SMF

ALTERNATOR

FUJIAN SINOCOX GENERATOR TECHNOLOGY CO., LTD.

SMF225 Range

_ Rev.H _

APPLICATION AND STANDARDS

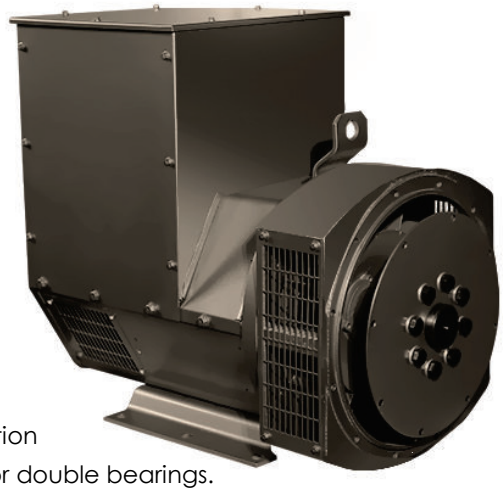
Widly used for homes, small shops and offices as a prime power supply or backup

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.

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) equiped 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	SX460	± 1%	<1.5% NO LOAD	<50	<2%

RATING TABLE

H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8										
TEMP.	125℃/40℃ PRIME POWER								163℃/27℃ Standby		Effi.	125℃/40℃ PRIME POWER								163℃/27℃ Standby		Effi.
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	%
SMF225B	45.0	36.0	**45.0**	**36.0**	45.0	36.0	34.0	27.2	48.0	38.4	87.5	50.0	40.0	52.5	42.0	52.5	42.0	**55.5**	**44.4**	60.0	48.0	85.7
SMF225C	50.0	40.0	**50.0**	**40.0**	50.0	40.0	37.8	30.2	55.1	44.1	88.3	60.0	48.0	62.5	50.0	62.5	50.0	**65.0**	**52.0**	71.3	57.0	87.4
SMF225D	60.0	48.0	**60.0**	**48.0**	60.0	48.0	45.0	36.0	63.5	50.8	88.9	67.5	54.0	72.5	58.0	72.5	58.0	**75.0**	**60.0**	81.1	64.9	88.2
SMF225E	75.0	60.0	**75.0**	**60.0**	75.0	60.0	55.0	44.0	83.0	66.4	89.9	85.0	68.0	89.0	71.2	89.0	71.2	**95.0**	**76.0**	103	82.4	89.6
SMF225FS	80.0	64.0	**80.0**	**64.0**	80.0	64.0	62.0	49.6	87.5	70.0	90.2	89.5	71.6	93.5	74.8	93.5	74.8	**99.5**	**79.6**	108	86.0	90.0
SMF225F	85.0	68.0	**85.0**	**68.0**	85.0	68.0	75.0	60.0	90.8	72.6	90.3	93.9	75.1	97.6	78.1	100	80.0	**104**	**83.2**	114	91.2	90.6
SMF225G	90.0	72.0	**90.0**	**72.0**	90.0	72.0	81.3	65.0	95.8	76.6	90.3	98.9	79.1	103	82.1	105	83.9	**109**	**87.2**	119	95.2	91.0

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4-Pole

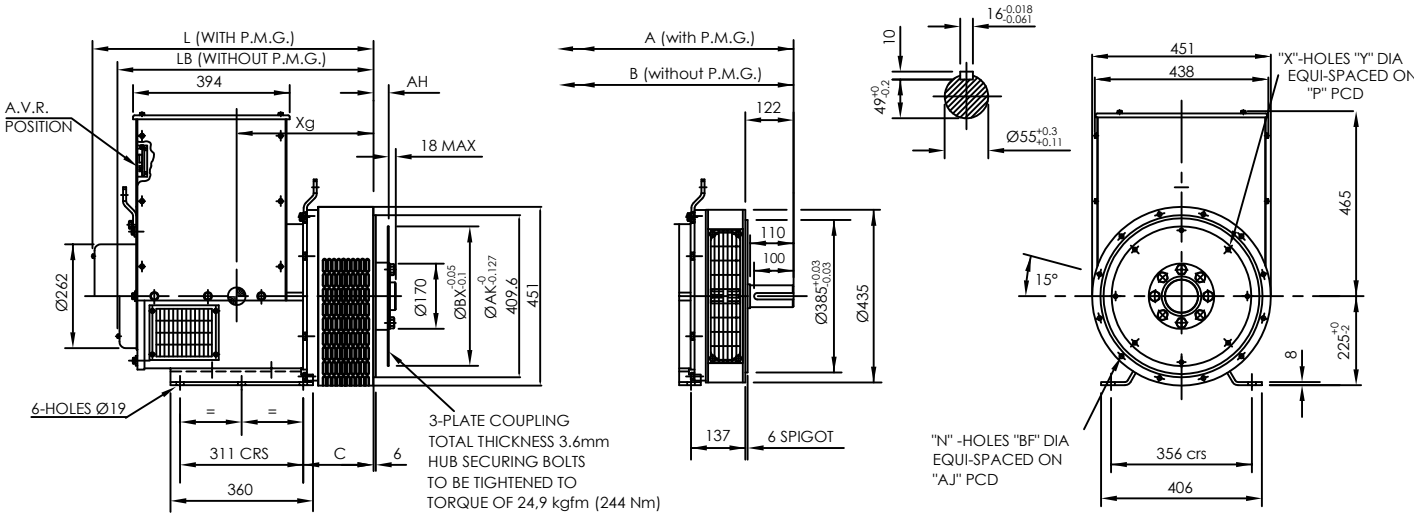
Always Better

REACTANCE-TIME CONSTANT(s) H CLASS

SMF225 B/C/D/E/FS/F/G

60Hz @ 480V		SMF225B	SMF225C	SMF225D	SMF225E	SMF225FS	SMF225F	SMF225G
Xd	Direct axis synchro. reactance unsaturated	2.48	2.46	2.49	2.12	2.19	2.19	2.19
X'd	Direct axis transient reactance saturated	0.17	0.18	0.18	0.18	0.18	0.18	0.18
X"d	Direct axis sub transient reactance saturated	0.11	0.11	0.12	0.12	0.12	0.12	0.12
Xq	Quadra. Axis synchro. reactance unsaturated	1.15	1.14	1.15	0.98	1.02	1.02	1.02
X"q	Quadra. Axis sub transient reactance saturated	0.12	0.11	0.12	0.11	0.12	0.12	0.12
X2	Negative sequence reactance unsaturated	0.11	0.11	0.12	0.11	0.12	0.12	0.12
Xo	Zero sequence reactance unsaturated	0.07	0.07	0.08	0.08	0.09	0.09	0.09
T'd	Short-Circuit transient time constant	0.025s	0.026s	0.027s	0.03s	0.03s	0.03s	0.03s
T"d	Sub transient time constant	0.006s	0.007s	0.007s	0.008s	0.009s	0.009s	0.009s
T'do	Open circuit time constant	0.065s	0.7s	0.71s	0.74s	0.75s	0.75s	0.75s
Ta	Armature time constant	0.005s	0.0055s	0.006s	0.0065s	0.007s	0.007s	0.007s
Kcc	Short circuit ratio	0.403	0.407	0.402	0.472	0.457	0.457	0.457

OUTLINE DRAWING



DATA TABLE - DOUBLE BEARING

Dimension (mm)	Double BRG						Weight		Packing
Model	A	B					Net(kg)	Gross(kg)	L x W x H (mm)
SMF225B	792	729					238	268	1100×680×890
SMF225C	792	729					253	283	1100×680×890
SMF225D	882	819					287	317	1100×680×890
SMF225E	882	819					309	339	1100×680×890
SMF225FS	927	864					327	357	1100×680×890
SMF225F	927	864					341	371	1100×680×890
SMF225G	927	864					355	385	1100×680×890

DATA TABLE - SINGLE BEARING

Dimension (mm)	SAE 1			SAE 2/3/4			Weight		Packing
Model	LB	L	Xg	LB	L	Xg	Net(kg)	Gross(kg)	L x W x H (mm)
SMF225B	661	724	323	647	710	311	213	233	1100×680×890
SMF225C	661	724	333	647	710	321	228	248	1100×680×890
SMF225D	751	814	348	737	800	336	262	282	1100×680×890
SMF225E	751	814	358	737	800	346	284	304	1100×680×890
SMF225FS	796	859	373	782	845	361	302	322	1100×680×890
SMF225F	796	859	373	782	845	361	316	336	1100×680×890
SMF225G	796	859	373	782	845	361	330	350	1100×680×890

Flange (mm)							Disc(mm)					
SAE#	BD	AK	AJ	BF	N	C	SAE#	BX	P	X	Y	AH
SAE 4	451	361.95	381	11	12	177	**14**	466.72	438.15	8	13.5	25.4
SAE 3	451	409.58	428.62	11	12	177	**11.5**	352.42	333.38	8	11	39.6
SAE 2	490	447.68	466.72	11	12	177	**10**	314.32	295.28	8	11	53.8
SAE 1	553	511.18	530.22	14	12	191.3	**8**	263.52	244.48	6	11	62