

ALTERNATOR

APPLICATION AND STANDARDS

Widely used for homes, small shops and offices as a prime power supply or backup

Comply with standards of IEC60034,NEMA MG1-22,IS08528,CSA C22.2-100, VDE 0530, GB755

ELECTRICAL FEATURES

The high efficiency semiconductors of the AVR ensure positive build-up from initial low levels of residual voltage.

2/3 winding pitch, effective control of harmonics.

12 leads, achieve a variety of voltage output

High efficiency and strong motor start ability

Be capable of running at overload up to 10% for 1 hour every 12 hours.

The "ARAP" - Auxiliary Regulation Adopted Principle is optional

Variety of excitation and voltage regulation system to meet different loads.

MECHANICAL FEATURES

Be protected to IP23, and IP44 is optional

Sealed for life bearings

Both single bearing and double bearing configurations are available

Steel sheet terminal box, which provides enough space for customer's reconnection

The rotor is dynamically balanced according to ISO 1940. A half-key balanced for double bearings.

INSULATION AND IMPREGNATION

H class insulation

The VPI (Vacuum Pressure Impregnation) equipped to ensure the electrical insulation and mechanical strength.

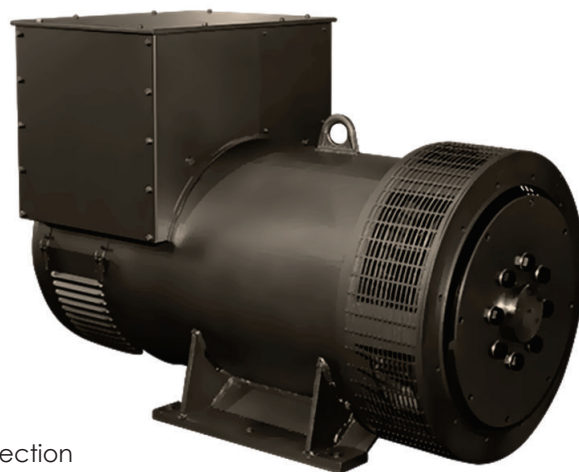
The "Anti-Harsh" winding is optional to meet the needs of harsh environment

COMMON DATA

INSULATION	ALTITUDE	OVERSPEED	PROTECTION	LEADS	PITCH	AVR	VOLTAGE REGULATION	WAVEFORM DISTORTION	TIF	THF
H/H	<=1000m	2250 rpm	IP23	12	2/3	AS440	± 1%	<1.5% NO LOAD	<50	<2%

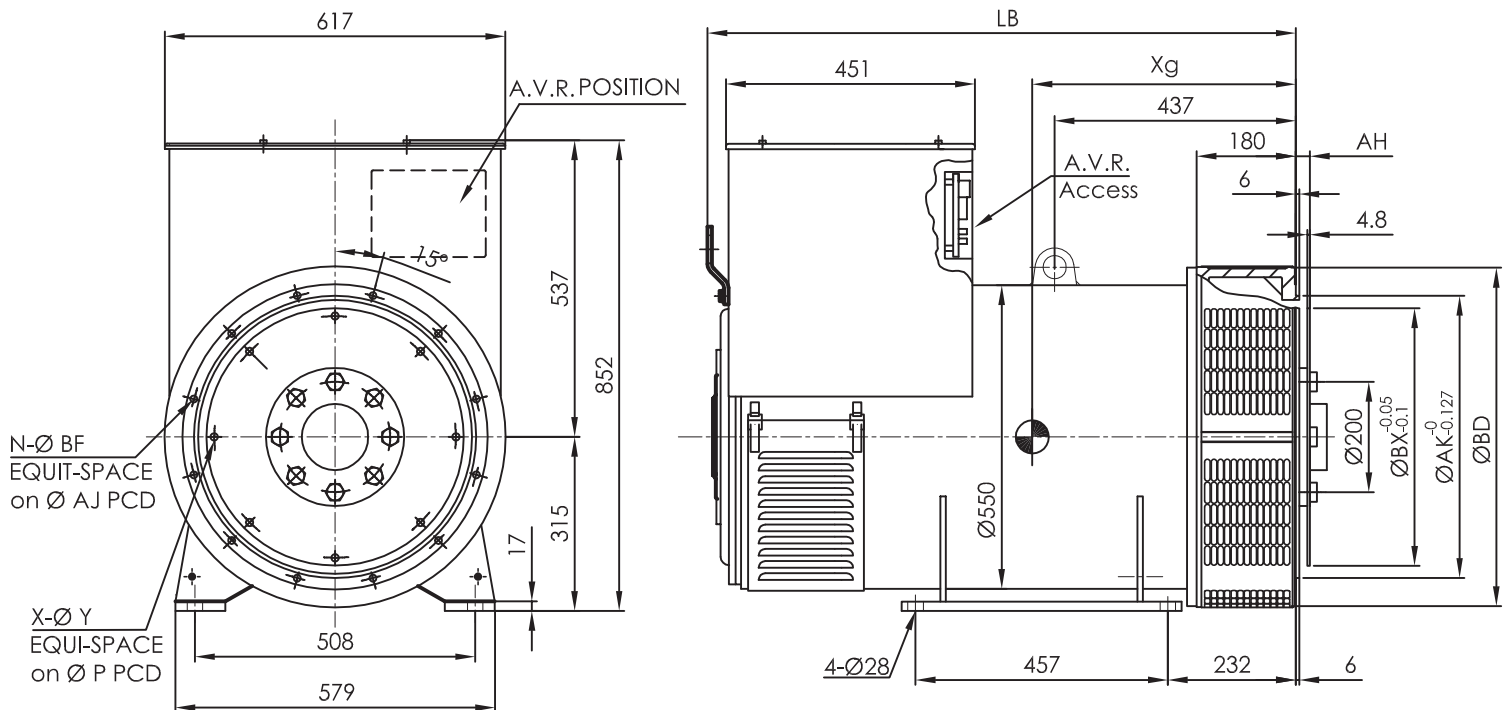
RATING TABLE

H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8																										
	125°C/40°C PRIME POWER											163°C/27°C Standby	Effi.	125°C/40°C PRIME POWER											163°C/27°C Standby	Effi.												
Y	380	400	415	440	400	400	416	440	460	480	480	480	YY	190	200	208	220	200	200	208	220	230	240	240	240	△	220	230	240	254	230	230	240	254	266	277	277	277
RATING	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%	kVA	kW	kVA	kW	kVA	kW	kVA	kW	kVA	kW	%																
SMU315B	250	200	250	200	250	200	250	200	278	222	92.9	290	232	302	242	316	253	316	253	348	278	92.8																
SMU315C	300	240	300	240	300	240	290	232	334	267	93.1	345	276	360	288	378	302	378	302	415	332	93.4																
SMU315DS	313	250	313	250	313	250	313	250	346	276	93.2	357	285	367	293	390	312	390	312	426	340	93.8																
SMU315D	325	260	325	260	325	260	325	260	360	288	93.5	371	297	382	306	406	325	406	325	445	356	93.7																
SMU315E	350	280	350	280	350	280	350	280	390	312	93.5	400	320	421	337	444	355	444	355	478	382	93.8																
SMU315F	380	304	380	304	380	304	380	304	415	332	93.6	425	340	446	357	469	375	469	375	503	402	94.0																
SMU315G	400	320	400	320	400	320	400	320	451	361	93.7	456	365	481	385	500	400	500	400	555	444	94.0																



REACTANCE-TIME CONSTANT(s) H CLASS
SMU315 B/C/DS/D/E/F/G

50Hz @ 400V		SMU315B	SMU315C	SMU315DS	SMU315D	SMU315E	SMU315F	SMU315G		
Xd	Direct axis synchro. reactance unsaturated	3.1	2.95	2.95	2.95	2.87	2.71	2.71		
X'd	Direct axis transient reactance saturated	0.21	0.18	0.18	0.18	0.17	0.15	0.15		
X''d	Direct axis sub transient reactance saturated	0.13	0.12	0.12	0.12	0.12	0.11	0.11		
Xq	Quadra. Axis synchro. reactance unsaturated	2.66	2.53	2.53	2.53	2.41	2.39	2.39		
X'q	Quadra. Axis sub transient reactance saturated	0.37	0.33	0.33	0.33	0.34	0.35	0.35		
X2	Negative sequence reactance unsaturated	0.25	0.25	0.25	0.25	0.23	0.24	0.24		
Xo	Zero sequence reactance unsaturated	0.09	0.08	0.08	0.08	0.08	0.08	0.08		
T'd	Short-Circuit transient time constant	0.08s	0.08s	0.08s	0.08s	0.08s	0.08s	0.08s		
T''d	Sub transient time constant	0.019s	0.019s	0.019s	0.019s	0.019s	0.019s	0.019s		
T'do	Open circuit time constant	1.7s	1.7s	1.7s	1.7s	1.7s	1.7s	1.7s		
Ta	Armature time constant	0.018s	0.018s	0.018s	0.018s	0.018s	0.018s	0.018s		
Kcc	Short circuit ratio	0.56	0.338	0.338	0.338	0.384	0.369	0.369		

OUTLINE DRAWING

DATA TABLE - SINGLE BEARING

Dimension (mm)	SAE 0/0.5/1/2		Weight		Packing
	LB	Xg	Net(kg)	Gross(kg)	
Model					L x W x H (mm)
SMU315B	1066	463	800	840	1280x770x1050
SMU315C	1066	483	875	915	1280x770x1050
SMU315DS	1066	504	930	970	1280x770x1050
SMU315D	1066	504	930	970	1280x770x1050
SMU315E	1066	522	960	1000	1280x770x1050
SMU315F	1151	530	1030	1070	1280x770x1050
SMU315G	1151	530	1100	1140	1280x770x1050

Flange (mm)							Disc(mm)					
SAE#	BD	AK	AJ	BF	N	U °	SAE#	BX	P	X	Y	AH
SAE 3	620	408.58	428.62	11	12	15	18	571.5	542.92	6	16.7	16
SAE 2	620	447.68	466.72	11	12	15	14	466.72	438.15	8	13.5	25.4
SAE 1	620	511.18	530.22	12.7	12	15	11.5	352.42	333.38	8	11	39.6
SAE 0.5	655	584.2	619.12	14	12	15						
SAE 0	715	647.7	679.45	14	16	11.25						