

SOLUTIONS BY



MISSION CRITICAL FACILITIES
DESIGN AND CONSTRUCTION

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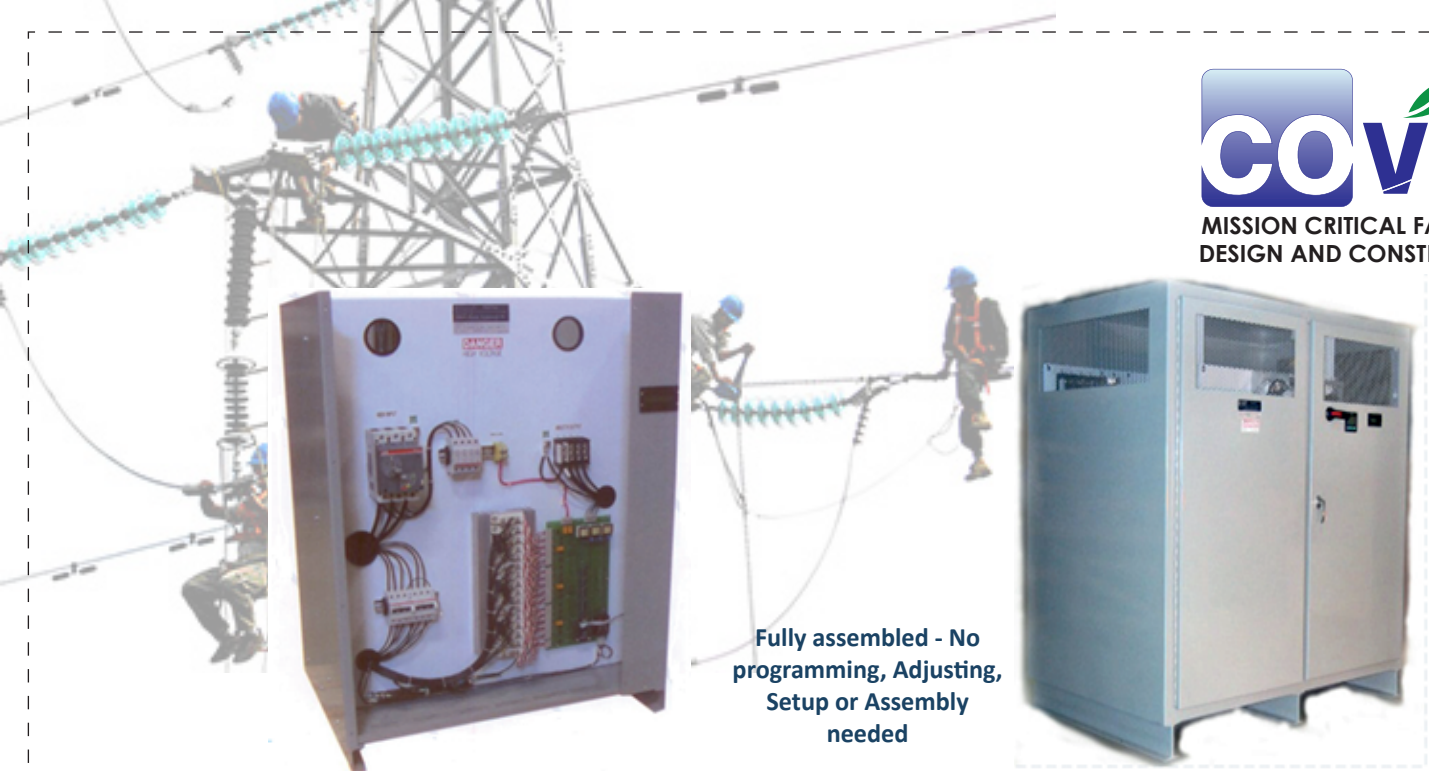


• 1 Year Warranty •

Power Conditioner Magnetic Voltage Regulator- Sure Volt™

Features

- Connecting high-frequency noise filter with transient protection.
- Highest Overload Capacity Available for Compatibility with All Load Types
- Highest Fault Clearing Capacity Available for Reliable Operation of Protective Devices
- Fast Response to Correct Under/Over Voltage, Sags and swells
- Automatic Failsave Electronic Bypass Eliminates Load Current Interruption in the Event of Malfunction
- Zero Moving Parts and Fan-Free Design for Increased Reliability and No Scheduled Maintenance
- Independent Phase Regulation for Correction of Voltage Imbalance
- Surge Suppression and Input Circuit Breaker are standard
- Completely Assembled and Requires No Programming, Testing, Measuring, Setting of Switches or Internal Wiring
- Comes with one year warranty include labour and parts



Fully assembled - No
programming, Adjusting,
Setup or Assembly
needed

The Sure-Volt™ is an industrial-grade, microprocessor-controlled, electronic tap switching voltage regulator using a non-full power semiconductor design. The unit continuously monitors the output voltage and very quickly switches transformer taps when the voltage falls outside of the regulation range. The Sure-Volt™ works automatically to regulate voltage and condition power with no operator effort or programming required. In the event of a malfunction, the automatic bypass actuates to isolate the power electronics and controls while maintaining power to the load and all other functionality except voltage regulation.

Industrial-grade means that the Sure-Volt™ is compatible with all load types and load power factors and provides a minimum 100% fault clearing capacity. Unlike computer-grade products, the Sure-Volt™ is designed for frequent high inrush current and low power factor loads without the need to over-size the product or to sacrifice reliability.

Protect your equipment from:

- Over/Undervoltage
- Voltage Fluctuations
- Sags | Dips
- Line Noise | Swells
- Phase Imbalance
- Short Circuits
- Brownouts | Surges

For virtually any application:

- Sizes 5 to 1500 kVA
- 50 Hz | 60 Hz
- Any Voltage up to 6000 VAC
- Step Up | Step Down
- Single Phase | Three Phase
- Compatible with all load types
- Outdoor | Indoor | Dirty Locations

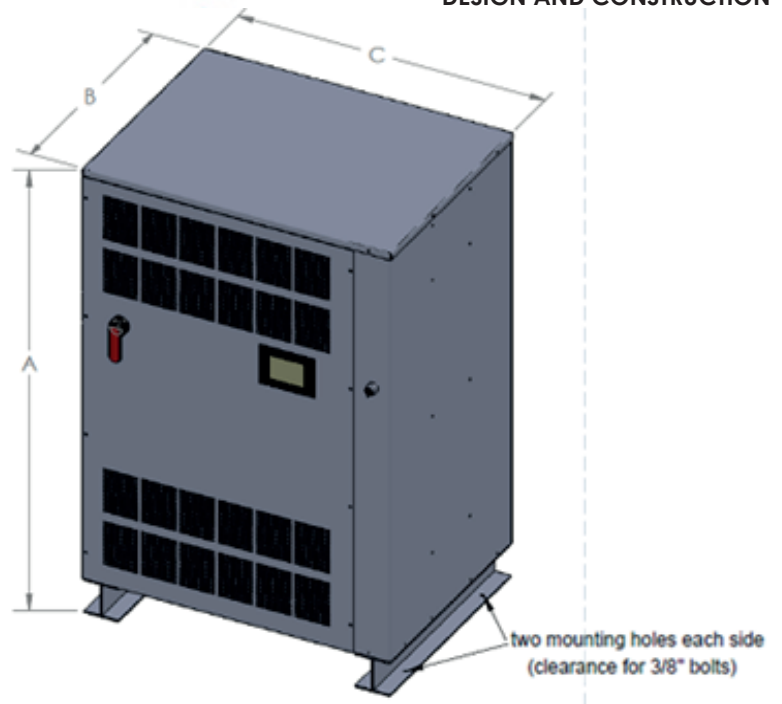
Typical applications include:

Manufacturing | Industrial Automation | Petrochemical | Machining | Broadcasting | Offices | Labs
Mining | Pharmaceutical | Food Processing | Medical Imaging & Treatments | Power Generation
& Transmission Schools | Printing | Pulp & Paper

Standard Unit Specifications & Technical Data

Application			
Sizes(kVA) [ϕ - Phase]	1 ϕ : 5,10,15,20,25,30,50,75,100,125,150...Larger Sizes Available 3 ϕ : 5,10,15,20,25,30,50,75,100,125,150,200,250,300,400,500,600,750,1000,1250, 1500,1750, 2000...Larger Sizes Available		
Input/output Voltages	1 ϕ /60 Hz: 120,208,240,480 3 ϕ /60 Hz: 208,240,480, 600	1 ϕ /50 Hz: 110,220,380,400 3 ϕ /50 Hz: 220,380,400, 415	Voltage Step-Up or Step-Down & Non Standard Voltages Available
Regulation/ Operating Characteristics			
Regulation	Nominal Input Voltage +10%/ -25% Nominal Output Voltage \pm 3%...Other Option Available		
Regulation Variation	None- Regulation Constant for 0% to 100% Load and Any Load Power Factor		
Overload/ Inrush Capacity	6000% -1 Cycle, 1000%-1 Seconds, 500% -5 Seconds, 200% - 1 Min; 1000% Fault Clearing		
Load/ Power Factor	No Minimum or Part Load or Load Power Factor Limitations, Compatible with All Load Types		
Tap Switching	No Load Current Interruption or Waveform Distortion on Switching at Any Load or Power Factor		
Zero Crossing Sensitivity	None, Tap Switching Not Dependent on Determining Load Current Zero Crossing		
Harmonic Distortion	No Distortion Added at any Load or Power Factor		
Response Time	1 Cycle Typical Regardless of Load or Load Power Factor.		
Efficiency	Isolation Transformer: 97% Typical, Autotransformer: 99% Typical		
Operating Temperature	\pm 3% of Nominal Frequency		
Noise Suppression/ Protection			
Noise Attenuation	150dB at 100 kHz Common Mode; 65dB at 100kHz Normal Mode(Isolation Transformer Only)		
Surge Suppression	Included, Compiles with ANSI/IEEE C62.41		
Input Circuit Breaker	Included, Refer to Standard Circuit Breaker Sizes		
FailSafe Electronic Bypass	Auto-Actuation on High Temperature, Over-Current or Component Failure- With No Loss of Load		
Construction			
Technology	Microprocessor- Controlled, Tap Switching Series Transformer Design		
Switching Semiconductors	Non-Full Power Semiconductors- Individuals SCRs Are Not Required to Carry Full Unit Current		
Transformer	500kVA & Below: Dry Tape Autotransformer, Copper Wound, Shielded [1 ϕ & 3 ϕ (Delta-Wye)]		
	Above 500kVA: Dry Tape Autotransformer, Copper Wound [3 ϕ (Wye-Wye)] Non-Standard Transformer Configuration Available		
Cooling	Natural Convection, No Cooling Fans Used		
Enclosure	Floor-Mounted NEMA 1, ANSI 61 Grey, Other Enclosure Types & Colour Available		
Cabling/ Connections	See Enclosure Drawing for Cable Entry/ Exit Options and Circuit Breaker/ Lug Size Table		
Audible Sound Level	Less Than 65dB @ 1 Meter		
Display	Backlit LCD Display Buck/ Boost per Phase and Unit Status		
Controls	No Controls or Programming Required, No User-Adjustable Controls		
Monitoring	Contracts for Remote Indication of Units and Surge Suppression Status are Included		
Environmental Requirements			
Temperature-Humidity	Ambient 32° to 104°F (0°C to 40°C)- Relative Humidity 0%- 95% Non-Condensing		
Operating Attitude	0 ft to 10,000 ft (3000m)		

*Specification subjects to change without prior notice



Diagram

Notes:

1. Penetrations may be made for cable entry/exit in the top or bottom or in the non-vented portion of the sides of the enclosure. The enclosure has no knockouts or removable panels for cable entry. The factory can be pre-punch holes up to 4" diameter for conduit in the location of the customer's choice- with proper advance notifications.

2. Recommended Minimum Clearances:

Front = 36" Top=36"
Back= 12" Sides= 2"

3. Sides may have zero clearance if back clearance is increased by 3" for each side of zero clearance

3. The front and rear access panels are identical and are of the screw type.

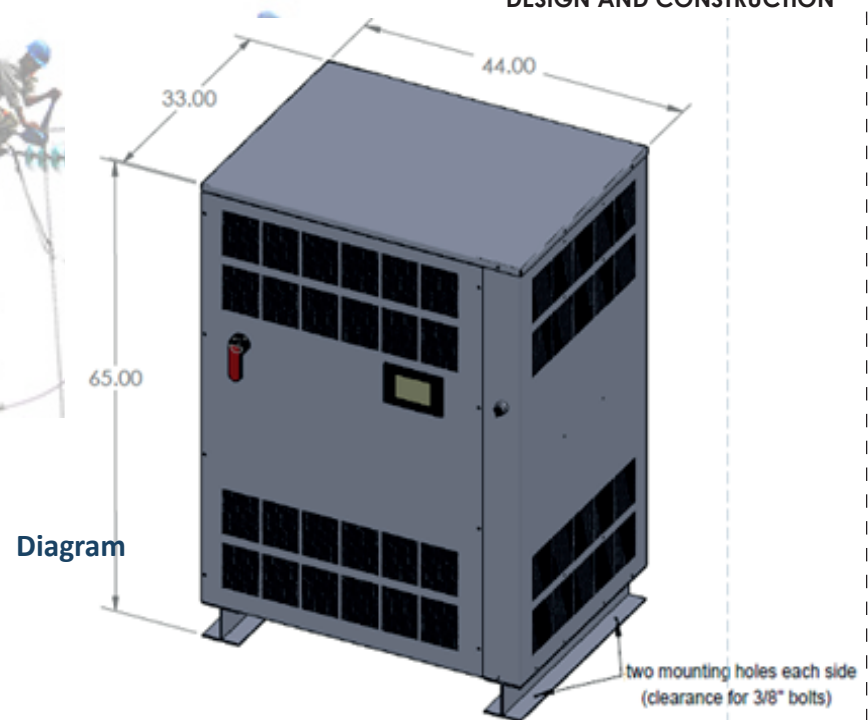
4. Standard paint colour is ANSI- 61 Grey.

5. The unit must be lifted from the base only

6. Typical detail shown, not for construction

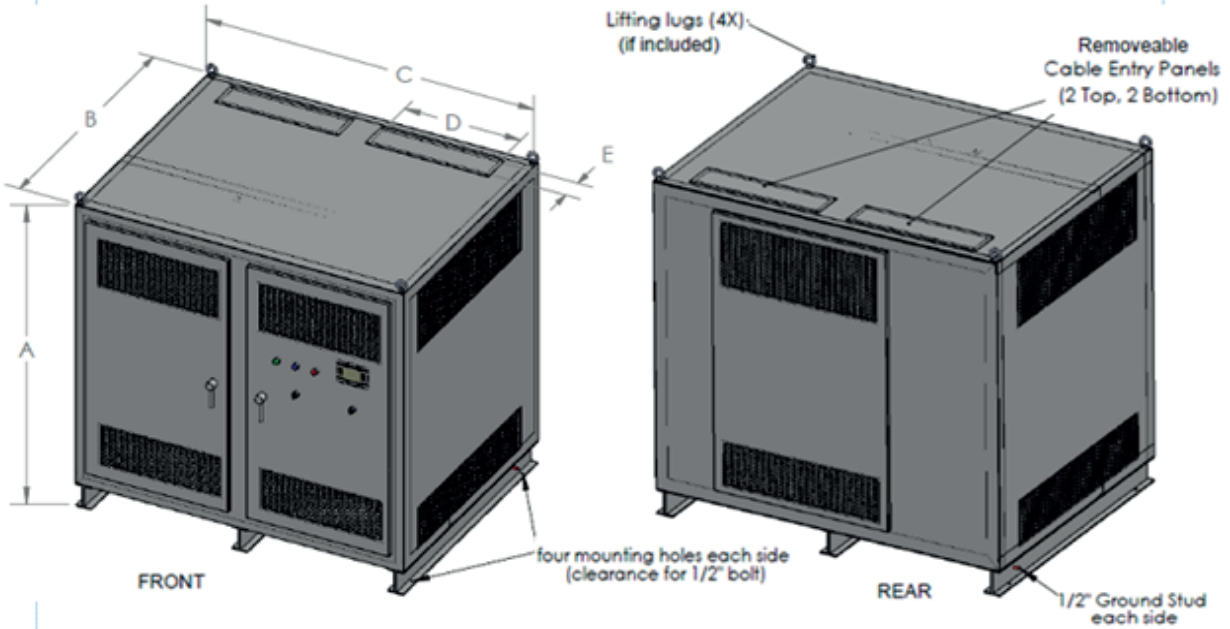
7. Dimension:

Enclosure	A	B	C
S28	42"	26"	28"
S36	46"	28"	36"



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2. Recommended Minimum Clearances:
Front = 36" Top=36"
Back= 12" Sides= 2"
3. Sides may have zero clearance if back clearance is increased by 3" for each side of zero clearance
4. The front and rear access panels are identical and are of the screw type.
5. Standard paint colour is ANSI- 61 Grey
6. The unit must be lifted from the base only
7. Typical detail shown, not for construction



Diagram

Enclosure	Dimensions			Clearance				Cable Entry Opening Size		Lifting Lugs
	A	B	c	Front	Rear	Sides	Top	D	E	
S72	78"	48"	72"	34"	18"	12"	12"	20"	6"	No
S85	80"	66"	85"	40"	18"	12"	12"	30"	6"	Yes
S96	80"	78"	96"	44"	18"	12"	12"	30"	6"	Yes
S132	80"	78"	132"	44"	18"	12"	12"	Custom	Custom	Yes

Notes:

1. Units without lifting lugs MUST be lifted from the base of the unit
2. Rear panel may be removed during installation of cabling
3. Typical detail shown, NOT FOR CONSTRUCTION
4. Standard paint colour is ANSI-61 Grey
5. The standard enclosure contains two mounting holes on each side of the base. Additional mounting holes can be included provided the request is made at the time of order.