



Model List

Staco AVR™

**Single and Three Phase Automatic Voltage Regulation and Power Conditioning
Model List**

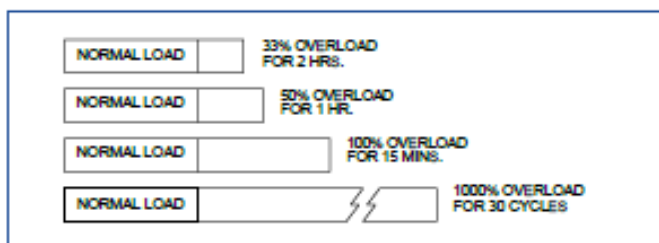
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WHY CHOOSE A STACO REGULATOR or POWER CONDITIONER...Together we Power On

Staco has been in the AC voltage control and regulation field since 1937. Today, Staco's products reflect this experience. Staco regulators are built for long-term reliability and trouble free operation. High quality components, optimum design, and excellent workmanship go together to ensure many years of satisfactory performance.

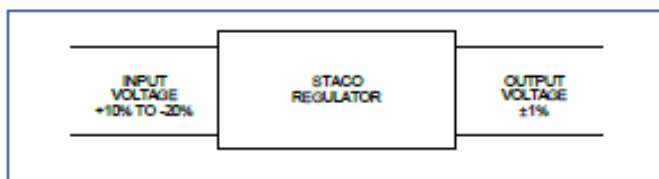
Conservative Ratings

Staco regulators are designed to withstand substantial current overloads.



Accuracy

Staco regulators will maintain a constant output voltage within $\pm 1\%$ or better, regardless of input voltage variations from $+10\%$ to -20% of the nominal input value in standard models. If the supply voltage varies beyond the regulating range, the regulator continues to provide its maximum correction so that the output voltage varies only by the amount that the line voltage deviates beyond the regulating limits. The usefulness of this feature is best illustrated by a motor load which can operate satisfactorily on a supply voltage of 20% below nominal; using a Staco regulator, the same motor can be operated when the line voltage falls to 39% below nominal.



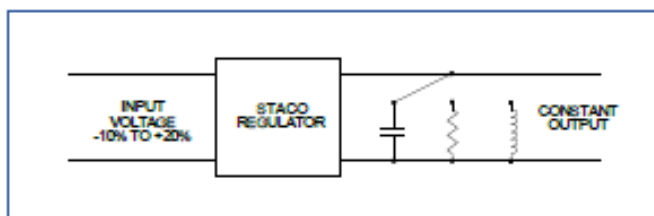
No Waveform Distortion-- No Harmonics Added

Staco regulators, unlike some types of regulators, cause no waveform distortion and add no harmonics to the system. They do not introduce awkward and irritating errors in voltage and current measurement which may occur if the normal wave shape of the supply voltage is distorted.



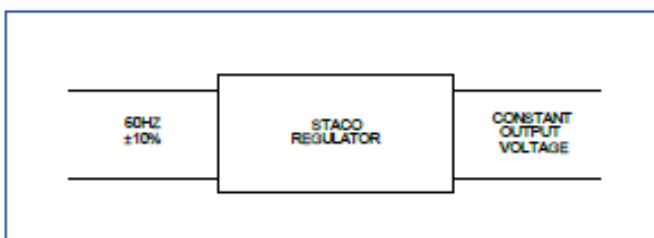
Independent of Power Factor

Staco regulators perform equally well whether the connected load is capacitive, resistive, or inductive in nature.



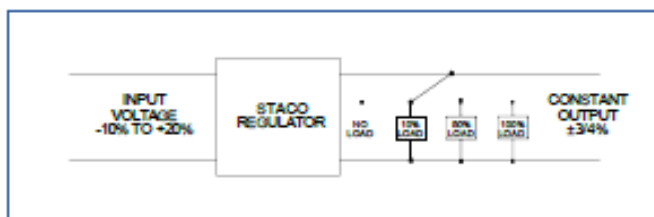
Insensitive to Frequency Changes

Staco manufactures regulators which will accept line frequency changes of up to $\pm 10\%$ without loss of output regulation.



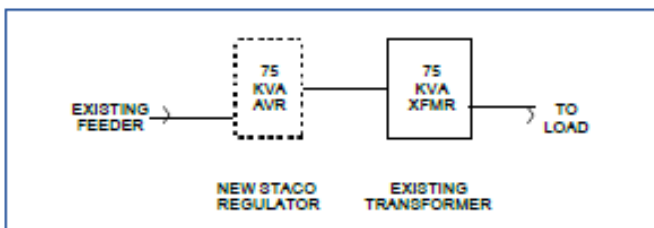
Compensates for Load Changes

Staco regulators maintain a constant output voltage regardless of load current changes from zero to full rated load.



Rated per Industry Standards

Staco regulators are designed and rated to meet standard industry kVA ratings for application ease in both new and existing installations. No longer is there a need to oversize the regulator to be able to utilize the full capability of a feeder circuit.



Selecting Staco Voltage Regulators and Power Conditioners

Selecting the Staco Voltage Regulator or Power Conditioner best suited to your specific requirements is easy once you make the following determinations:

VOLTAGE REGULATOR OR POWER CONDITIONER?

The first step in the product selection process is to determine what type of product is required. A voltage regulator is designed to take the system input voltage and provide a regulated output voltage. The main difference between a regulator and a power conditioner is that a power conditioner also contains a surge protective device (SPD) plus an output isolation transformer (ISO). A power conditioner provides output regulation plus load isolation and electrical noise attenuation. If system brownouts are the major concern, select a Voltage Regulator. If electrical noise as well as brownouts are the major application concern, or if load isolation or system voltage step-down is required, choose a Power Conditioner.

SINGLE OR THREE PHASE?

The second step is to determine the type of load to be supplied. If the load is a single-phase load, choose a single-phase Regulator or Power Conditioner. If the load is three phase or is a combination of single and three phase loads, select a three-phase unit.

VOLTAGE?

The third step is to determine the selected unit's voltage rating. There are only a few different nominal system voltages used throughout the world. Our products have been designed to meet most of our day-to-day needs. Staco Voltage Regulators, unlike some of the other regulator technologies, are designed with an adjustable output voltage setpoint. The charts on the next page show standard output voltage setpoints available with the standard regulators listed in the price list. Using this output setpoint feature, 9 basic regulator voltage families can provide a $\pm 1\%$ or better output regulation for 28 different world system voltages.

Special voltage units are available; contact the factory for product information. Domestic units are 60 Hz rated and international units are 50/60 Hz rated.

DELTA OR WYE?

The fourth step is to determine if your three-phase system is Delta or Wye. This depends on whether a system neutral is available. A Delta system has only three conductors or wires whereas a Wye system has three conductors plus a system neutral. A Delta system is known as a three phase, three-wire system, where the Wye system is known as a three phase, four-wire system where the fourth wire is the system neutral. The type of three phase supply system must be determined for proper Voltage Regulator or Power Conditioner selection. Staco offers both Delta and Wye three phase units as standard catalog items.

NOTE: A Wye source without the neutral must use a Delta designed unit

SINGLE LINE CONTROL OR INDIVIDUAL PHASE CONTROL?

If a three-phase system is selected, the fifth step is to determine if Individual Phase Control (IPC) is needed. In an IPC unit, each output phase has its own controller-monitored voltage feedback loop, and each output phase is regulated independently of the other phases. IPC is an excellent design choice for three phase distributed load applications, consisting of both single and three phase loads, as the regulator will provide a regulated and balanced output voltage even under unbalanced line and load conditions. Choose Single Line Control (SLC) for balanced load conditions.

The MP, microprocessor controller, is the standard controller for Regulators and Power Conditioners with IPC. The controller can operate in several different modes which can be programmed locally with the panel mounted micro terminal, or remotely through an RS-232, RS-422, or IEEE-488 bi-directional communication port. See the "MP Series Controllers" catalog for more information.

SIZE?

The sixth step in the selection process is to determine the unit's kVA rating. The price list shows both the unit's kVA rating and maximum output amperes. Knowing either the load kVA or amperes, select a unit that meets or exceeds the load requirements. The kVA ratings listed in the price list are based on a unit's maximum output ampere rating at its listed nominal output voltage.

If a Voltage Regulator is being selected based on the output set-point feature, the regulator should be selected based on the maximum output amperes which remain constant over the unit's output voltage setpoint range. The output kVA can then be recalculated based on the output voltage setpoint and the unit's maximum output amperes.

As a final step review the application to determine if any options are required.

Below is a table of our available nominal output voltages, demonstrating how modifying the output voltage setpoint changes the input voltage range that can be regulated per the stated controller capabilities.

Single Phase Voltage Regulators					
System	Output Voltage Setpoint	Base Unit Output Voltage	Input Voltage Range		
			W	P	N
			+10/-20%	+7/-17%	+7/-11%
2 wire	100	120 60 Hz*	80-110	83-107	89-107
	110		88-121	91-118	98-118
	115		92-126	96-123	102-123
	120		96-132	100-128	107-128
	200	240 60 Hz ¹	160-220	166-214	174-214
	208		166-229	172-224	185-224
	220		176-242	183-235	196-235
	230		184-253	191-246	205-246
	240		192-264	199-257	214-257
	347	380 50/60 Hz	278-381		
	380		304-418		
	440	480 60 Hz	352-484		
	460		368-506		
	480		384-528		

Three Phase Voltage Regulators					
System	Output Voltage Setpoint	Base Unit Output Voltage	Input Voltage Range		
			W	T	Q
			+10/-20%	+10/-15%	+10/-10%
Delta (3-wire)	200	240 60 Hz	160-220	170-220	180-220
	220		176-242	184-242	198-242
	230		184-253	196-253	207-253
	240		192-264	204-264	216-264
	400	480 60 Hz	320-440	340-440	360-440
	415		365-456	353-456	374-456
	440		352-484	374-484	396-484
	480		384-528	408-528	432-528
Wye (4-wire)	200	208 60 Hz	160-220	170-220	180-220
	208		166-229	177-229	187-229
	220		176-242	187-242	198-242
	380	380 50/60 Hz	304-418	323-418	342-418
	400		320-440	340-440	360-440
	415 50Hz ²		365-444	353-444	374-444
	415 60Hz	480 60 Hz	365-456	353-456	374-456
	440		352-488	374-488	396-488
	480		384-528	408-528	432-528

¹ Type SVR and SLC units are 50/60 Hz rated for all set point voltages.

² 415V, 50Hz units have a maximum input range of 444V, which is +7%, due to the 50Hz frequency.

Controller type	Used on	Regulation
MPII	MVR, MLC	±0.5V
FRC-20	AVR, FVR, PLC	±1%
Stepper	SVR, SLC	±0.5%

Staco Voltage Regulator (Power Conditioner) Model List

Product Type Descriptions

AVR

Standard Voltage Regulation +/-1%

The StacoAVR Automatic Voltage Regulator (AVR) is comprised of a motorized variable autotransformer providing precise voltage correction to your critical loads through a series buck-boost transformer. Customer-selected output voltage is maintained by a microprocessor controller.

MVR = AVR + IPC

Standard Voltage Regulation +/-1%, adjustable to +/-0.5V

The StacoAVR Microprocessor Voltage Regulator (MVR) is comprised of a motorized variable autotransformer providing precise voltage correction to your critical loads through series buck-boost transformers. Customer-selected output voltage is maintained by the Staco (MPII) Microprocessor controller. This system also provides Individual Phase Control (IPC). See details for MPII and IPC below.

PLC = AVR + ISO + SPD

Standard Voltage Regulation +/-1%

The StacoAVR Power Line Conditioner (PLC) is comprised of a motorized variable autotransformer providing precise voltage correction to your critical loads through series buck-boost transformers. The power conditioner also includes a double-shielded isolation transformer (ISO) and surge protection device (SPD) for additional transient protection. Customer-selected output voltage is maintained by a microprocessor controller. See details for ISO and SPD below.

MLC = PLC + IPC

Standard Voltage Regulation +/-1%

The StacoAVR Microprocessor Line Conditioner (MLC) is comprised of a motorized variable autotransformer providing precise voltage correction to your critical loads through series buck-boost transformers. The power conditioner also includes a double-shielded isolation transformer (ISO) and surge protection device (SPD) for additional transient protection. Customer-selected output voltage is maintained by the Staco (MPII) Microprocessor controller. This system also provides Individual Phase Control (IPC). See details for ISO, SPD, MPII and IPC below.

SVR

Standard Voltage Regulation +/-1%, adjustable to +/-0.5V with specials to +/-0.25V

The StacoAVR Stepper Voltage Regulator (SVR) is comprised of a stepper motorized variable autotransformer providing precise voltage correction to your critical loads through a series buck-boost transformer. Customer-selected output voltage is maintained by a microprocessor controller. Single phase only. Surge Protective Device (SPD) not available on Rack Units.

SLC = SVR + ISO + SPD

Standard Voltage Regulation +/-1%

The StacoAVR Stepper Line Conditioner (SLC) is comprised of a motorized stepper variable autotransformer providing precise voltage correction to your critical loads through a series buck-boost transformer. The power conditioner also includes a double-shielded isolation transformer (ISO) and surge protection device (SPD) for additional transient protection. Customer-selected output voltage is maintained by a microprocessor controller. See details for ISO and SPD below. Single phase only.

Dimensions (H xWx D)

1R	10x19x10
A	12x20x10
B	34x22x17
B1	23x22x17
C	53x22x17
D	53x31x17
E	34x37x25
F	53x37x25

G	71x37x25
H	53x51x25
I	71x51x25
I	71x51x25
J	53x65x25
K	71x65x25
2K	71x65x50
2L	71x86x50

Staco Voltage Regulator (Power Conditioner) Model List

Standard Options

Voltages

Standard voltages are shown. Contact factory for other configurations.

Input Range

The standard input range is (W-range) +10 to -20%, (Q-range) +10 to -10% type, (T-range) +10 to -15%, and (V-range) +15 to -30%. Contact factory for other configurations.

IPC = Individual Phase Control

This Individual Phase Control (IPC) will provide up to ± 0.5 volt output voltage control band. With IPC and the microprocessor controller, the output voltage of each phase is maintained to eliminate fluctuations in individual phases. The controller also has an output digital voltmeter that display outputs of each phase.

MPH = Microprocessor Controller

The "MP" Microprocessor Controller option offers intelligent control that provides users control and monitoring locally through a panel mounted microterminal, or remotely through its RS-232, bi-directional, communications port. The MP Controller is user configurable to accept peak-to-peak, RMS or average voltage feedback signals and provides for set point and dead-band adjustments. While standard units provide $\pm 1\%$ output regulation, the MP Controller can provide regulation in the range of ± 1 volt. MP controllers are standard on all individual phase control, three-phase voltage MVR regulators and MLC power conditioners.

SPD = Surge Protection Device

Option Suffix T

Description: Parallel connected, fixed clamping type, minimum 40kA per mode transient voltage surge suppressor utilizing encapsulated Optimal Response Network circuitry, which provides the lowest possible Let-Through Voltages.

Application: Designed for use at ANSI/IEEE Categories C, B and A with susceptibility up to medium exposure levels. This option utilizes a transient suppression network to provide protection from the damaging effects of transient voltage activity in the normal mode (L-N, L-L) and common mode (N-G, L-G). SPD is standard on all PLC and MLC models, and optional on other configurations.

ISO = Double Shielded Isolation Transformer

The double-shielded isolation transformer with 120dB common mode and 60dB normal (transverse) mode attenuation creating a bonded neutral (Wye-Wye, no phase shift, newly derived source for input equals output units), (Delta-Wye, 30 degree phase shift, newly derived source for voltage change units).

MB (3-Position Manual Switch) or MBCB (3-Circuit Breakers) = External Maintenance Bypass Switch

Break-Before-Make 480 volt class, 50/60 Hz rated maintenance bypass switch is enclosed in a drip-proof enclosure. When installed it will provide complete electrical and mechanical isolation for routine maintenance. The single-phase units are wall mounted and the three-phase units are wall or floor mounted.

Primary and Secondary Circuit Breakers

Contact factory for pricing and part numbers.

Other Options

Other options include both analog and digital metering or custom enclosures. Contact factory for pricing and part numbers.

Understanding the STACO CATALOG NUMBERING SYSTEM

1: Product Type	
AVR	Voltage Regulator, analog control
FVR	Same as AVR, with UL 508C 3rd Edition certification for P/N FVR-48WCSD225
MVR	Voltage Regulator, microprocessor control
PLC	Voltage Regulator w/ Iso Transformer & Surge Suppression, analog control
MLC	Voltage Regulator w/ Iso Transformer & Surge Suppression, microprocessor control
SVR	Voltage Regulator, stepper control
SLC	Voltage Regulator w/ Iso Transformer & Surge Suppression, stepper control

12	120 to 120
20	208 to 208
21	240 to 120/240 [Edison Type]
22	240 to 208
23	230 to 230
24	240 to 240
25	220 to 220 3-phase, 220 to 120 1-phase
26	230 to 208
27	277 to 277
28	240 to 120
29	120/240 to 120/240
32	380 to 220
33	400 to 480
38	380 to 380
39	380 to 208
40	400 to 400 (handles 380-400-415)
41	480 to 120/240 [Edison Type]
42	480 to 208
43	480 to 240 (handles 460 to 230 and 440 to 220)
44	415 to 240 (handles 400 to 230 and 380 to 220)
45	480 to 220
46	480 to 277
47	440 to 440
48	480 to 480
49	208 to 480
50	220 to 208
51	400 to 230
60	600 to 600
61	600 to 120/240 [Edison Type]
62	600 to 208
63	600 to 240
64	600 to 480
65	600 to 240
74	240 to 415 (handles 230 to 400 and 220 to 380)
75	240 to 480
83	480 to 400
84	440 to 400
85	220 to 400
86	480 to 380

12	120 to 120
20	208 to 208
49	208 to 480
50	220 to 208
25	220 to 220
85	220 to 400
26	230 to 208
23	230 to 230
28	240 to 120
21	240 to 120/240 [Edison Type]
22	240 to 208
24	240 to 240
74	240 to 415 (handles 230 to 400 and 220 to 380)
75	240 to 480
29	240/120 to 240/120
27	277 to 277
39	380 to 208
32	380 to 220
38	380 to 380
51	400 to 230
40	400 to 400 (handles 380-400-415)
33	400 to 480
44	415 to 240 (handles 400 to 230 and 380 to 220)
84	440 to 400
47	440 to 440
41	480 to 120/240 [Edison Type]
42	480 to 208
45	480 to 220
43	480 to 240 (handles 460 to 230 and 440 to 220)
46	480 to 277
86	480 to 380
83	480 to 400
48	480 to 480
61	600 to 120/240 [Edison Type]
62	600 to 208
63	600 to 240
65	600 to 240
64	600 to 480
60	600 to 600

Understanding the STACO CATALOG NUMBERING SYSTEM

[illegible]

A	Single Phase, 60 Hertz
B	Single Phase, 50/60 Hertz
C	Three Phase, 60 Hertz
D	Three Phase, 50/60 Hertz

I	Individual Phase Control
S	Single Line Control

D	Delta input, Delta output
H	High Leg Delta
N	Not used
X	Delta input, Wye output; Iso. no phase shift
Y	Wye input, Wye output
Z	Delta input, Wye output; Iso. 30 degree phase shift

D	+ 2.5% to –5% / $\pm 1\%$
F	+ 5% to –10% / $\pm 1\%$
E	+ 5% to –5% / $\pm 1\%$
B	+ 5% to –9% / $\pm 1\%$
H	+ 6% to –10% / $\pm 1\%$
P	+ 7% to – 17% / $\pm 1\%$
N	+ 7% to –11% / $\pm 1\%$
Q	+10% to –10% / ± 1 volt
R	+10% to –11.5% / ± 1 volt
T	+10% to –15%/ ± 1 volt
W	+10% to –20% / $\pm 1\%$
K	+10% to –40% / $\pm 5\%$
A	+13% to –40% / $\pm 1\%$
M	+15% to –10% / $\pm 1\%$
Z	+15% to –15% / ± 1 %
V	+15% to –30% / ± 1 %
J	+20% to –10% / $\pm 1\%$
G	+20% to –20% / ± 1 %
Y	+25% to –10% / $\pm 1\%$
S	+25% to –25% / $\pm 1\%$
X	+25% to –30% / $\pm 1\%$
U	+27% to –35% / $\pm 1\%$
O	+30% to –10% / $\pm 1\%$
L	+30% to –20% / $\pm 1\%$
I	+30% to –30% / $\pm 1\%$

Staco Voltage Regulator (Power Conditioner) Model List

Understanding the STACO CATALOG NUMBERING SYSTEM

7: KVA Rating	
	Actual unit kVA, max of four positions
8: Rack Mounted Unit	
R	Only used when rack mount type is required
9: Options (Contact Factory)	
A2	Output Voltage Range with Phase Loss and Phase Reversal Detection Alarms
A6	MP Controlled Output Voltage Range Protection Alarm with Manual Override
B	Bypass switch internal
L	Phase Loss and Voltage Range Alarm Protection circuitry for use with input or output Circuit Breakers, or output Contactor. Requires (S1) or (P1) Breaker Options or (O) output Contactor option.
Q	Wide Temperature range unit -5 to 50 degree Celsius
T	Surge Protective Device (SPD)

SINGLE AND THREE PHASE

D	Digital Volt Meter Replacement for Analog Meter on Standard Units Single or Three Phase		
AD	Digital Amps displayed on MP11 controller		
F	Frequency		
	Single Phase System Description		Three Phase System Description
MAD	Meter-Amp-Digital-Output, (1) Meter		Meter-Amp-Digital-Output, (1) Meter & Phase Selector Switch
MADI	Meter-Amp-Digital-Input, (1) Meter		Meter-Amp-Digital-Input, (1) Meter & Phase Selector Switch
MVD	Meter-Volt-Digital-Output, (1) Meter		Meter-Volt-Digital-Output, (1) Meter & Phase Selector Switch
MVDI	Meter-Volt-Digital-Input, (1) Meter		Meter-Volt-Digital-Input, (1) Meter & Phase Selector Switch
MP	N/A		Meter-Power Meter-Digital-Output, (1) Meter Multifunctional KW, KVA, A, V, Hz
MPI	N/A		Meter-Power Meter-Digital-Input, (1) Meter Multifunctional KW, KVA, A, V, Hz
MPIO	N/A		Meter-Power Meter-Digital-Input & Output, (2) Meters Multifunctional
MAF	N/A		Meter-Amp Meter & Frequency Meter Analog Output
P	Primary Circuit Breaker		
PH	Higher kAIC Breaker (65 kAIC)		
P1	Primary Circuit Breaker with Shunt Trip		
P2	Primary Circuit Breaker with Undervoltage Trip		
P3	Primary Circuit Breaker with Shunt Trip to be used as an input contactor switch with NO CURRENT PROTECTION.		
S	Secondary Circuit Breaker		
S1	Secondary Circuit Breaker with Shunt Trip.		
O	Output Contactor		
K	"K 13" rated transformer		
U	UPS Power-Loss Soft Start		
V	Variable Transformer Input Fuse		
Z	Tropicalization		
10: Special Enclosure Type		Suffix for Enclosures	
3R	Nema 3R	A	Air Conditioning
3RS	Stainless Steel Nema 3R	F	Fans with thermostat for unit
4	Nema 4	H	Heater with thermostat for unit
4X	Nema 4X	HH	Heater with thermostat for unit and MP controller
4XS	Stainless Steel Nema 4X		
12	Nema 12		
12S	Stainless Steel Nema 12		
NE	No enclosure		

Single Phase (120, 240) Voltage Regulator (Power Conditioner) Model List

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Iso Trans	TVSS	Size	Wt
2.5 kVA									
20.8	SVR-12WBSN002	50/60	120	120	+10%/-20%			A	100
20.8	SVR-12WBSN002R	50/60	120	120	+10%/-20%			1R	100
10.4	SVR-24WBSN002	50/60	240D	240D	+10%/-20%			A	95
10.4	SVR-24WBSN002R	50/60	240D	240D	+10%/-20%			1R	90
10.4	SVR-21WBSN002	50/60	240D	120/240	+10%/-20%	□		B	150
5 kVA									
41.7	SVR-12WBSN005	50/60	120	120	+10%/-20%			A	122
41.7	SVR-12WBSN005R	50/60	120	120	+10%/-20%			1R	110
41.7	SLC-12WBSN005	50/60	120	120	+10%/-20%	□	□	B	150
20.8	SVR-24WBSN005	50/60	240D	240D	+10%/-20%			A	110
20.8	SVR-24WBSN005R	50/60	240D	240D	+10%/-20%			1R	100
20.8	SVR-21WBSN005	50/60	240D	120/240	+10%/-20%	□		B	200
20.8	SLC-21WBSN005	50/60	240D	120/240	+10%/-20%	□	□	B	210
7.5 kVA									
62.5	SVR-12WBSN007	50/60	120	120	+10%/-20%			A	120
62.5	SVR-12WBSN007R	50/60	120	120	+10%/-20%			1R	117
62.5	SLC-12WBSN007	50/60	120	120	+10%/-20%	□	□	B	200
31.3	SVR-24PBSN007	50/60	240D	240D	+7%/-17%			A	125
31.3	SVR-24PBSN007R	50/60	240D	240D	+7%/-17%			1R	115
31.3	SVR-21PBSN007	50/60	240D	120/240	+7%/-17%	□		B	300
31.3	SLC-21PBSN007	50/60	240D	120/240	+7%/-17%	□	□	B	310
31.3	PLC-21WASN007	60	240D	120/240	+10%/-20%	□	□	D	400
10 kVA									
83.3	SVR-12PBSN010	50/60	120	120	+7%/-17%			A	125
83.3	SVR-12PBSN010R	50/60	120	120	+7%/-17%			1R	117
83.3	PLC-12WASN010	60	120	120	+10%/-20%	□	□	F	410
41.7	SVR-24NBSN010	50/60	240D	240D	+7%/-11%			A	122
41.7	SVR-24NBSN010R	50/60	240D	240D	+7%/-11%			1R	112
41.7	AVR-24WBSN010	50/60	240D	240D	+10%/-20%			B1	360
41.7	AVR-21WASN010	60	240D	120/240	+10%/-20%	□		E	430
41.7	PLC-21WASN010	60	240D	120/240	+10%/-20%	□	□	D	440
15 kVA									
125	SVR-12NBSN015	50/60	120	120	+7%/-11%			A	130
125	SVR-12NBSN015R	50/60	120	120	+7%/-11%			1R	125
125	PLC-12WASN015	60	120	120	+10%/-20%	□	□	F	470
62.5	SVR-24HBSN015	50/60	240D	240D	+6%/-10%			A	113
62.5	SVR-24HBSN015R	50/60	240D	240D	+6%/-10%			1R	115
62.5	AVR-24WBSN015	50/60	240D	240D	+10%/-20%			B1	360
62.5	AVR-21WASN015	60	240D	120/240	+10%/-20%	□		E	490
62.5	PLC-21WASN015	60	240D	120/240	+10%/-20%	□	□	F	500
19 kVA									
158	SVR-12FASN019R	60	120	120	+5%/-10%			1R	130
25 kVA									
208	AVR-12WASN025	60	120	120	+10%/-20%			E	520
208	PLC-12WASN025	60	120	120	+10%/-20%	□	□	F	590
104	AVR-24WASN025	60	240D	240D	+10%/-20%			E	360
104	AVR-21WASN025	60	240D	120/240	+10%/-20%	□		E	600
104	PLC-21WASN025	60	240D	120/240	+10%/-20%	□	□	F	610
26 kVA Custom for Marine Applications									
110	AVR-24WBSN026	50/60	240D	240D	+10%/-20%			B1	360
37.5 kVA									
313	AVR-12WASN037	60	120	120	+10%/-20%			E	570
313	PLC-12WASN037	60	120	120	+10%/-20%	□	□	F	800
156	AVR-24WASN037	60	240D	240D	+10%/-20%			E	480
156	AVR-21WASN037	60	240D	120/240	+10%/-20%	□		F	820
156	PLC-21WASN037	60	240D	120/240	+10%/-20%	□	□	F	830

Single Phase (380) Volt International Regulator Model List

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Iso Trans	TVSS	Size	Wt
2.5 kVA									
6.6	AVR-38WBSN002	50/60	380D	380D	10%/-20%			B	130
5 kVA									
13.2	AVR-38WBSN005	50/60	380D	380D	10%/-20%			B	140
7.5 kVA									
19.7	AVR-38WBSN007	50/60	380D	380D	10%/-20%			B	150
10 kVA									
26.3	AVR-38WBSN010	50/60	380D	380D	10%/-20%			B	160
15 kVA									
39.5	AVR-38WBSN015	50/60	380D	380D	10%/-20%			B	200
25 kVA									
65.8	AVR-38WBSN025	50/60	380D	380D	10%/-20%			E	330
37.5 kVA									
98.7	AVR-38WBSN037	50/60	380D	380D	10%/-20%			E	350

Options:	add -U suffix for UPS Power Loss Soft Start	□			35
	add -T suffix for TVSS (included where noted)		□		5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Three Phase (208, 240, 480) Volt +10 / -20% Range Model List

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Control	Iso Trans	TVSS	Size	Wt
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9 kVA

25	AVR-20WCSY009	60	208/120	208/120	Single			B	270
25	MVR-20WCIY009	60	208/120	208/120	Individual			C	300
25	PLC-20WCSX009	60	208D	208/120	Single	□	□	D	620
25	MLC-20WCIX009	60	208D	208/120	Individual	□	□	D	630
25	PLC-22WCSX009	60	240D	208/120	Single	□	□	D	600
25	PLC-42WCSX009	60	480D	208/120	Single	□	□	D	610
25	MLC-42WCIX009	60	480D	208/120	Individual	□	□	D	620
21.7	AVR-24WCSD009	60	240D	240D	Single			B	270
10.8	PLC-48WCSX009	60	480D	480/277	Single	□	□	D	610

15 kVA

41.6	AVR-20WCSY015	60	208/120	208/120	Single			B	310
41.6	MVR-20WCIY015	60	208/120	208/120	Individual			C	340
41.6	PLC-20WCSX015	60	208D	208/120	Single	□	□	D	650
41.6	MLC-20WCIX015	60	208D	208/120	Individual	□	□	D	660
41.6	PLC-22WCSX015	60	240D	208/120	Single	□	□	D	650
41.6	PLC-42WCSX015	60	480D	208/120	Single	□	□	D	640
41.6	MLC-42WCIX015	60	480D	208/120	Individual	□	□	D	650
36.1	AVR-24WCSD015	60	240D	240D	Single			B	300
18	AVR-48WCSD015	60	480D	480D	Single			B	290
18	AVR-48WCSY015	60	480/277	480/277	Single			B	290
18	MVR-48WCIY015	60	480/277	480/277	Individual			C	330
18	PLC-48WCSX015	60	480D	480/277	Single	□	□	D	640

30 kVA

83.3	AVR-20WCSY030	60	208/120	208/120	Single			E	630
83.3	MVR-20WCIY030	60	208/120	208/120	Individual			F	670
83.3	PLC-20WCSX030	60	208D	208/120	Single	□	□	F	1040
83.3	MLC-20WCIX030	60	208D	208/120	Individual	□	□	G	1070
83.3	PLC-22WCSX030	60	240D	208/120	Single	□	□	F	1040
83.3	PLC-42WCSX030	60	480D	208/120	Single	□	□	F	1020
83.3	MLC-42WCIX030	60	480D	208/120	Individual	□	□	G	1050
72.2	AVR-24WCSD030	60	240D	240D	Single			E	630
36.1	AVR-48WCSD030	60	480D	480D	Single			E	610
36.1	AVR-48WCSY030	60	480/277	480/277	Single			E	610
36.1	MVR-48WCIY030	60	480/277	480/277	Individual			F	680
36.1	PLC-48WCSX030	60	480D	480/277	Single	□	□	F	1020

45 kVA

125	AVR-20WCSY045	60	208/120	208/120	Single			F	690
125	MVR-20WCIY045	60	208/120	208/120	Individual			F	750
125	PLC-20WCSX045	60	208D	208/120	Single	□	□	G	1170
125	MLC-20WCIX045	60	208D	208/120	Individual	□	□	I	1200
125	PLC-22WCSX045	60	240D	208/120	Single	□	□	G	1255
125	PLC-42WCSX045	60	480D	208/120	Single	□	□	G	1140
125	MLC-42WCIX045	60	480D	208/120	Individual	□	□	I	1180
108	AVR-24WCSD045	60	240D	240D	Single			F	680
54.1	AVR-48WCSD045	60	480D	480D	Single			E	660
54.1	AVR-48WCSY045	60	480/277	480/277	Single			E	660
54.1	MVR-48WCIY045	60	480/277	480/277	Individual			F	730
54.1	PLC-48WCSX045	60	480D	480/277	Single	□	□	G	1255

Three Phase (208, 240, 480) Volt +10 / -20% Range Model List

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Control	Iso Trans	TVSS	Size	Wt
75 kVA									
208	AVR-20WCSY075	60	208/120	208/120	Single			F	1090
208	MVR-20WCIY075	60	208/120	208/120	Individual			H	1070
208	PLC-20WCSX075	60	208D	208/120	Single	□	□	I	1790
208	MLC-20WCIX075	60	208D	208/120	Individual	□	□	I	1800
208	PLC-22WCSX075	60	240D	208/120	Single	□	□	I	1770
208	PLC-42WCSX075	60	480D	208/120	Single	□	□	G	1470
208	MLC-42WCIX075	60	480D	208/120	Individual	□	□	I	1500
180	AVR-24WCSD075	60	240D	240D	Single			F	1080
90.2	AVR-48WCSD075	60	480D	480D	Single			F	740
90.2	AVR-48WCSY075	60	480/277	480/277	Single			F	740
90.2	MVR-48WCIY075	60	480/277	480/277	Individual			F	800
90.2	PLC-48WCSX075	60	480D	480/277	Single	□	□	G	1470
112.5 kVA									
312	AVR-20WCSY112	60	208/120	208/120	Single			F	1190
312	MVR-20WCIY112	60	208/120	208/120	Individual			H	1250
312	PLC-20WCSX112	60	208D	208/120	Single	□	□	I	2070
312	MLC-20WCIX112	60	208D	208/120	Individual	□	□	I	2080
312	PLC-22WCSX112	60	240D	208/120	Single	□	□	I	2050
312	PLC-42WCSX112	60	480D	208/120	Single	□	□	I	2010
312	MLC-42WCIX112	60	480D	208/120	Individual	□	□	I	2020
271	AVR-24WCSD112	60	240D	240D	Single			F	1170
135	AVR-48WCSD112	60	480D	480D	Single			F	1130
135	AVR-48WCSY112	60	480/277	480/277	Single			F	1130
135	MVR-48WCIY112	60	480/277	480/277	Individual			H	1190
135	PLC-48WCSX112	60	480D	480/277	Single	□	□	I	2230
150 kVA									
416	AVR-20WCSY150	60	208/120	208/120	Single			G	1550
416	MVR-20WCIY150	60	208/120	208/120	Individual			I	1640
416	PLC-20WCSX150	60	208D	208/120	Single	□	□	I	2620
416	MLC-20WCIX150	60	208D	208/120	Individual	□	□	I	2640
416	PLC-22WCSX150	60	240D	208/120	Single	□	□	I	2600
416	PLC-42WCSX150	60	480D	208/120	Single	□	□	I	2290
416	MLC-42WCIX150	60	480D	208/120	Individual	□	□	I	2310
361	AVR-24WCSD150	60	240D	240D	Single			G	1520
180	AVR-48WCSD150	60	480D	480D	Single			F	1200
180	AVR-48WCSY150	60	480/277	480/277	Single			F	1200
180	MVR-48WCIY150	60	480/277	480/277	Individual			H	1260
180	PLC-48WCSX150	60	480D	480/277	Single	□	□	I	2290
225 kVA									
625	AVR-20WCSY225	60	208/120	208/120	Single			J	2040
625	MVR-20WCIY225	60	208/120	208/120	Individual			J	1880
625	PLC-42WCSX225	60	480D	208/120	Single	□	□	I	3080
625	MLC-42WCIX225	60	480D	208/120	Individual	□	□	I	3120
541	AVR-24WCSD225	60	240D	240D	Single			J	2000
271	AVR-48WCSD225	60	480D	480D	Single			G	1590
271	AVR-48WCSY225	60	480/277	480/277	Single			G	1590
271	MVR-48WCIY225	60	480/277	480/277	Individual			J	1595
271	PLC-48WCSX225	60	480D	480/277	Single	□	□	I	3260
Options: add -U suffix for UPS Power Loss Soft Start						□			35
add -T suffix for TVSS (included where noted)							□		5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Three Phase (208, 240, 480) Volt +10 / -20% Range Model List

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Control	Iso Trans	TVSS	Size	Wt
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300 kVA

833	AVR-20WCSY300	60	208/120	208/120	Single			K	2430
833	MVR-20WCIY300	60	208/120	208/120	Individual			K	2450
722	AVR-24WCSD300	60	240D	240D	Single			K	2390
361	AVR-48WCSD300	60	480D	480D	Single			J	2030
361	AVR-48WCSY300	60	480/277	480/277	Single			J	2030
361	MVR-48WCIY300	60	480/277	480/277	Individual			J	2050

400 kVA

1110	MVR-20WCIY400	60	208/120	208/120	Individual			K	3100
481	AVR-48WCSD400	60	480D	480D	Single			J	2420
481	AVR-48WCSY400	60	480/277	480/277	Single			J	2420
481	MVR-48WCIY400	60	480/277	480/277	Individual			J	2430

500 kVA

1388	MVR-20WCIY500	60	208/120	208/120	Individual			K	3770
600	AVR-48WCSD500	60	480D	480D	Single			K	3020
600	AVR-48WCSY500	60	480/277	480/277	Single			K	3020
600	MVR-48WCIY500	60	480/277	480/277	Individual			K	3030

Options:	add -U suffix for UPS Power Loss Soft Start	□			35
	add -T suffix for TVSS (included where noted)		□		5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Three Phase (380) Volt +10 / -20% Range Models International 50 HZ applications

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Control	Size	Wt
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9 kVA

13.7	AVR-38WDSY009	50/60	380/220	380/220	Single	B	280
13.7	MVR-38WDIY009	50/60	380/220	380/220	Individual	C	310

15 kVA

22.8	AVR-38WDSY015	50/60	380/220	380/220	Single	B	310
22.8	MVR-38WDIY015	50/60	380/220	380/220	Individual	C	340

30 kVA

45.6	AVR-38WDSY030	50/60	380/220	380/220	Single	E	640
45.6	MVR-38WDIY030	50/60	380/220	380/220	Individual	F	700

45 kVA

68.4	AVR-38WDSY045	50/60	380/220	380/220	Single	E	690
68.4	MVR-38WDIY045	50/60	380/220	380/220	Individual	F	760

75 kVA

114	AVR-38WDSY075	50/60	380/220	380/220	Single	F	1090
114	MVR-38WDIY075	50/60	380/220	380/220	Individual	H	1150

112.5 kVA

171	AVR-38WDSY112	50/60	380/220	380/220	Single	F	1180
171	MVR-38WDIY112	50/60	380/220	380/220	Individual	H	1250

150 kVA

228	AVR-38WDSY150	50/60	380/220	380/220	Single	G	1540
228	MVR-38WDIY150	50/60	380/220	380/220	Individual	J	1630

225 kVA

342	AVR-38WDSY225	50/60	380/220	380/220	Single	J	2010
342	MVR-38WDIY225	50/60	380/220	380/220	Individual	J	2030

300 kVA

456	AVR-38WDSY300	50/60	380/220	380/220	Single	J	2390
456	MVR-38WDIY300	50/60	380/220	380/220	Individual	J	2410

400 kVA

608	AVR-38WDSY400	50/60	380/220	380/220	Single	K	3020
608	MVR-38WDIY400	50/60	380/220	380/220	Individual	K	3030

500 kVA

760	AVR-38WDSY500	50/60	380/220	380/220	Single	K	3410
760	MVR-38WDIY500	50/60	380/220	380/220	Individual	K	3430

Options	add -U suffix for UPS Power Loss Soft Start	□		35
	add -T suffix for TVSS (included where noted)		□	5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Three Phase (480) Volt +/-10%; +10 / -15%; +15% / -30% Range Models

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Soft Start	TVSS	Size	Wt
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83 kVA

100	MVR-48QCIY083	60	480/277	480/277	+10%/-10%			F	700
100	MVR-48TCIY083	60	480/277	480/277	+10%/-15%			F	750
100	MVR-48VCIY083	60	480/277	480/277	+15%/-30%			H	1200
100	MVR-48QCID083	60	480D	480D	+10%/-10%			G	1000
100	MVR-48TCID083	60	480D	480D	+10%/-15%			G	1050
100	MVR-48VCID083	60	480D	480D	+15%/-30%			I	1600

125 kVA & 138 kVA

166	MVR-48QCIY138	60	480/277	480/277	+10%/-10%			F	800
150	MVR-48TCIY125	60	480/277	480/277	+10%/-15%			H	1050
150	MVR-48VCIY125	60	480/277	480/277	+15%/-30%			J	1600
166	MVR-48QCID138	60	480D	480D	+10%/-10%			G	1100
150	MVR-48TCID125	60	480D	480D	+10%/-15%			I	1350
150	MVR-48VCID125	60	480D	480D	+15%/-30%			K	2000

166 kVA

200	MVR-48QCIY166	60	480/277	480/277	+10%/-10%			H	1050
200	MVR-48TCIY166	60	480/277	480/277	+10%/-15%			H	1200
200	MVR-48VCIY166	60	480/277	480/277	+15%/-30%			J	1940
200	MVR-48TCID166	60	480D	480D	+10%/-15%			I	1500
200	MVR-48VCID166	60	480D	480D	+15%/-30%			K	2340

249 kVA

300	MVR-48QCIY249	60	480/277	480/277	+10%/-10%			H	1210
300	MVR-48TCIY249	60	480/277	480/277	+10%/-15%			J	1550
300	MVR-48VCIY249	60	480/277	480/277	+15%/-30%			J	2350
300	MVR-48QCID249	60	480D	480D	+10%/-10%			I	1510
300	MVR-48TCID249	60	480D	480D	+10%/-15%			K	1850
300	MVR-48VCID249	60	480D	480D	+15%/-30%			K	3050

333 kVA

400	MVR-48QCIY333	60	480/277	480/277	+10%/-10%			J	1550
400	MVR-48TCIY333	60	480/277	480/277	+10%/-15%			J	1830
400	MVR-48VCIY333	60	480/277	480/277	+15%/-30%			K	2970
400	MVR-48QCID333	60	480D	480D	+10%/-10%			K	1840
400	MVR-48TCID333	60	480D	480D	+10%/-15%			K	2130
400	MVR-48VCID333	60	480D	480D	+15%/-30%			K	3670

Three Phase (480) Volt +/-10%; +10 / -15%; +15% / -30% Range Models

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Soft Start	TVSS	Size	Wt
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416 kVA

500	MVR-48QCIY416	60	480/277	480/277	+10%/-10%			J	1560
500	MVR-48TCIY416	60	480/277	480/277	+10%/-15%			J	1970
500	MVR-48VCIY416	60	480/277	480/277	+15%/-30%			K	3600
500	MVR-48QCID416	60	480D	480D	+10%/-10%			K	1860
500	MVR-48TCID416	60	480D	480D	+10%/-15%			K	2270
500	MVR-48VCID416	60	480D	480D	+15%/-30%			K	4100

500 kVA

600	MVR-48QCIY500	60	480/277	480/277	+10%/-10%			J	1950
600	MVR-48TCIY500	60	480/277	480/277	+10%/-15%			J	2300
600	MVR-48VCIY500	60	480/277	480/277	+15%/-30%			2K	4600
600	MVR-48QCID500	60	480D	480D	+10%/-10%			K	2350
600	MVR-48TCID500	60	480D	480D	+10%/-15%			K	2600
600	MVR-48VCID500	60	480D	480D	+15%/-30%			2K	5600

582 kVA

700	MVR-48QCIY582	60	480/277	480/277	+10%/-10%			J	2200
700	MVR-48TCIY582	60	480/277	480/277	+10%/-15%			J	2780
700	MVR-48VCIY582	60	480/277	480/277	+15%/-30%			2K	5500
700	MVR-48QCID582	60	480D	480D	+10%/-10%			K	2540
700	MVR-48TCID582	60	480D	480D	+10%/-15%			K	3080
700	MVR-48VCID582	60	480D	480D	+15%/-30%			2K	6500

665 kVA

800	MVR-48QCIY665	60	480/277	480/277	+10%/-10%			J	2370
800	MVR-48TCIY665	60	480/277	480/277	+10%/-15%			K	3090
800	MVR-48VCIY665	60	480/277	480/277	+15%/-30%			2K	6500
800	MVR-48QCID665	60	480D	480D	+10%/-10%			K	2710
800	MVR-48TCID665	60	480D	480D	+10%/-15%			K	3390
800	MVR-48VCID665	60	480D	480D	+15%/-30%			2K	7500

831 kVA

1000	MVR-48QCIY831	60	480/277	480/277	+10%/-10%			K	3000
1000	MVR-48TCIY831	60	480/277	480/277	+10%/-15%			2K	4600
1000	MVR-48VCIY831	60	480/277	480/277	+15%/-30%				
1000	MVR-48QCID831	60	480D	480D	+10%/-10%			2K	3800
1000	MVR-48TCID831	60	480D	480D	+10%/-15%			2K	5400
1000	MVR-48VCID831	60	480D	480D	+15%/-30%				

Options	add -U suffix for UPS Power Loss Soft Start	□			35
	add -T suffix for TVSS (included where noted)		□		5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Three Phase (400) Volt +/-10%; +10 / -15%; +15% / -30% Range Models International 50 HZ applications

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Soft Start	TVSS	Size	Wt
69 kVA @ 400 volts **									
100	MVR-40QDIY069	50/60	400/230	400/230	+10%/-10%			F	700
100	MVR-40TDIY069	50/60	400/230	400/230	+10%/-15%			F	750
100	MVR-40VDIY069	50/60	400/230	400/230	+15%/-30%			H	1200
100	MVR-40QDID069	50/60	400D	400D	+10%/-10%			G	1000
100	MVR-40TDID069	50/60	400D	400D	+10%/-15%			G	1050
100	MVR-40VDID069	50/60	400D	400D	+15%/-30%			I	1600
104 kVA @ 400 volts **									
150	MVR-40QDIY104	50/60	400/230	400/230	+10%/-10%			F	800
150	MVR-40TDIY104	50/60	400/230	400/230	+10%/-15%			H	1050
150	MVR-40VDIY104	50/60	400/230	400/230	+15%/-30%			J	1600
150	MVR-40QDID104	50/60	400D	400D	+10%/-10%			G	1100
150	MVR-40TDID104	50/60	400D	400D	+10%/-15%			I	1350
150	MVR-40VDID104	50/60	400D	400D	+15%/-30%			K	2000
139 kVA @ 400 volts **									
200	MVR-40QDIY139	50/60	400/230	400/230	+10%/-10%			H	1050
200	MVR-40TDIY139	50/60	400/230	400/230	+10%/-15%			H	1200
200	MVR-40VDIY139	50/60	400/230	400/230	+15%/-30%			J	1940
200	MVR-40QDID139	50/60	400D	400D	+10%/-10%			I	1350
200	MVR-40TDID139	50/60	400D	400D	+10%/-15%			I	1500
200	MVR-40VDID139	50/60	400D	400D	+15%/-30%			K	2340
208 kVA @ 400 volts **									
300	MVR-40QDIY208	50/60	400/230	400/230	+10%/-10%			H	1210
300	MVR-40TDIY208	50/60	400/230	400/230	+10%/-15%			J	1550
300	MVR-40VDIY208	50/60	400/230	400/230	+15%/-30%			J	2350
300	MVR-40QDID208	50/60	400D	400D	+10%/-10%			I	1510
300	MVR-40TDID208	50/60	400D	400D	+10%/-15%			K	1850
300	MVR-40VDID208	50/60	400D	400D	+15%/-30%			K	3050
277 kVA @ 400 volts **									
400	MVR-40QDIY277	50/60	400/230	400/230	+10%/-10%			J	1550
400	MVR-40TDIY277	50/60	400/230	400/230	+10%/-15%			J	1830
400	MVR-40VDIY277	50/60	400/230	400/230	+15%/-30%			K	2970
400	MVR-40QDID277	50/60	400D	400D	+10%/-10%			K	1840
400	MVR-40TDID277	50/60	400D	400D	+10%/-15%			K	2130
400	MVR-40VDID277	50/60	400D	400D	+15%/-30%			K	3670

Note 1: All "MVR" units are individual phase control type.

** 380 volt, 400 volt, and 415 volt, 50/60 Hz units
Select unit based on output amps.
Input range will not change but unit KVA rating
will change as noted in the selection chart to the
right.

KVA Rating @		
415v	400v	380v
72	69	66
108	104	99
144	139	132
216	208	197
288	277	263
359	346	329
431	416	395
503	485	461
575	554	527
719	693	658

Three Phase (400) Volt +/-10%; +10 / -15%; +15% / -30% Range Models International 50 HZ applications

Output Amps	Part Number	Freq	Input Voltage	Output Voltage	Input Volt Range	Soft Start	TVSS	Size	Wt
346 kVA @ 400 volts **									
500	MVR-40QDIY346	50/60	400/230	400/230	+10%/-10%			J	1560
500	MVR-40TDIY346	50/60	400/230	400/230	+10%/-15%			J	1970
500	MVR-40VDIY346	50/60	400/230	400/230	+15%/-30%			K	3600
500	MVR-40QDID346	50/60	400D	400D	+10%/-10%			K	1860
500	MVR-40TDID346	50/60	400D	400D	+10%/-15%			K	2270
500	MVR-40VDID346	50/60	400D	400D	+15%/-30%			K	4100
416 kVA @ 400 volts **									
600	MVR-40QDIY416	50/60	400/230	400/230	+10%/-10%			J	1950
600	MVR-40TDIY416	50/60	400/230	400/230	+10%/-15%			J	2300
600	MVR-40VDIY416	50/60	400/230	400/230	+15%/-30%			2K	4600
600	MVR-40QDID416	50/60	400D	400D	+10%/-10%			K	2350
600	MVR-40TDID416	50/60	400D	400D	+10%/-15%			K	2600
600	MVR-40VDID416	50/60	400D	400D	+15%/-30%			2K	5600
485 kVA @ 400 volts **									
700	MVR-40QDIY485	50/60	400/230	400/230	+10%/-10%			J	2200
700	MVR-40TDIY485	50/60	400/230	400/230	+10%/-15%			J	2780
700	MVR-40VDIY485	50/60	400/230	400/230	+15%/-30%			2K	5500
700	MVR-40QDID485	50/60	400D	400D	+10%/-10%			K	2540
700	MVR-40TDID485	50/60	400D	400D	+10%/-15%			K	3080
700	MVR-40VDID485	50/60	400D	400D	+15%/-30%			2K	6500
554 kVA @ 400 volts **									
800	MVR-40QDIY554	50/60	400/230	400/230	+10%/-10%			J	2370
800	MVR-40TDIY554	50/60	400/230	400/230	+10%/-15%			K	3090
800	MVR-40VDIY554	50/60	400/230	400/230	+15%/-30%			2K	6500
800	MVR-40QDID554	50/60	400D	400D	+10%/-10%			K	2710
800	MVR-40TDID554	50/60	400D	400D	+10%/-15%			K	3390
800	MVR-40VDID554	50/60	400D	400D	+15%/-30%			2K	7500
693 kVA @ 400 volts **									
1000	MVR-40QDIY693	50/60	400/230	400/230	+10%/-10%			K	3000
1000	MVR-40TDIY693	50/60	400/230	400/230	+10%/-15%			2K	4600
1000	MVR-40VDIY693	50/60	400/230	400/230	+15%/-30%				
1000	MVR-40QDID693	50/60	400D	400D	+10%/-10%			2K	3800
1000	MVR-40TDID693	50/60	400D	400D	+10%/-15%			2K	5400
1000	MVR-40VDID693	50/60	400D	400D	+15%/-30%				

Options:	add -U suffix for UPS Power Loss Soft Start	□			35
	add -T suffix for TVSS (included where noted)		□		5

Note 1: Input range is +10%/-20% unless otherwise noted.

Note 2: Contact factory for other configurations.

Note 3: Pricing subject to change without notice.

Bypass Switch Model List

Output Amps	Part Number	Type	Wt
SINGLE PHASE		NON-LOAD BREAK BYPASS SWITCH	
65	MB-S65	WALL MOUNT Maintenance Bypass Switch	3-Position Switch 30
100	MB-S100	WALL MOUNT Maintenance Bypass Switch	3-Position Switch 40
200	MB-S200	WALL MOUNT Maintenance Bypass Switch	3-Position Switch 70
THREE PHASE		NON-LOAD BREAK BYPASS SWITCH	
65	MB-T65	FLOOR MOUNT Maintenance Bypass Switch	3-Position Switch 140
100	MB-T100	FLOOR MOUNT Maintenance Bypass Switch	3-Position Switch 180
300	MB-T200	FLOOR MOUNT Maintenance Bypass Switch	3-Position Switch 270
500	MB-T400	FLOOR MOUNT Maintenance Bypass Switch	3-Position Switch 280

Non-load break, 600 volt class, 50/60 Hz rated. Break-before-make maintenance bypass switch is enclosed in a drip-proof enclosure with the operating handle being located behind a removable front cover to limit accessibility. Cable terminations are provided for system input, load output, plus regulator input and output. The external bypass switch is designed to provide electrical and mechanical isolation while allowing maximum layout flexibility at time of installation.

Output Amps	Part Number	Type	Wt
THREE PHASE		THREE BREAKER BYPASS SWITCH	
150	MBCB-W150-10K	WALL MOUNT Maintenance Bypass Switch	10 kAIC breakers 55
150	MBCB-T150-14K	FLOOR MOUNT Maintenance Bypass Switch	14 kAIC breakers 365
200	MBCB-W200-10K	WALL MOUNT Maintenance Bypass Switch	10 kAIC breakers 55
200	MBCB-T200-35K	FLOOR MOUNT Maintenance Bypass Switch	35 kAIC breakers 365
350	MBCB-W350-35K	WALL MOUNT Maintenance Bypass Switch	35 kAIC breakers 125
350	MBCB-T350-35K	FLOOR MOUNT Maintenance Bypass Switch	35 kAIC breakers 365
600	MBCB-W600-35K	WALL MOUNT Maintenance Bypass Switch	35 kAIC breakers 165
600	MBCB-T600-35K	FLOOR MOUNT Maintenance Bypass Switch	35 kAIC breakers 365
800	MBCB-W800-50K	WALL MOUNT Maintenance Bypass Switch	50 kAIC breakers 165
800	MBCB-T800-50K	FLOOR MOUNT Maintenance Bypass Switch	50 kAIC breakers 710
1000	MBCB-T1000-50K	FLOOR MOUNT Maintenance Bypass Switch	50 kAIC breakers 710
1200	MBCB-T1200-50K	FLOOR MOUNT Maintenance Bypass Switch	50 kAIC breakers 710
1600	MBCB-T1600-65K	FLOOR MOUNT Maintenance Bypass Switch	65 kAIC breakers 1400
2000	MBCB-T2000-65K	FLOOR MOUNT Maintenance Bypass Switch	65 kAIC breakers 1400

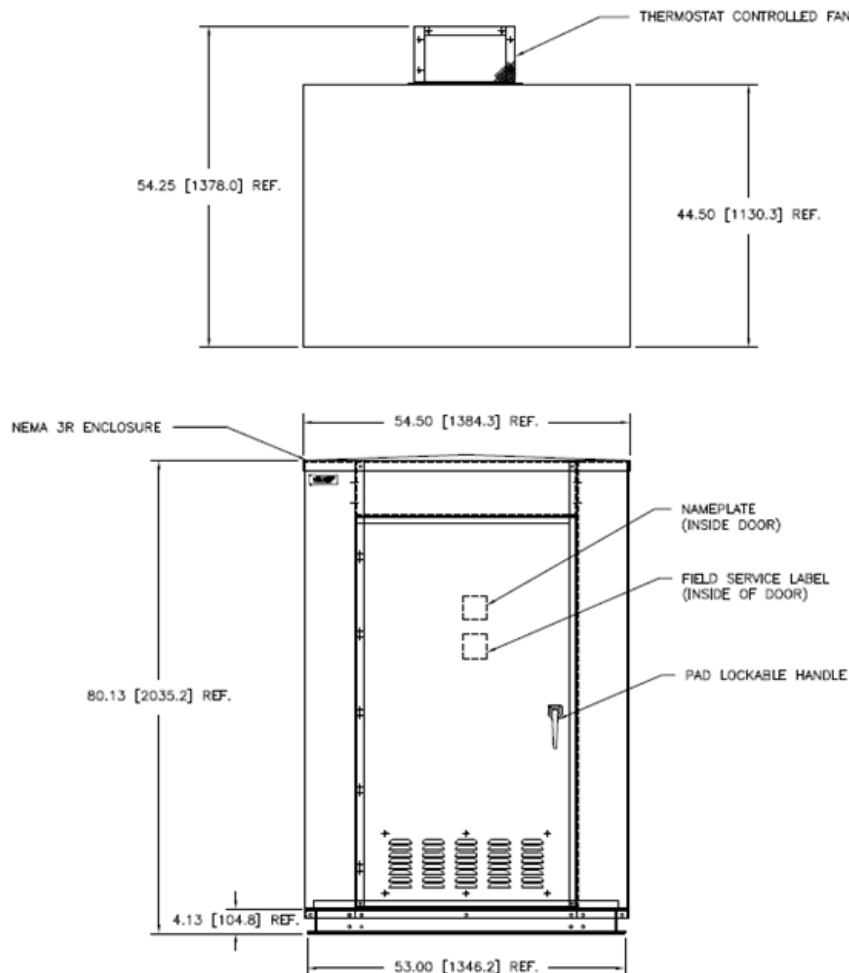
Break-before-make maintenance bypass switch is enclosed in a drip-proof enclosure. When installed the (3) breakers xx kAIC interlocked with Kirk-Keys. These units are External Wall or Floor Mounted and black in color. 480 volt class, 50/60 Hz rated. Cable terminations are provided for system input, load output, plus regulator input and output. The external bypass switch is designed to provide electrical and mechanical isolation while allowing maximum layout flexibility at time of installation.

Harsh Environment Enclosures

Outdoor Heavy-Duty Nema-3R Type steel enclosure designed to protect your regulator while providing an easy installation. These units listed below are the common sizes for 90% of our regulator units listed in this model book.

Example, when selecting the MVR-20WCIY075 regulator, choose the Nema 3R adder that corresponds to size H enclosures, and add "-3R" to part number. New part number is MVR-20WCIY075-3R and total list price is Regulator MSRP plus Nema-3R adder.

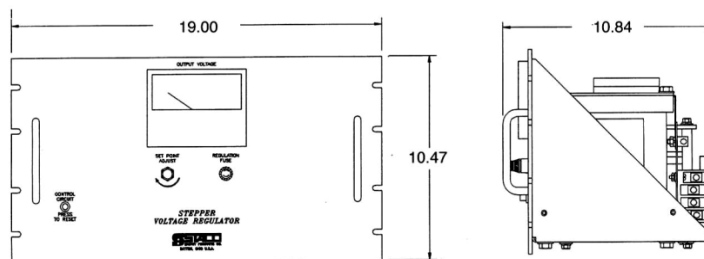
Regulator Size	Suffix	Desc	Height	Width	Depth
B, B1, C, D, E, F, G and 200-2000A Maintenance Bypass cabinets.*	3R	NEMA 3R	94	60	48
	3RS	Stainless Steel	94	60	48
H, I	3R	NEMA 3R	94	94	48
	3RS	Stainless Steel	94	94	48
J, K	3R	NEMA 3R	94	100	48
	3RS	Stainless Steel	94	100	48



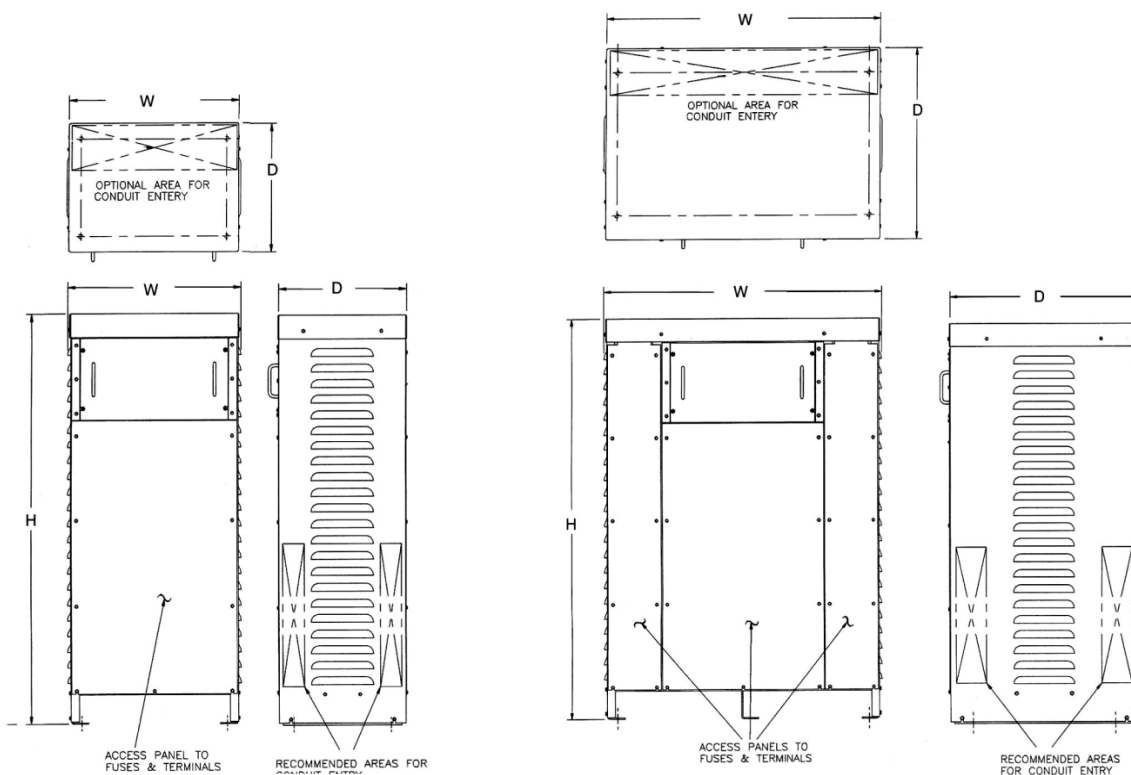
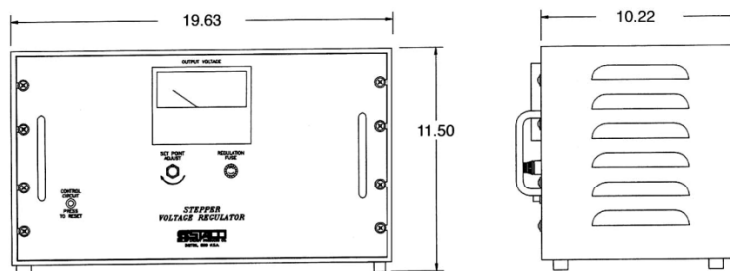
Staco Voltage Regulator (Power Conditioner) Model List

Outline Enclosure Dimensions

SIZE 1R



SIZE A

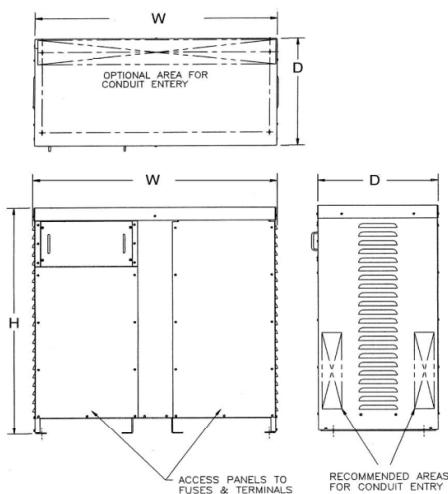


DIMENSIONS (INCHES)			
SIZE	H	W	D
B	33.50	22.27	16.50
B1	23.00	22.27	16.50
C	52.50	22.27	16.50
D	52.50	30.90	16.50

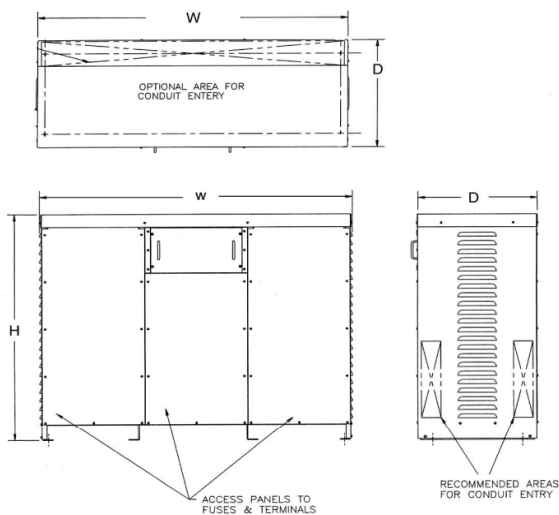
DIMENSIONS (INCHES)			
SIZE	H	W	D
E	33.50	36.52	25.00
F	52.50	36.52	25.00
G	70.50	36.52	25.00

Staco Voltage Regulator (Power Conditioner) Model List

Outline Enclosure Dimensions

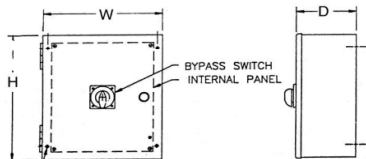


DIMENSIONS (INCHES)			
Size	H	W	D
H	52.50	50.77	25.00
I	70.50	50.77	25.00



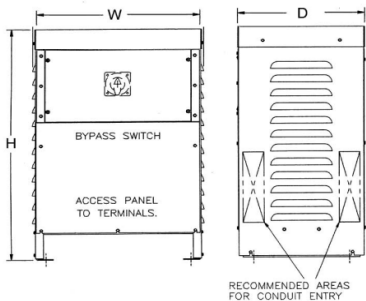
DIMENSIONS (INCHES)			
Size	H	W	D
J	52.50	65.02	25.00
K	70.50	65.02	25.00
2K	70.50	65.02	50.00

Wall Mounted Bypass Switch, Single Phase



DIMENSIONS (INCHES)			
Amp Rating	H	W	D
65, 100	14	12	6
200	24	20	11

Bypass Switch, Three Phase

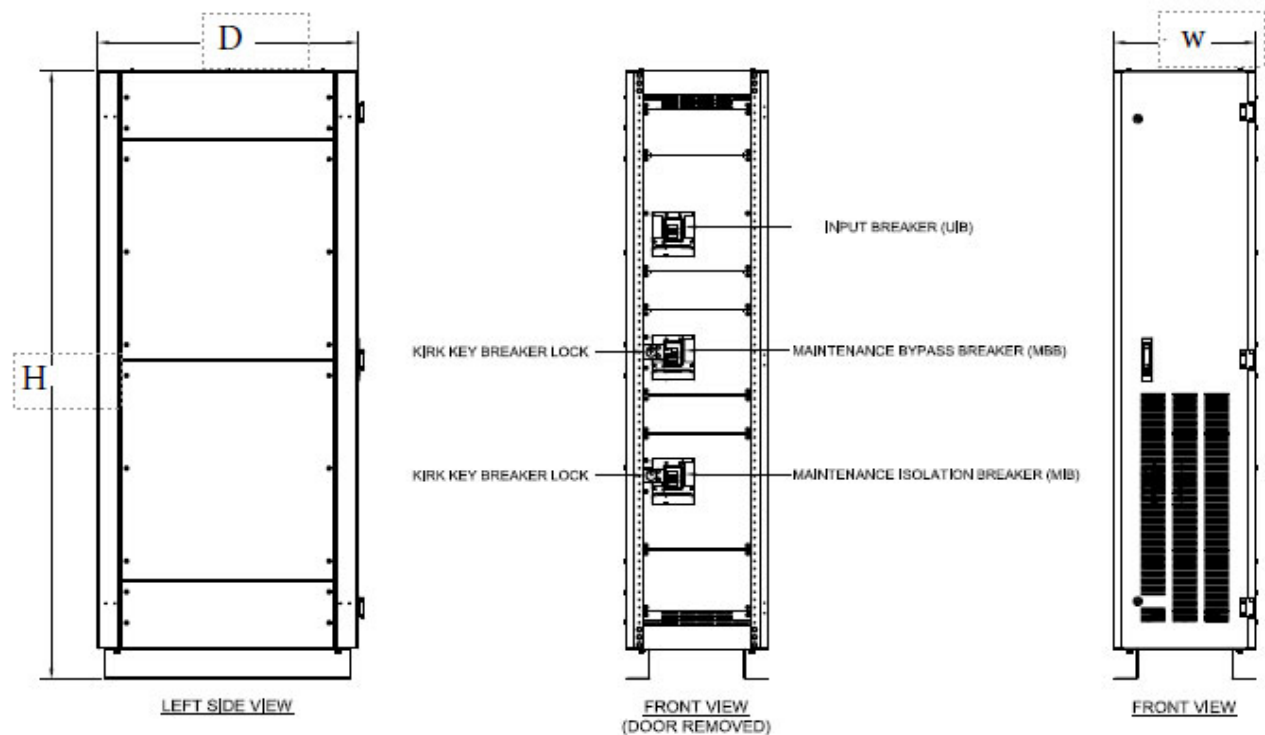


DIMENSIONS (INCHES)			
Amp Rating	H	W	D
65, 100	34	22	17
200, 300, 400, 500	53	22	25
600, 700	71	22	25
800, 1000	71	37	25

Staco Voltage Regulator (Power Conditioner) Model List

Outline Enclosure Dimensions

3-BREAKER BYPASS



DIMENSIONS (INCHES)

Amp Rating	H	W	D
WALL			
150-200	24	22	9
350	42	30	11
600-800	48	36	14
TOWER			
150-350	79	12	33
600	79	18	33
800-1200	79	36	33
1600-2000	79	56	33

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