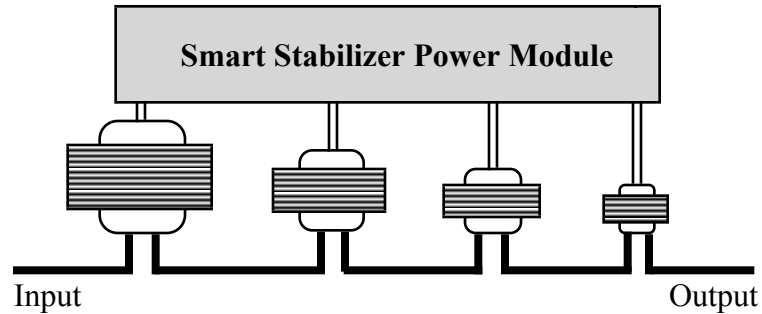




Smart Stabilizer Power Modules Explained

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One module and four relatively small transformers replace the servo, the variac and the buck-boost transformer in AC voltage stabilizers.

Triacs are used in MT10-50, thyristors in larger models.

No high frequency, no shielding is needed. There is no upper power limit for this method.

Primary transformer coils are fed with stabilized 230V.

Secondary coils add or subtract a correction voltage of zero to 42V.

At an input voltage of 188V the input current is 123% of the output current.

At an input voltage of 272V the input current is 85% of the output current.

Primary transformers are selected at zero volt crossing moments.

No switching occurs within a sine wave, no switching is performed in the power path.

Correction voltage is continuously computed and applied for a smooth stabilized output voltage.

Load can be resistive, inductive or capacitive. A module's efficiency is 99.7%.

Time interval is standard 640msec, on request 320 or 160msec.

With higher speeds, inrush-reduced transformers must be used.

Input:

Output:

below 150V:

As input

150V - 188V:

All secondary transformer voltages are added

188V - 272V:

230V stabilized

272V - 300V:

All secondary transformer voltages are subtracted

- Short
- Add
- Subtract

Add/Subtract	22.4V	11.2V	5.6V	2.8V	
● Add	● Add	● Add	● Add	● Add	+ 42.0
● Add	● Add	● Add	● Add	○ Short	+ 39.2
● Add	● Add	● Add	○ Short	● Add	+ 36.4
● Add	● Add	● Add	○ Short	○ Short	+ 33.6
● Add	● Add	○ Short	● Add	● Add	+ 30.8
● Add	● Add	○ Short	○ Short	○ Short	+ 28.0
● Add	● Add	○ Short	○ Short	● Add	+ 25.2
● Add	● Add	○ Short	○ Short	○ Short	+ 22.4
● Add	○ Short	● Add	● Add	● Add	+ 19.6
● Add	○ Short	● Add	● Add	○ Short	+ 16.8
● Add	○ Short	● Add	○ Short	● Add	+ 14.0
● Add	○ Short	○ Short	○ Short	○ Short	+ 11.2
● Add	○ Short	○ Short	● Add	● Add	+ 8.4
● Add	○ Short	○ Short	○ Short	○ Short	+ 5.6
● Add	○ Short	○ Short	○ Short	● Add	+ 2.8
○ Short	○ Short	○ Short	○ Short	○ Short	0.0
● Subtract	○ Short	○ Short	○ Short	● Subtract	- 2.8
● Subtract	○ Short	○ Short	● Subtract	○ Short	- 5.6
● Subtract	○ Short	○ Short	● Subtract	● Subtract	- 8.4
● Subtract	○ Short	● Subtract	○ Short	○ Short	- 11.2
● Subtract	○ Short	● Subtract	○ Short	● Subtract	- 14.0
● Subtract	○ Short	● Subtract	● Subtract	○ Short	- 16.8
● Subtract	○ Short	● Subtract	● Subtract	● Subtract	- 19.6
● Subtract	● Subtract	○ Short	○ Short	○ Short	- 22.4
● Subtract	● Subtract	○ Short	○ Short	● Subtract	- 25.2
● Subtract	● Subtract	○ Short	● Subtract	○ Short	- 28.0
● Subtract	● Subtract	○ Short	● Subtract	● Subtract	- 30.8
● Subtract	● Subtract	● Subtract	○ Short	○ Short	- 33.6
● Subtract	● Subtract	● Subtract	○ Short	● Subtract	- 36.4
● Subtract	● Subtract	● Subtract	● Subtract	○ Short	- 39.2
● Subtract	● Subtract	● Subtract	● Subtract	● Subtract	- 42.0