

ALTERNATOR

SMU180 Range

_ Rev.B _

APPLICATION AND STANDARDS

SUPER RELIABLE MACHINE, MAINLY LAND-USED AS PRIME OR STANDBY POWER

COMPLY WITH STANDARDS OF IEC60034, NEMA MG1-22, IS08528, CSA C22.2-100, VDE 0530, GB755

SPECIAL FEATURES

- OVERLOAD** : 15% OVERLOAD FOR 1 HOUR EVERY 12 HOURS
- WINDING PROTECTION** : VPI(VACUUM PRESSURE IMPREGNATION)+ EPOXY RESIN+ **ANTI-HARSH** PAINTING
- SUPER SILENCE** : FAN, MADE OF STEEL, ROTATING EVENLY
- VIBERATION** : MOST RIGID DYNAMIC-BALANCED ROTOR AND STRONGER BODY AND FEET
- EXCITATION** : THE AUXILIARY WINDING AND PMG IS OPTIONAL
- THERMAL OVERLOAD** : WINDING AND BEARING DETECTOR CAN BE EQUIPPED UPON CUSTOMER REQUEST
- BEARING** : SEAL FOR LIFE
- TERMINAL BOX**: THREE OPTIONS: HIGH, LOW AND NONE (2mm-CABLE EXTENTION)
- DIODE**: ACCESS FROM NON-DRIVE END FOR EASY-MAINTENANCE

GENERAL FEATURES

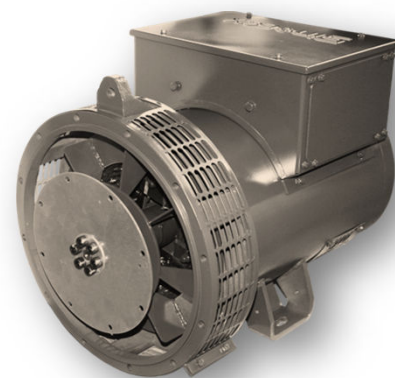
WIRE WOUND AND CLASS H THERMAL INSULATION

IP23, STANDARD EQUIPPED, AND IP44, IP54 UPON CUSTOMER REQUEST

ROUND-SHAPE MACHINE BODY FOR BETTER CENTERLIZATION

NAMEPLATE, MADE OF STEEL OR PLASTIC

SINOCOX LOGO STAMPED TO THE TOP COVER OF T-BOX



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

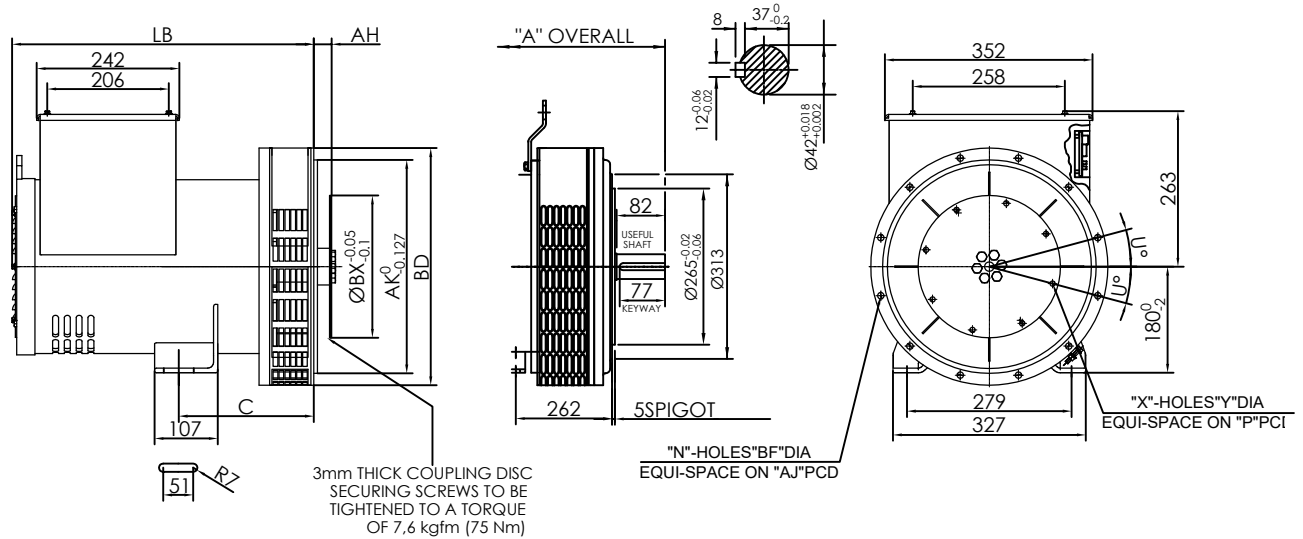
H CLASS	50Hz/1500RPM/PF 0.8											60Hz/1800RPM/PF 0.8													
	125°C/40°C PRIME POWER										163°C/27°C Standby	Effi.	125°C/40°C PRIME POWER										163°C/27°C Standby	Effi.	
TEMP.																									
Y	380	400	415	440	400	400	416	440	460	480	480	480	Y	190	200	208	220	200	200	208	220	230	240	240	240
Δ	220	230	240	254	230	230	240	254	266	277	277	277	Δ	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	%			
SMU180B	18.8	15.0	18.8	15.0	18.8	15.0	15.0	12.0	23.3	16.3	84.3	21.9	17.5	23.0	18.4	23.0	18.4	23.0	18.4	25.0	20.0	85.0			
SMU180C	22.5	18.0	22.5	18.0	22.5	18.0	17.5	14.0	24.4	19.5	84.3	27.5	22.0	28.8	23.0	28.8	23.0	30.0	24.0	32.6	26.0	85.2			
SMU180DS	25.0	20.0	25.0	20.0	25.0	20.0	20.3	16.2	27.0	21.6	85.9	30.0	24.0	31.3	25.0	31.3	25.0	31.3	25.0	34.0	27.2	85.7			
SMU180D	27.5	22.0	27.5	22.0	27.5	22.0	22.5	18.0	30.0	24.0	85.9	32.5	26.0	34.4	27.5	34.4	27.5	35.0	28.0	38.8	31.0	86.7			
SMU180E	32.0	25.6	32.0	25.6	32.0	25.6	27.5	22.0	33.0	26.4	86.4	35.0	28.0	37.5	30.0	37.5	30.0	37.5	30.0	40.0	32.0	87.9			
SMU180F	37.5	30.0	37.5	30.0	37.5	30.0	32.5	26.0	40.0	32.0	87.0	44.3	35.4	46.8	37.4	46.8	37.4	46.8	37.4	50.0	40.0	88.0			
SMU180G	40.0	32.0	42.5	34.0	40.0	32.0	35.0	28.0	45.0	36.0	87.2	47.5	38.0	50.0	40.0	50.0	40.0	50.0	40.0	53.5	42.8	88.6			

REACTANCE-TIME CONSTANT(s) H CLASS

SMU180 B/C/DS/D/E/F/G

60Hz @ 480V		SMU180B	SMU180C	SMU180DS	SMU180D	SMU180E	SMU180F	SMU180G		
Xd	Direct axis synchro. reactance unsaturated	1.881	1.881	1.751	1.751	1.561	2.000	1.935		
X'd	Direct axis transient reactance saturated	0.190	0.190	0.171	0.171	0.161	0.152	0.148		
X''d	Direct axis sub transient reactance saturated	0.120	0.120	0.120	0.120	0.102	0.083	0.081		
Xq	Quadra. Axis synchro. reactance unsaturated	0.931	0.931	0.882	0.882	0.773	0.967	0.935		
X'q	Quadra. Axis sub transient reactance saturated	0.211	0.211	0.200	0.200	0.171	0.169	0.164		
X2	Negative sequence reactance unsaturated	0.171	0.171	0.162	0.162	0.152	0.124	0.123		
Xo	Zero sequence reactance unsaturated	0.082	0.082	0.075	0.075	0.068	0.030	0.030		
Td	Short-Circuit transient time constant	0.02s	0.02s	0.02s	0.02s	0.020	0.24s	0.03s		
T'd	Sub transient time constant	0.005s	0.005s	0.005s	0.005s	0.006s	0.015s	0.015s		
T'do	Open circuit time constant	0.4s	0.4s	0.4s	0.4s	0.5s	0.57s	0.6s		
Ta	Armature time constant	0.006s	0.006s	0.006s	0.006s	0.007s	0.01s	0.01s		
Kcc	Short circuit ratio	0.532	0.532	0.571	0.571	0.641	0.500	0.517		

OUTLINE DRAWING



DATA TABLE - DOUBLE BEARING

Dimension (mm)	Double BRG	Weight		Packing
		Net(kg)	Gross(kg)	
Model	A			L x W x H (mm)
SMU180B	547.6	118	146	1120x680x700
SMU180C	547.6	126	154	1120x680x700
SMU180DS	637.6	141	169	1120x680x700
SMU180D	637.6	148	176	1120x680x700
SMU180E	637.6	156	184	1120x680x700
SMU180F	667.6	172	190	1120x680x700
SMU180G	697.6	180	208	1120x680x700

SAE AVAILABILITY

SAE#	6.5	7.5	8	10	11.5
5	x	x			
4		x	x	x	
3				x	x
2					

DATA TABLE - SINGLE BEARING

Dimension (mm)	SAE 3	SAE 4	SAE 5	Weight		Packing
				Net(kg)	Gross(kg)	
Model	LB	LB	LB			L x W x H (mm)
SMU180B	439.6	427.6	427.6	110	143	1120x680x700
SMU180C	439.6	427.6	427.6	121	151	1120x680x700
SMU180DS	529.6	517.6	517.6	130	166	1120x680x700
SMU180D	529.6	517.6	517.6	135	173	1120x680x700
SMU180E	529.6	517.6	517.6	150	180	1120x680x700
SMU180F	559.6	547.6	547.6	165	184	1120x680x700
SMU180G	589.6	577.6	577.6	185	205	1120x680x701

Flange (mm)								Disc(mm)					
SAE#	BD	AK	AJ	BF	N	U°	C	SAE#	BX	P	X	Y	AH
SAE 5	356	314.32	333.38	11	8	22.5	232	11.5	352.42	333.38	8	11	39.6
SAE 4	402	361.95	381.00	11	12	15	232	10	314.32	295.28	8	11	53.8
SAE 3	451	409.58	428.62	11	12	15	244	8	263.52	244.48	6	11	62
								7.5	241.30	222.25	8	9	30.2
								6.5	215.90	200.02	6	9	30.2