

36kW - 75kW

SMF225 Range

Application and Standards

SMF225 4 pole alternators are designed for different applications: prime,stand-by,telcom,rental,etc.
Comply with standards of IEC60034,NEMA MG1-32,IS08528,CSA C22.2-100 , VDE 0530 , GB755

Electrical Features

- H class insulation
- Special-treated winding is optional to meet the needs of harsh environment
- 12 leads, achieve a variety of voltage output
- 2/3 winding pitch, effective control of harmonics.
- High efficiency and strong motor start ability
- Variety of excitation and voltage regulation system to meet different loads.

Mechanical Features

- Be protected to IP23, and IP44 is optional
- Both single bearing and double bearing configurations are available
- Sealed for life bearings
- Blackening coupling disc
- The rotors are dynamically balanced according to ISO 1940. A half-key balanced for double bearings.



Common Data

Insulation	H	Voltage Regulation	± 1%	THD	No load<1.5%
Altitude	<=1000m	Leads	12	TIF	<50
Protection	IP23	Winding pitch	2/3	THF	<2%
Overspeed	2250rpm	AVR	SX460 (Standard) / SX440 (Optional)		

Rating

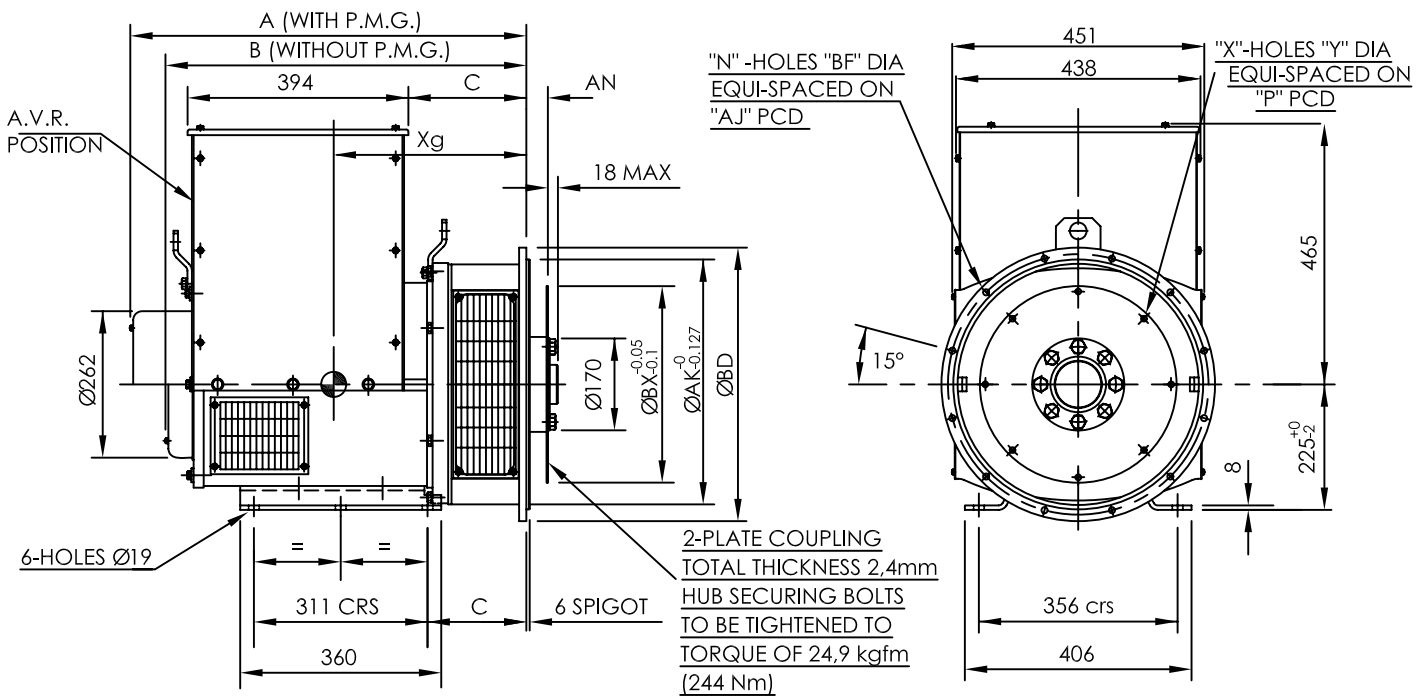
H Class	50Hz / 1500RPM / 40 °C / PF 0.8						60Hz / 1800RPM / 40 °C / PF 0.8						
	Voltage		Cont.		Standby	Efficiency	Cont.		Standby	Efficiency			
Y Series Star	380	400	415	440	400		416	440	460	480	480		
YY Parallel Star	190	200	208	220	200		208	220	230	240	240		
ΔSeries Delta	220	230	240	254	230		240	254	266	277	277		
SMF225B	kVA	42.5	42.5	42.5	30.0	45.0	87.1%	50.0	52.5	52.5	55.0	57.8	88.1%
	kW	34.0	34.0	34.0	24.0	36.0		40.0	42.0	42.0	44.0	46.2	
SMF225C	kVA	50.0	50.0	50.0	37.5	53.0	88.2%	60.0	62.5	62.5	65.0	68.3	89.0%
	kW	40.0	40.0	40.0	30.0	42.4		48.0	50.0	50.0	52.0	54.6	
SMF225D	kVA	60.0	60.0	60.0	45.0	61.0	88.8%	67.5	70.0	72.5	75.0	78.8	89.6%
	kW	48.0	48.0	48.0	36.0	48.8		54.0	56.0	58.0	60.0	63.0	
SMF225E	kVA	72.5	72.5	72.5	55.0	77.0	89.9%	83.8	87.5	87.5	93.8	98.5	90.6%
	kW	58.0	58.0	58.0	44.0	61.6		67.0	70.0	70.0	75.0	78.8	
SMF225FS	kVA	80.0	80.0	80.0	65.0	82.5	90.0%	87.5	90.0	93.8	100.0	105.0	90.8%
	kW	64.0	64.0	64.0	52.0	66.0		70.0	72.0	75.0	80.0	84.0	
SMF225F	kVA	85.0	85.0	85.0	75.0	87.5	90.2%	93.8	97.5	100.0	103.8	109.0	91.0%
	kW	68.0	68.0	68.0	60.0	70.0		75.0	78.0	80.0	83.0	87.2	
SMF225G	kVA	93.8	93.8	93.8	80.0	97.5	88.2%	102.5	107.5	100.0	107.5	110.0	88.7%
	kW	75.0	75.0	75.0	64.0	78.0		82.0	86.0	80.0	86.0	88.0	

Reactance- time constant (s) -H class

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

50Hz @ 400V		SMF225B	SMF225C	SMF225D	SMF225E	SMF225FS	SMF225F	SMF225G
Xd	Direct axis synchro. reactance unsaturated	2.18	2.1	2.23	2.08	2.21	2.21	2.19
X'd	Direct axis transient reactance saturated	0.16	0.15	0.16	0.16	0.17	0.17	0.18
X''d	Direct axis sub transient reactance saturated	0.1	0.10	0.12	0.11	0.12	0.12	0.12
Xq	Quadra. Axis synchro. reactance unsaturated	1.01	0.97	1.01	0.96	1.01	1.01	1.02
X''q	Quadra. Axis sub transient reactance saturated	0.13	0.12	0.13	0.14	0.15	0.15	0.12
X2	Negative sequence reactance unsaturated	0.12	0.110	0.120	0.130	0.14	0.14	0.12
Xo	Zero sequence reactance unsaturated	0.08	0.070	0.09	0.1	0.1	0.1	0.09
T'd	Short-Circuit transient time constant	0.025	0.026	0.027	0.03	0.03	0.03	0.03
T''d	Sub transient time constant	0.006	0+007	0.007	0.008	0.009	0.009	0.009
T'do	Open circuit time constant	0.65	0.7	0.71	0.74	0.75	0.75	0.75
Ta	Armature time constant	0.005	0.0055	0.006	0.0065	0.007	0.007	0.007
Kcc	Short circuit ratio	0.459	0.476	0.448	0.481	0.452	0.452	0.457

Outline Drawing



Dimension (mm)	SAE 1			SAE 2/3/4			Net W.	Gross W.	Packing
Model	LB	L	Xg	LB	L	Xg	kg	kg	L x W x H (mm)
SMF225B	661	724	323	647	710	311	235	250	960×650×870
SMF225C	661	724	333	647	710	321	240	255	960×650×870
SMF225D	751	814	348	737	800	336	280	295	960×650×870
SMF225E	751	814	358	737	800	346	300	315	960×650×870
SMF225FS	796	859	373	782	845	361	336	351	960×650×870
SMF225F	796	859	373	782	845	361	336	351	960×650×870
SMF225G	796	859	373	782	845	361	356	371	960×650×870

Flange (mm)							Disc	(mm)				
SAE#	BD	AK	AJ	BF	n	C	SAE#	BX	P	X	Y	AH
SAE 4	402	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	12.7	12	191.3	8	263.52	244.48	6	11	62