SMU

ALTERNATOR

FUJIAN SINOCOX GENERATOR TECHNOLOGY CO., LTD.

SMU450 Range

_ Rev.B _

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.

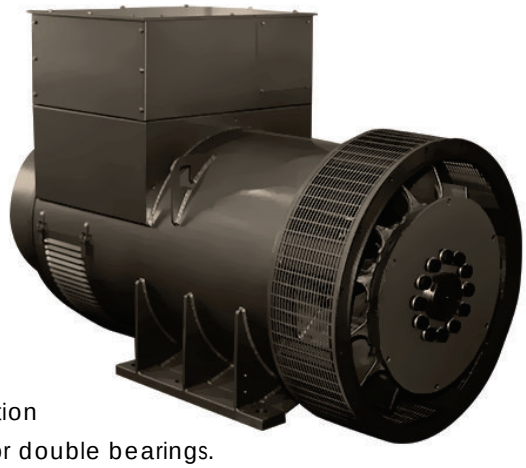
2/3 winding pitch, effective control of harmonics.

12 leads, achieve a variety of voltage output

High efficiency and strong motor start ability with PMG

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

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

The "ARAP" - Auxiliary Regulation Adopted Principle is optional

COMMON DATA

NSULATIOI	ALTITUDE	OVERSPEED	PROTECTION	LEADS	PITCH	AVR	VOLTAGE REGULATION	WAVEFORM DISTORTION	TIF	THF
H/H	<=1000m	2250 rpm	IP23	6	2/3	MX321	± 1%	<1.5% NO LOAD	<50	<2%

RATING TABLE

FREQ.	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.
STAR	380		**400**		415		440		400		400	416		440		460		**480**		480		480
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	%
SMU450B	1230	984	**1280**	**1024**	1280	1024	1240	992	1350	1080	94.4	1380	1104	1500	1200	1520	1216	**1530**	**1224**	1635	1308	94.2
SMU450C	1380	1104	**1420**	**1136**	1420	1136	1380	1104	1510	1208	94.9	1530	1224	1630	1304	1670	1336	**1700**	**1360**	1815	1452	94.9
SMU450D	1510	1208	**1560**	**1248**	1560	1248	1550	1240	1670	1336	95.4	1715	1372	1820	1456	1880	1504	**1900**	**1520**	2032	1626	95.4
SMU450E	1620	1296	**1680**	**1344**	1680	1344	1625	1300	1775	1420	96.2	1824	1459	1940	1552	1980	1584	**2030**	**1624**	2187	1750	96.3
SMU450F	1850	1480	**1905**	**1524**	1905	1524	1865	1492	2040	1632	95.8	2078	1662	2220	1776	2270	1816	**2315**	**1852**	2486	1989	95.9
SMU450G	2030	1624	**2100**	**1680**	2100	1680	2050	1640	2260	1808	96.0	2359	1887	2510	2008	2580	2064	**2650**	**2120**	2793	2234	96.1
SMU450H	2140	1712	**2205**	**1764**	2205	1764	2180	1744	2390	1912	96.0	2435	1948	2540	2032	2650	2120	**2790**	**2232**	2954	2363	96.1

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4-Pole

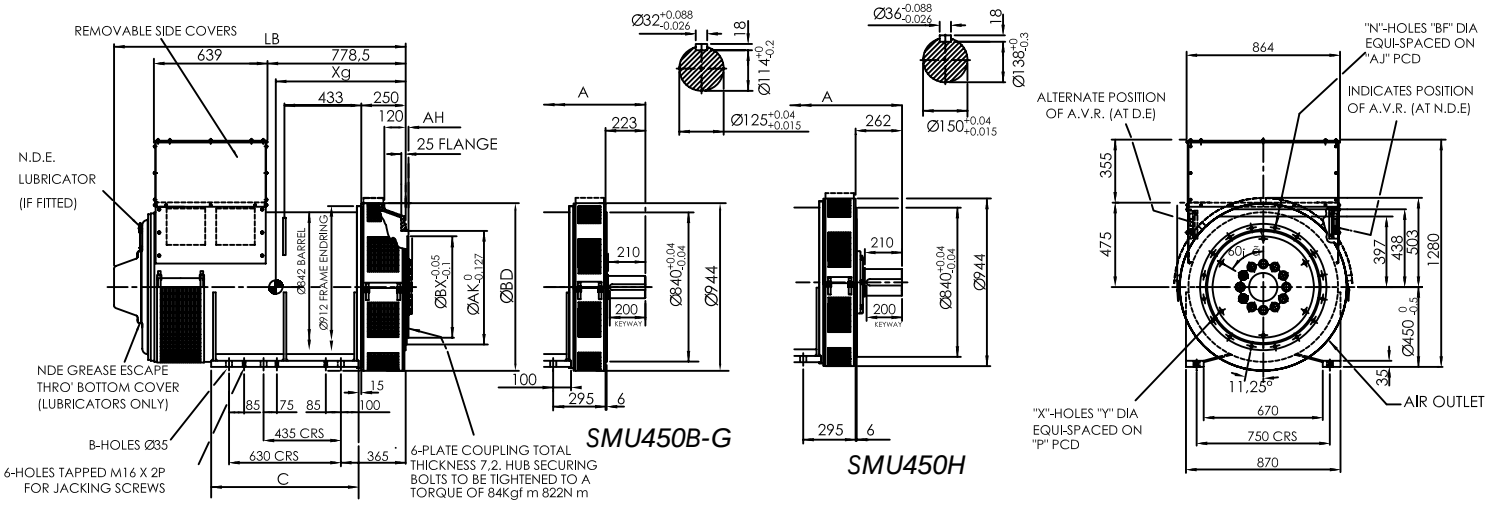
Always Better

REACTANCE-TIME CONSTANT(s) H CLASS

SMU450 B/C/D/E/F/G/H

50Hz @ 400V		SMU450B	SMU450C	SMU450D	SMU450E	SMU450F	SMU450G	SMU450H		
Xd	Direct axis synchro. reactance unsaturated	3.55	3.54	3.22	3.13	3.22	2.95	3.75		
X'd	Direct axis transient reactance saturated	0.23	0.22	0.21	0.19	0.19	0.18	0,22		
X"d	Direct axis sub transient reactance saturated	0.16	0.17	0.15	0.15	0.14	0.13	0.15		
Xq	Quadra. Axis synchro. reactance unsaturated	2.27	2.28	2.08	2.02	2.05	1.92	2.4		
X"q	Quadra. Axis sub transient reactance saturated	0.33	0.32	0.29	0.29	0.29	0.28	0.27		
X2	Negative sequence reactance unsaturated	0.23	0.23	0.22	0.27	0.21	0.19	0.22		
Xo	Zero sequence reactance unsaturated	0.03	0.03	0.03	0.02	0.03	0.02	0.04		
T'd	Short-Circuit transient time constant	0.13s	0.13s	0.13s	0.13s	0.14s	0.15s	0.16s		
T"d	Sub transient time constant	0.01s	0.01s	0.01s	0.01s	0.02s	0.02s	0.01s		
T'do	Open circuit time constant	2.15s	2.15s	2.24s	2.32s	2.43s	2.54s	2.89s		
Ta	Armature time constant	0.02s	0.02s	0.02s	0.02s	0.02s	0.02s	0.02s		
Kcc	Short circuit ratio	0.282	0.282	0.311	0.319	0.311	0.339	0.267		

OUTLINE DRAWING



DATA TABLE-DOUBLE BEARING

Dimension（mm）	Double BRG				Weight		Packing
MODEL	A				Net(kg)	Gross(kg)	L x W x H (mm)
SMU450B	1795				2785	2885	2000x1100x1550
SMU450C	1795				2785	2885	2000x1100x1550
SMU450D	1795				3043	3143	2000x1100x1550
SMU450E	1945				3343	3443	2000x1100x1550
SMU450F	1945				3581	3681	2000x1100x1550
SMU450G	2069				3865	3985	2100x1100x1550
SMU450J	2132				4079	4179	2100x1100x1550

DATA TABLE-SINGLE BEARING

Dimension（mm）	SAE 00/0				Weight		Packing
MODEL	LB	Xg	C	B	Net(kg)	Gross(kg)	L x W x H (mm)
SMU450B	1643	710	830	6	2760	2860	2000x1100x1550
SMU450C	1643	710	830	6	2760	2860	2000x1100x1550
SMU450D	1643	710	830	6	3018	3118	2000x1100x1550
SMU450E	1793	710	830	6	3318	3418	2000x1100x1550
SMU450F	1793	710	830	6	3556	3656	2000x1100x1550
SMU450G	1878	825	1000	8	3840	3940	2000x1100x1550
SMU450H	1940	850	1000	8	4054	4154	2000x1100x1550

Flange（mm）							Disc(mm)					
SAE#	BD	AK	AJ	BF	N		SAE#	BX	P	X	Y	AH
SAE 0	944	647.70	679.45	14	16		24	733.42	692.15	12	20.7	0
SAE 00	944	787.40	850.90	14	16		21	673.10	641.35	12	16.7	0
							18	571.50	542.92	6	16.7	15.7