

### ALTERNATOR

#### APPLICATION AND STANDARDS

Widly 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

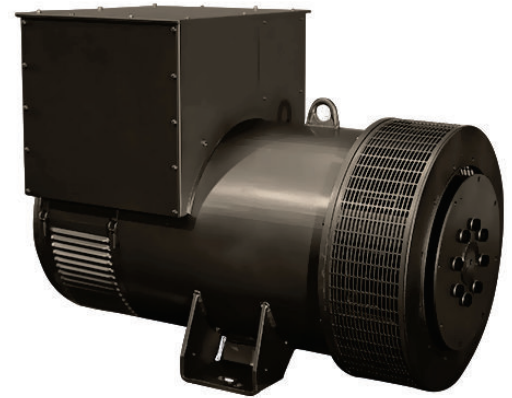
Be protected to IP23, and IP44 is optional

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

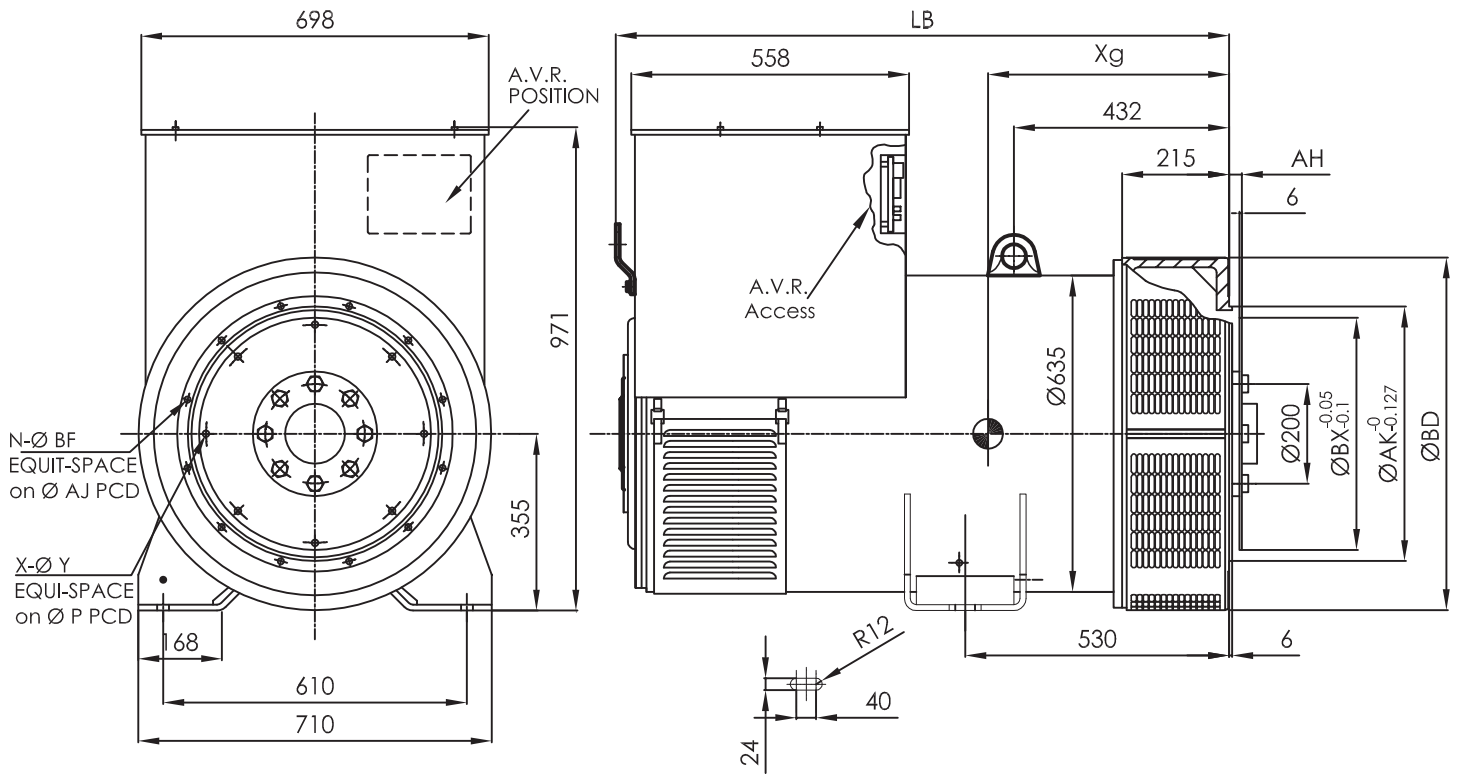
H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8														
	125°C/40°C PRIME POWER											163°C/27°C Standby	Effi.	125°C/40°C PRIME POWER											163°C/27°C Standby	Effi.
TEMP.																										
Y	380	400	415	440	400	400	416	440	460	480	480	480	416	440	460	480	480	480								
YY	190	200	208	220	200	200	208	220	230	240	240	240	208	220	230	240	240	240								
△	220	230	240	254	230	230	240	254	266	277	277	277	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	%				
SMU355B	450	360	500	400	450	360	450	360	520	416	93.8	525	420	550	440	581	465	594	475	644	515	94.1				
SMU355C	500	400	550	440	500	400	500	400	590	472	94.3	575	460	594	475	625	500	644	515	694	555	94.5				
SMU355DS	563	450	563	450	563	450	563	450	615	492	94.9	625	500	655	524	685	548	703	562	759	607	94.8				
SMU355D	600	480	610	488	600	480	590	472	665	532	95.0	681	545	720	576	750	600	750	600	819	655	95.1				
SMU355ES	615	492	625	500	615	492	615	492	680	544	95.1	698	558	730	584	762	610	781	625	834	667	94.8				
SMU355E	670	536	670	536	670	536	655	524	738	590	95.1	738	590	775	620	800	640	825	660	910	728	95.1				

REACTANCE-TIME CONSTANT(s) H CLASS

SMU355 B/C/DS/D/ES/E

50Hz @ 400V		SMU355B	SMU355C	SMU355DS	SMU355D	SMU355ES	SMU355E		
X <sub>d</sub>	Direct axis synchro. reactance unsaturated	3.35	2.96	2.92	2.92	2.8	2.8		
X' <sub>d</sub>	Direct axis transient reactance saturated	0.16	0.15	0.15	0.15	0.14	0.14		
X'' <sub>d</sub>	Direct axis sub transient reactance saturated	0.12	0.1	0.1	0.1	0.09	0.09		
X <sub>q</sub>	Quadra. Axis synchro. reactance unsaturated	2.65	2.41	2.33	2.33	2.23	2.23		
X'' <sub>q</sub>	Quadra. Axis sub transient reactance saturated	0.29	0.26	0.28	0.28	0.26	0.26		
X <sub>2</sub>	Negative sequence reactance unsaturated	0.2	0.199	0.19	0.19	0.18	0.18		
X <sub>0</sub>	Zero sequence reactance unsaturated	0.09	0.08	0.08	0.08	0.08	0.08		
T' <sub>d</sub>	Short-Circuit transient time constant	0.08s	0.08s	0.08s	0.08s	0.08s	0.08s		
T'' <sub>d</sub>	Sub transient time constant	0.012s	0.012s	0.012s	0.012s	0.012s	0.012s		
T' <sub>do</sub>	Open circuit time constant	2s	2.2s	2.5s	2.5s	2.5s	2.5s		
T <sub>a</sub>	Armature time constant	0.017s	0.018s	0.019s	0.019s	0.019s	0.019s		
K <sub>cc</sub>	Short circuit ratio	0.298	0.338	0.342	0.342	0.357	0.357		

OUTLINE DRAWING



DATA TABLE - SINGLE BEARING

Dimension (mm)	SAE 0/0.5/1		Weight		Packing
	LB	Xg	Net(kg)	Gross(kg)	
Model	LB	Xg	Net(kg)	Gross(kg)	L x W x H (mm)
SMU355B	1232	555	1210	1254	1430×850×1200
SMU355C	1232	555	1330	1374	1430×850×1200
SMU355DS	1232	575	1380	1424	1430×850×1200
SMU355D	1232	575	1450	1494	1430×850×1200
SMU355ES	1307	595	1490	1534	1430×850×1200
SMU355E	1307	595	1580	1624	1430×850×1200

Flange (mm)							Disc(mm)					
SAE#	BD	AK	AJ	BF	N	U °	SAE#	BX	P	X	Y	AH
SAE 1	715	511.18	530.22	12.7	12	15	21	673.1	641.35	12	16.7	0
SAE 0.5	715	584.2	619.12	14	12	15	18	571.5	542.92	6	16.7	15.7
SAE 0	715	647.7	679.45	14	16	11.25	14	466.72	438.15	8	13.5	25.4