

EY AVR Static Voltage Regulator

3Phase 60Hz 10kVA - 4000kVA



Why Choose a Voltage Regulator ?

The **EY AVR Static Voltage Regulator** are microprocessor controlled devices with high speed semiconductor switching designed for voltage control, protection and management. They are continuously rated and are applied to provide stabilized voltage to industrial, commercial and public infrastructure applications where devices need continuous stable electrical supply.

Today thousands of users with widely differing characteristics such as manufacturing plants, agriculture, hospitals, public buildings and residential, are all supplied from the same utility supply. They have differing needs for voltage stability.

EY AVR's are specifically applied to those facilities most sensitive to voltage variation with solutions designed for individual customer needs.

Response Time

EY AVR can be produced with a wide range of input voltages for locations where system voltages can drop or rise excessively.

Time for correction of voltage variations is typically 1-2 cycles. This is much faster than electro-mechanical regulators which typically take a few seconds to correct the voltage.



Voltage Output Accuracy

Typically output voltage is controlled to $\pm 1\%$

Efficiency

Energy Losses in the **EY AVR's** are typically $< 2\%$.

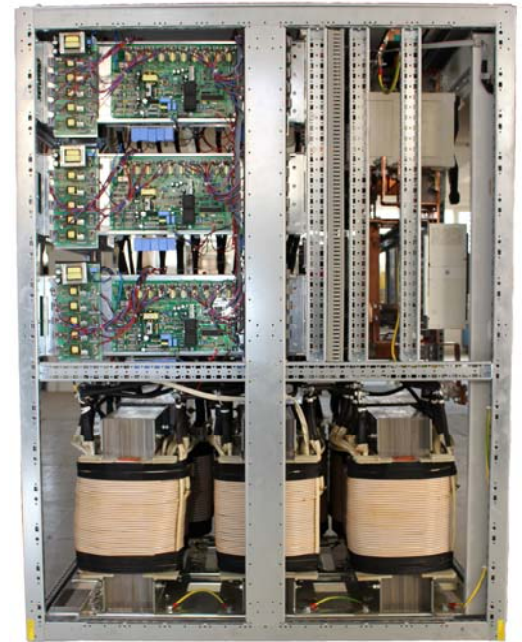
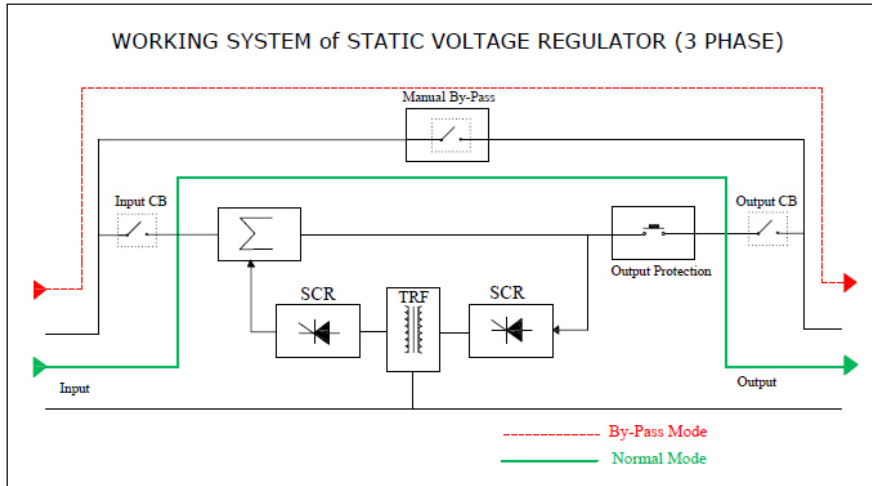
Maintenance

Mechanical regulators rely on moving parts which require periodic maintenance. The mechanical units may not be well suited to either damp or very dusty environments. The **EY AVR's** are designed to work in such environments and require very little maintenance.



tame your power—keep your profits

Typical Configuration



The **EY AVR's** have High Voltage, Low Voltage, Over Temperature, Overload, Short Circuit and Phase Loss protection both for its own operational safety and to provide protection for customer loads.

Surge protection devices area available as an option.

There is a Manual By-Pass switch which allows loads to be connected directly to the network supply and allows for safe inspection of the regulator. Options for circuit breakers are available.

Cable connection is standard but it is also possible as an option to design Input and Output connections to connect to busway systems. (Note: this may require extra sections)

LCD Display

Information such as Input Voltage, Output Voltage, Load levels, faults and warning information can be viewed on LCD Display which is standard on 3-Phase models of **EY AVR's** .

Web connection allows the viewing of all information on the LCD Display and it is also possible to change set values of the Regulator via the REMOTE VIEWING AND MANAGEMENT software, using RS232, ModBus and Ethernet.

EY AVR Static Voltage Regulator

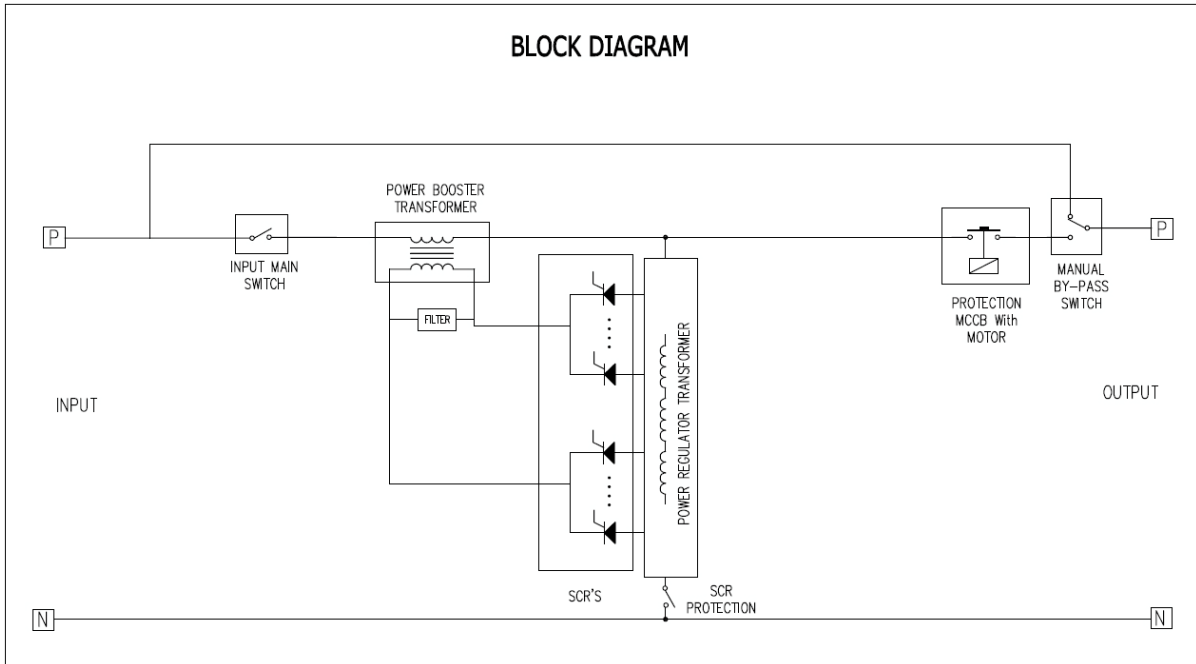


Technical Specifications

OMNI EY SERIES 3-Phase Input/3-Phase Output

MODEL	3- Phase
Power	10 - 4000 kVA
Power factor	0.80
INPUT	
Voltage	480V AC 3-Phase + N (208V, 380V - 415V, 600V AC Optional)
Voltage Tolerance	-25% to +15% Standard (From -60% to +40% Optional)
Frequency	50/60 Hz ±5%
Connection	Hardwire Terminal
OUTPUT	
Voltage	480V AC 3-Phase + N (208V, 380V - 415V, 600V AC Optional)
Voltage Tolerance	±1%
Current per Phase	Per Model
Overload	101%-125% 3 Min; 126%-150% 10 Sec; >151% Output OFF in 0.2Sec
Frequency	50/60 Hz ±5%
Response Time	1/2 cycle response time, 1-2 cycles correction time
Efficiency	>98%
Connection	Hardwire terminal
LCD Display	4 x 16 Character LCD Display: Input Voltage, Output Voltage, % Output Load, Output Frequency, Regulator Condition & Failure Info, Overload, Over Temperature, Input Fault Warning
Communication	Remote Management System software RS232, ModBus, Ethernet
PROTECTION	
Output Voltage	When output voltage outside of ± 10% of selected value Contactor opens
Current	Fuse Protection+ MCCB at Input or Output, electronic over current protection via microprocessor
By-pass	Manual By-Pass for failure or maintenance
Surge Arrestor	Optional Class I or Class II
RFI Filter	RFI Filter or Harmonic Filter is available as Option
Isolation Transformer	Input / Output Isolation Transformers Optional
GENERAL	
Operating Temp.	-10C to +40C (-15C to +55C Optional)
Altitude	<3000m
Humidity	90% non condensing
Acoustic Noise	<55dB
Enclosures	NEMA 1 Standard, (NEMA 3R and NEMA 4 Optional)

EY AVR Regulator Circuit Diagram



Voltage Support Solutions from Omnicverter

Omnicverter offers a variety of solutions to correct voltage problems encountered by customers as shown in the table below. All can be custom made to fit individual customer's needs and applications.

	Digit@I AVR	EY Static AVR	AVC	AVC _{RTS}
Rating	10-5000kVA	2-3200kVA	200kVA-60MVA	150kVA-20MVA
Speed of response	10-20ms/volt	1-1.5 cycles	1-2 milliseconds	4 milliseconds
Application	Voltage Reg.	Voltage Reg.	Sag mitigation	Outages
Voltages	208-15kV	120-690V	208-36kV	208-15kV



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