / 10% of output Volts, for phase voltage (R, Y, B, N, E)
Output	220V / 230V / 240V Phase voltage (P, N, E)
Output accuracy	±1%
Frequency	47 to 53Hz
Efficiency	Above 98% (above 20% Rated Load)
Output Voltage Waveform	Free from any spikes / surge and EMI
Surge Protection	Class II 40KA
Overload Capacity	125% for 1 minute
Display / Indication	Input Voltage, Output Voltage, Output Current, Frequency, and Parameters are Display for Digital display.
Protection	Overload, Output High / Low voltage, Input High / Low Voltage, short circuit protection through MCB / MCCB
Operating Temperature	0 to 60 Deg C
Cooling	Forced Natural air
Colour	Basalt gray and LT gray
Enclosure protection type	IP 21 Indoor type
Soft Switch On	Enabled
Auto Bypass	Provided
Manuel Bypass	Provided

**NOTE :**

1. 2 phases failure output enable
2. Suitable for only single phase load
3. In-built auto and manual phase selector
4. Input neutral required
5. Input side loaded any 1 phase

## Technology Difference between Servo Control and Static Control

PARAMETER	SERVO CONTROL TECHNOLOGY	STATIC CONTROL TECHNOLOGY
Correction Speed	100V /Sec Max	Above 4000V/Sec, 20ms (One cycle)
Sag Elimination	No	Yes
Moving Parts Used	Variac, Motor	Nil
Auto Bypass	Normally not provided	Inbuilt with Zero Transition Time
Reliability	Less	Good
Regenerative load compatibility	Yes	Yes
Voltage over shoot	Yes	Nil
Load Protection Capabilities	Less	High
Maintenance	Required	Nil
Size / Weight	High	Less
Noise	Normal	Nil
Surge arrestor Class II	Normally not provided	In-built
EMI	Normally not provided	In-built
Power Quality	Normal	High

### NOTE 1 :

Static stabiliser has very high speed of voltage regulation at 4000V/Sec, also it has inbuilt SPD & Noise filter. Output voltage of static stabiliser is noise free & harmonics are also mitigated. CVT's can be eliminated while Static Stabilizer is installed for oil & gas vending applications , thus reducing overall cost & improves site up time.

### NOTE 2 :

Static stabilisers regulate voltage highs & sags instantaneously in 20ms, also has surge suppression, noise filters so they are Power conditioners.

Non-Standard Input and Output ranges also available as per customer availability requirements.



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