Voltage Stabilisers, D5406 series

These stabilisers provide closely controlled ac power from fluctuating ac mains supply. They are available in various sizes for both single and three-phase circuits for any common supply voltage.

Applications

In the office:	minicomputers, computers, data processing equipment.
In the factory:	electronic induction heating, process control, lighting, power conversion, vibratory feeders, etc.
In the laboratory:	test equipment, research equipment, measurement.
In TV and broadcasting:	transmitters, studio lighting, etc.
Other applications:	wherever constant voltage control with varying load is required.

Construction

Small units available in chassis mount or bench mount enclosures.

Large units available in open frame or freestanding cubicles.

Features

Output voltage is unaffected by variations in frequency over the range 47Hz to 53Hz. Output frequency is exactly the input frequency.

Negligible waveform distortion introduced.

Efficiency of ca. 98% at full load.

Output free from radio frequency interference.

Quiet operation.

Low price per stabilised kVA.

Features (continued)

Small weight per stabilised kVA.

Output voltage unaffected by load power factor.

Output voltage maintained within +/-1% steady state for loads varying between zero and 100%.

Minimum maintenance required.

Excellent short term overload characteristics.

Possibility of adjusting output voltage steplessly over small range.

Remote sensing (optional extra).

Metering (optional extra).

Technical data

Input voltage:	single phase 220 or 240 or 254 three phase 380 or 415 or 440
Input voltage range:	standard +/-10% (other ranges available)
Input frequency:	47 - 53Hz.
Output voltage (nominal):	single phase 220 or 240 or 254 three phase 380 or 415 or 440
Correction accuracy:	standard +/-1% to order +/-0.5%

This correction accuracy is obtained for a combined variation of:
the input voltage within the tolerated limits.
the frequency between 47 and 53Hz.
the output load between 0 and 100%.

Correction speed:	from ca. 20V/sec to ca. 5V/sec, depending on capacity.
Efficiency:	about 98% at full load.
Distortion:	virtually none introduced.

Technical data (continued)

Power factor:	less than 0.5 lead or lag.
Short term overload:	* 500% for 1 sec. * 200% for 1 min. (* voltage regulation not guaranteed)

Three phase systems

Available either with simultaneous correction of three phases (4-wire) or independent correction of three phases (4-wire).

Special options

* Circuit breaker
* Fuses
* Metering
* High frequency filter capacitors
* Under/overvoltage detection and protection
* Manual bypass switch
* Remote control start. This is designed specifically for computer systems which are unable to tolerate direct-on-line restart after a low voltage dropout.

Special executions

Single phase 380-415-440-480V stabilisers are manufactured to special order, up to 60kVA. Price and technical details on application.

For increased voltage range, ie. +/-15% or +/-20%, assume dimensions of next size up.

For non standard ranges (+/-15%, +/-20%) cost is assessed approximately, thus:
+/-15%: multiply x 1.5 to obtain equivalent kVA capacity
+/-20%: multiply x 2.0 to obtain equivalent kVA capacity.

Refer to table for standard sizes.

Arrive at size and weight.

Voltage correction in V/sec. is also increased in same ratio.

To order:

Specify:

1. Nominal input voltage.
2. Frequency … to …Hz.
3. Number of phases.
4. Continuous max. load.
5. For polyphase, whether type C or D.

* 6. Maximum expected voltage swing +/-…%.

7. Type of enclosure.
8. Ambient temperature.
9. Options.
10. Voltage correction desired (+/-1% or +/-0.5%).

* 11. Minimum correction speed Volts/Sec.

* Note: over specifying can increase cost considerably.