

AUTOMATIC VOLTAGE REGULATOR
THREE PHASE, MULTI-SHIELDED, COPPER-WOUND,
VOLTAGE REGULATOR

POWER REG
15 TO 1250 KVA



APPLICATIONS

INDUSTRIAL
SCHOOLS
HOSPITALS
CHURCHES

CITY HALL
LIBRARY
FIRE STATION
SHOPPING CENTER
MALLS

RESTAURANTS
MEDICAL EQUIP.
PRINTING EQUIP.
MACHINE SHOP
SERVICE STATION

Exceptional Reliability

The Power-Reg is highly reliable, and the primary reason is the zero current tap-switching technology. A tap-switching Power-Reg regulates the voltage by switching electrical taps to either raise or lower the output voltage. Since these tap changes are made when the current is at zero, there is virtually no component stress. This innovative zero current tap-switching technique results in exceptional system reliability.

Another high reliability technique utilized by the Power-Reg is our unique distributed leakage reactance protection system. The electrical taps of the computer grade transformer are located in the center of the primary winding. When a high energy impulse occurs, which would damage other tap-switching regulators, the distributed leakage reactance attenuates the impulse before it reaches critical limits.

Environmental

The Power-Reg is convection cooled (≤ 300 kVA) and equipped with circulation fan for units 400 kVA and above. The Power-Reg fits well into utility closets and other out-of-the-way places. Operable over a wide temperature range, and with high humidity tolerance, the Power-Reg will go places where other power conditioners can't go.

Compensates to Maintain Load Power Factor

The power factors of most automated equipment (typ. 0.8 lagging) will lower the output voltage in a ferroresonant regulator by as much as 6%. OnLine Power-Regs are not affected by the load power factor.

Wide Input Frequency Range

The Power-Reg operates within a broad input frequency range from 57 Hz to 63 Hz and is therefore unaffected by frequency fluctuations. Many other types of regulating devices are highly sensitive to routine input frequency variations.

Negligible Harmonic Distortion

Harmonic distortion can adversely affect sensitive electronic equipment. Ordinary regulating devices can cause severe distortion of output waveforms and also on the input power line. The Power-Reg adds less than 1% total harmonic distortion to the line and load.

“ULTRA-REG” Version Combines Precision Regulation with Exclusive Shielding

The Ultra-Reg version combines a wide regulation capability (+10% to -26% of nominal) and multi-shielding that achieves a minimum common-mode noise attenuation of -126 dB, with optional -140 dB, -146 dB, or -152 dB available.

UL Listed

High Efficiency (>96%)

Low Distortion

Tight Output Voltage Regulation ($\pm 3\%$)

Exceptional Reliability

Single Point Grounding

Zero Current Tap Switching

Excellent Voltage Regulation

Common-Mode Noise Attenuation up to -152 dB (Ultra-Reg)

Small Foot Prints

1 Year Warranty

POWER REG SPECIFICATIONS

Sizes: 15, 30, 50, 75, 100, 125, 150, 175, 200, 225, 250, 300, 400, 500, 625, 750, 875, 1000, and 1250 kVA

Input Voltage*: 208 or 480 VAC, **480Y/277

Output Voltage*: 208Y/120 or 480Y/277 VAC

Frequency*: 60 Hz \pm 5%

Response Time: 1 cycle typical

Harmonic Distortion: 1% max. added at switching

Input Voltage Regulation Range: .. +10% to -26% of nominal

Output Voltage Regulation Range: \pm 3% typ. \pm 4% maximum

Common-Mode: -120 dB. (\leq 300 kVA)
-140 dB -146 dB or -156 dB available

Normal-Mode: 40 dB/decade

Overload(Inrush): 200% of full load for 10 seconds
1000% of full load for 1 cycle

Transformer \leq 300 kVA; 3 phase computer grade, dual-shielded, isolation transformer

Transformer \geq 400 kVA; 3 phase, copper wound, buck-boost transformer

Efficiency: 96% at full loads; 98.5% at light loads

Load Power Factor: 0.3 leading or lagging to unity

Audible Noise: <35 dB measured on Response Curve "A"

Environmental:

Operating Humidity: 10 to 90% non-condensing

Operating Temperature 32°F (0°C) to 104°F (40°C)

Storage Temperature -4° to 140° F

Transformer Impedance: 3 to 5%

STANDARD FEATURES

- NEMA 1 Indoor Cabinet
- Three Phase Regulating, Dual-Shielded Computer Grade Transformer
- Common-Mode Noise Attenuation (\leq 300 kVA)
Power-Reg; -120 dB standard,
***Ultra-Reg; -126 dB standard
- Regulating Assembly and Input Filter
- Regulation/Isolation Only Switch (Bypasses Regulation Electronics)

OPTIONS

- High Isolation Transformer with Harmonic Reduction (up to K-50)
- Controlled Impedance for Load Regulation (Application of No Load to Full Load)
- Monitoring Panels
- Remote Monitoring
- Secondary Surge Suppression
- Input/Output Filter (-60 dB/decade Normal-mode)
- TVSS
- Outdoor Cabinet
- Special Paint
- Extended Warranty and Service Plans
- Spare Part Kits Available
- ***"Ultra-Reg" version:
provides Common-Mode Noise Attenuation levels of -140 dB, -146 dB. or -152 dB.

kVA SIZE	INPUT VOLTAGE	MODEL NUMBERS***		WEIGHT S (LBS)	BTUs/HR	CABINET SIZES H" x W" x D"	
		208Y/120 OUTPUT VOLT	480Y/277 OUTPUT VOLT				
15	208	PR015B0500T3	PR015B0900T3	400	2,040	32" x 36.5" x 17"	
	480	PR015H0500T3	PR015H0900T3				
30	208	PR030B0500T3	PR030B0900T3	500	4,080		
	480	PR030H0500T3	PR030H0900T3				
50	208	PR050B0500T3	PR050B0900T3	700	6,800		40.5" x 31.5" x 22"
	480	PR050H0500T3	PR050H0900T3				
75	208	PR075B0500T3	PR075B0900T3	850	10,200		
	480	PR075H0500T3	PR075H0900T3				
100	208	PR100B0500T3	PR100B0900T3	1,250	13,600	66" x 50.5" x 32"	
	480	PR100H0500T3	PR100H0900T3			42" x 32" x 22"	
125	208	PR125B0500T3	PR125B0900T3	1,400	17,000	66" x 50.5" x 32"	
	480	PR125H0500T3	PR125H0900T3			51.5" x 40.5" x 26.5"	
150	208	PR150B0500T3	PR150B0900T3	1,500	20,400	66" x 50.5" x 32"	
	480	PR150H0500T3	PR150H0900T3			51.5" x 40.5" x 26.5"	
175	208	PR175B0500T3	PR175B0900T3	1,700	23,800	66" x 50.5" x 32"	
	480	PR175H0500T3	PR175H0900T3				
200	208	PR200B0500T3	PR200B0900T3	2,000	27,200		
	480	PR200H0500T3	PR200H0900T3				
225	208	PR225B0500T3	PR225B0900T3	2,250	30,600		
	480	PR225H0500T3	PR225H0900T3				
250	208	PR250B0500T3	PR250B0900T3	2,450	34,000		
	480	PR250H0500T3	PR250H0900T3				
300	208	PR300B0500T3	PR300B0900T3	2,900	40,800		
	480	PR300H0500T3	PR300H0900T3				
**400	208Y/120	PR400O0500T3		3,900	50,700		73" x 67" x 35"
	480Y/277		PR400H0900T3				
**500	208Y/120	PR500O0500T3		4,250	60,600		
	480Y/277		PR500H0900T3				
**625	480Y/277		PR625H0900T3	6,500	70,400		
**750	480Y/277		PR750H0900T3	7,500	80,800		
**875	480Y/277		PR875H0900T3	8,500	90,600		
**1000	480Y/277		PR104H0900T3	9,500	99,600		
**1250	480Y/277		PR124H0900T3	10,500	105,000		

* Other voltages and frequencies available consult factory

** Consult Factory. Input and Output voltage must be the same

*** For "Ultra-Reg" version, consult factory.

Specifications are subject to change without prior notification.



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