



THREE-PHASE SYNCHRONOUS GENERATOR

Datasheet For 50Hz @ 1500rpm / 60Hz @ 1800rpm

EG560S-2000N

Frequency	HZ	50				60			
Rated capacity (kVA)	S	2375	2500	2500	2450	2595	2737.5	2870	3012.5
Rated power (kW)	P	1900	2000	2000	1960	2076	2190	2296	2410
Voltage (V)	U	380	400	415	440	415	440	460	480
Efficiency of 25% load	%	92.2	92.2	92.1	91.7	91.2	91.4	91.6	91.7
50% load	%	95	95.1	95	94.9	94.6	94.7	94.8	94.9
75% load	%	95.5	95.6	95.6	95.6	95.3	95.5	95.6	95.7
100% load	%	95.5	95.91	95.7	95.7	95.4	95.93	95.7	95.8
Reactance at Class H									
Short-circuit ratio	Kcc	0.33	0.361	0.408	0.511	0.291	0.315	0.335	0.36
Direct axis synchronous reactance	Xd	3.429	3.258	3.026	2.638	3.77	3.538	3.393	3.271
Quadrature axis synchronous reactance	Xq	1.52	1.444	1.341	1.169	1.67	1.568	1.504	1.45
Direct axis transient reactance saturated	X'd	0.193	0.183	0.17	0.148	0.212	0.199	0.191	0.184
Direct axis subtransient reactance saturated	X''d	0.15	0.143	0.133	0.116	0.165	0.155	0.149	0.143
Quadrature axis subtransient reactance saturated	X''q	0.185	0.175	0.163	0.142	0.203	0.19	0.183	0.176
Zero sequence reactance unsaturated	X0	0.008	0.008	0.007	0.006	0.009	0.008	0.008	0.008
Leakage reactance	X1	0.095	0.09	0.084	0.073	0.105	0.098	0.094	0.091
Negative sequence reactance saturated	X2	0.17	0.16	0.15	0.13	0.18	0.17	0.17	0.16
Open circuit time constant	T'd0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Short-circuit transient time constant	T'd	0.258	0.258	0.258	0.258	0.258	0.258	0.258	0.258
Subtransient time constant	T''d	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Armature time constant	Ta	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
No load excitation current	io(A)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Full load excitation current	ic(A)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Full load excitation voltage	uc(V)	60	60	60	60	60	60	60	60
No load losses	W	21690	22640	23510	24950	32300	33270	34110	35120
Heat dissipation at full load at Class H	W	89946	91831	90738	88281	99645	100795	102412	104608
Short circuit current capacity	%	>300							
Recovery time	s	1							
Waveform : TIF		<50							
Waveform : THD		<2%							
Winding pitch		2/3							
Voltage regulation		+/- 1%							
A.V.R. model		WT-3							
Duty		Continuous							
Number of poles		4							
Class of insulation		H							
Temperature rise		≤125K							
Altitude		≤1000m							
Rated power factor		0.8							
Excitation		Brushless							
Stator winding		6ends							
Rotor		With damping cage							
Overload	%	110% rated load for 1 hour							
Stator winding resistance (20°C)	ohm	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Rotor winding resistance (20°C)	ohm	1.480	1.480	1.480	1.480	1.480	1.480	1.480	1.480
Exciter resistance (20°C)	ohm	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Cooling air requirement	m ³ /min	188	188	188	188	226	226	226	226
Energy storage constant (H)	sec.	0.2691	0.2691	0.2691	0.2691	0.3699	0.3392	0.3392	0.3392
Method of cooling		IC 01							
Ambient temperature		40°C							
Sense of rotation		Counter-clockwise							
Type of construction		Single / Double bearing							
Degree of protection / enclosure		IP21 or IP23							
Maximum overspeed	rpm	2160							