6.5kW -12.8kW

SINOCOX ELECTRO - MECHANICAL FUZHOU CO., LTD

SM160 Range

Application and Standards

SM160 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	**± 0.5%**	THD	**No load<1.5%**
Altitude	**<=1000m**	Leads	**12**	TIF	**<50**
Protection	**IP23**	Winding pitch	**2/3**	THF	**<2%**
Overspeed	**2250rpm**	AVR	**VR301(Standard), VR302 (Optional)**		

Rating

H Class		50Hz / 1500RPM / 40℃ / PF 0.8						60Hz / 1800RPM / 40℃ / 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	
△Series Delta		220	**230**	240	254	230		240	254	266	**277**	277	
SM160B	kVA	8.1	**8.1**	8.1	6.2	9.3	76.6%	9.6	10.2	10.2	**10.2**	12.0	77.4%
	kW	6.5	**6.5**	6.5	5.0	7.4		7.7	8.2	8.2	**8.2**	9.0	
SM160C	kVA	11.0	**11.0**	11.0	8.5	12.8	79.4%	13.0	13.8	13.8	**13.8**	16.0	80.2%
	kW	8.8	**8.8**	8.8	6.8	10.2		10.4	11.0	11.0	**11.0**	13.0	
SM160D	kVA	13.5	**13.5**	13.5	11.0	15.7	81.0%	16.0	16.9	16.9	**16.9**	20.0	81.8%
	kW	10.8	**10.8**	10.8	8.8	12.6		12.8	13.5	13.5	**13.5**	16.0	
SM160E	kVA	16.0	**16.0**	16.0	13.5	18.7	82.0%	18.9	20.0	20.0	**20.0**	23.0	82.8%
	kW	12.8	**12.8**	12.8	10.8	15.0		15.1	16.0	16.0	**16.0**	19.0	

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4-Pole

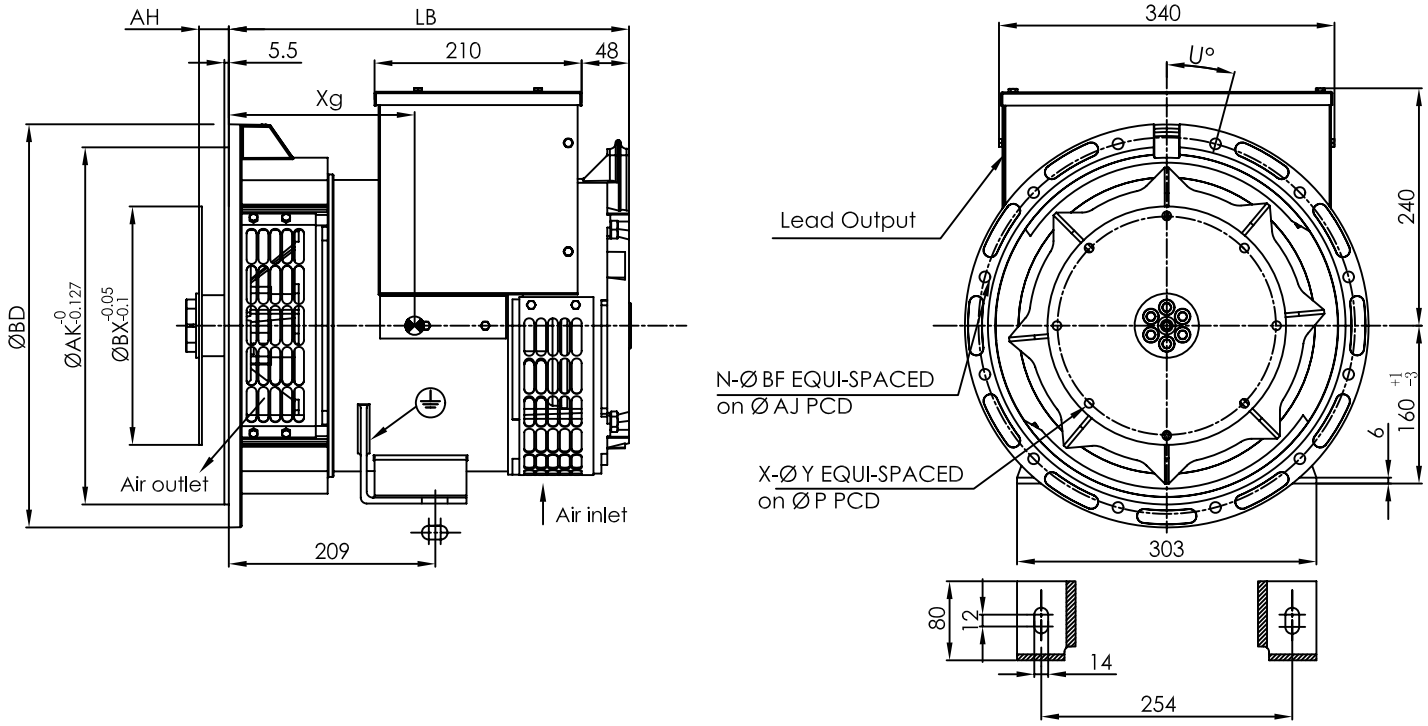
Always Better

SM 160B/C/D/E

Reactance- time constant (s) -H class

50Hz @ 400V		SM160B	SM160C	SM160D	SM160E
Xd	Direct axis synchro. reactance unsaturated	1.810	1.776	1.753	1.735
X'd	Direct axis transient reactance saturated	0.183	0.18	0.178	0.177
X"d	Direct axis sub transient reactance saturated	0.113	0.112	0.111	0.11
Xq	Quadra. Axis synchro. reactance unsaturated	0.893	0.882	0.971	0.862
X"q	Quadra. Axis sub transient reactance saturated	0.205	0.203	0.201	0.198
X2	Negative sequence reactance unsaturated	0.171	0.17	0.167	0.165
Xo	Zero sequence reactance unsaturated	0.077	0.076	0.075	0.074
T'd	Short-Circuit transient time constant	0.012	0.014	0.016	0.018
T"d	Sub transient time constant	0.003	0.0033	0.0038	0.0042
T'do	Open circuit time constant	0.200	0.25	0.29	0.33
Ta	Armature time constant	0.004	0.0043	0.0048	0.0053
Kcc	Short circuit ratio	0.552	0.563	0.57	0.576

Outline Drawing



Dimension (mm)	SAE 3, 4, 5						Net W.	Gross W.	Packing
Model	LB		Xg				kg	kg	L x W x H (mm)
SM160B	370		162				80	90	740×650×700
SM160C	370		178				90	100	740×650×700
SM160D	405		188				98	108	740×650×700
SM160E	405		195				103	113	740×650×700

Flange (mm)							Disc	(mm)				
SAE#	BD	AK	AJ	U °	BF	N	SAE#	BX	P	X	Y	AH
SAE 5	356	314.32	333.38	22.5	11	8	11.5	352.42	333.38	8	11	39.6
SAE 4	408	361.95	381	15	11	12	10	314.32	295.28	8	11	53.8
SAE 3	460	409.58	428.62	15	11	12	8	263.52	244.48	6	11	62
							7.5	241.3	222.25	8	9	30.2
							6.5	215.9	200.02	6	9	30.2