

ALTERNATOR

SMF355 Range

_ Rev.H _

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.

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

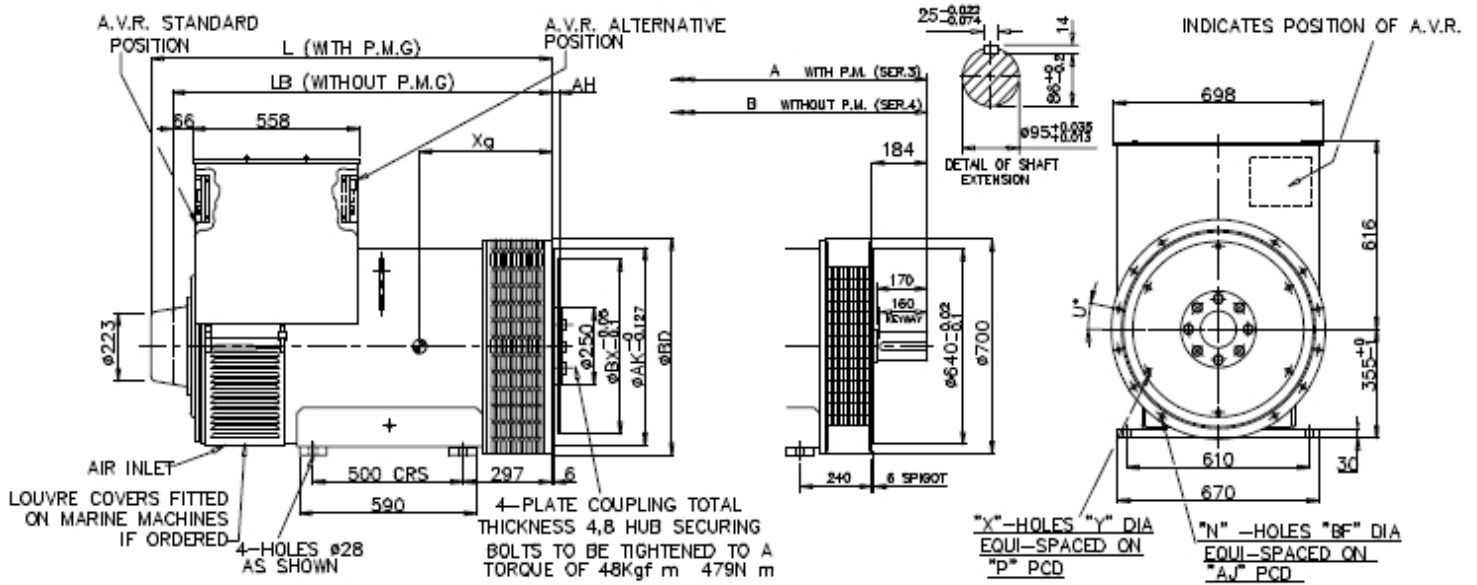
H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8											
	125°C/40°C PRIME POWER										163°C/27°C Standby	Effi.	125°C/40°C PRIME POWER										163°C/27°C Standby
SERIES STAR	380	400	415	440	400	400	416	440	460	480	480	480											
PARALLEL STAR	190	200	208	220	200	200	208	220	230	240	240	240											
SERIES DELTA	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	%	
SMF355B	450	360	500	400	450	360	450	360	520	416	93.8	525	420	550	440	581	465	594	475	644	515	94.1	
SMF355C	500	400	550	440	500	400	500	400	590	472	94.3	575	460	594	475	625	500	644	515	694	555	94.5	
SMF355DS	563	450	563	450	563	450	563	450	615	492	94.9	625	500	655	524	685	548	703	562	759	607	94.8	
SMF355D	600	480	610	488	600	480	590	472	665	532	95.0	681	545	720	576	750	600	750	600	819	655	95.1	
SMF355ES	615	492	625	500	615	492	615	492	680	544	95.1	698	558	730	584	762	610	781	625	834	667	94.8	
SMF355E	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

SMF355 B/C/DS/D/ES/E

60Hz @ 480V		SMF355B	SMF355C	SMF355DS	SMF355D	SMF355ES	SMF355E
Xd	Direct axis synchro. reactance unsaturated	3.35	2.96	2.92	2.92	2.8	2.8
X'd	Direct axis transient reactance saturated	0.16	0.15	0.15	0.15	0.14	0.14
X''d	Direct axis sub transient reactance saturated	0.12	0.1	0.1	0.1	0.09	0.09
Xq	Quadra. Axis synchro. reactance unsaturated	2.65	2.41	2.33	2.33	2.23	2.23
X''q	Quadra. Axis sub transient reactance saturated	0.29	0.26	0.28	0.28	0.26	0.26
X2	Negative sequence reactance unsaturated	0.2	0.199	0.19	0.19	0.18	0.18
Xo	Zero sequence reactance unsaturated	0.09	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
T''d	Sub transient time constant	0.012s	0.012s	0.012s	0.012s	0.012s	0.012s
T'do	Open circuit time constant	2s	2.2s	2.5s	2.5s	2.5s	2.5s
Ta	Armature time constant	0.017s	0.018s	0.019s	0.019s	0.019s	0.019s
Kcc	Short circuit ratio	0.298	0.338	0.342	0.342	0.357	0.357

OUTLINE DRAWING



DATA TABLE - DOUBLE BEARING

Dimension (mm)	Double BRG		Weight		Packing
	A	B	Net(kg)	Gross(kg)	
Model					L x W x H (mm)
SMF355B	1464	1393	1148	1192	1500×850×1170
SMF355C	1464	1393	1203	1247	1500×850×1170
SMF355DS	1464	1393	1218	1262	1500×850×1170
SMF355D	1464	1393	1261	1305	1500×850×1170
SMF355ES	1539	1468	1282	1332	1600×850×1170
SMF355E	1539	1468	1372	1422	1600×850×1170

DATA TABLE - SINGLE BEARING

Dimension (mm)	SAE 0/0.5/1			Weight		Packing
	LB	L	Xg	Net(kg)	Gross(kg)	
Model						L x W x H (mm)
SMF355B	1266	1337	555	1136	1176	1500×850×1170
SMF355C	1266	1337	575	1191	1231	1500×850×1170
SMF355DS	1266	1337	595	1208	1248	1500×850×1170
SMF355D	1266	1337	595	1249	1289	1500×850×1170
SMF355ES	1341	1412	620	1270	1315	1500×850×1170
SMF355E	1341	1412	620	1360	1405	1500×850×1170

Flange (mm)							Disc(mm)					
SAE#	BD	AK	AJ	BF	N	U °	SAE#	BX	P	X	Y	AH
SAE 1	715	511.18	530.22	14	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