



THREE-PHASE SYNCHRONOUS GENERATOR

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

EG560L-2400N

Frequency	HZ	50				60			
Rated capacity (kVA)	S	2850	3000	3000	2850	3100	3300	3450	3600
Rated power (kW)	P	2280	2400	2400	2280	2480	2640	2760	2880
Voltage (V)	U	380	400	415	440	415	440	460	480
Efficiency of 25% load	%	92.5	92.3	92.1	91.6	91.6	91.8	91.8	91.7
50% load	%	95.2	95.2	95.1	94.9	94.9	95	95	95
75% load	%	95.8	95.8	95.8	95.7	95.7	95.8	95.8	95.9
100% load	%	95.8	96.4	95.9	95.9	95.8	96.3	96	96.1
Reactance at Class H									
Short-circuit ratio	Kcc	0.441	0.505	0.568	0.716	0.375	0.409	0.45	0.505
Direct axis synchronous reactance	Xd	2.734	2.597	2.413	2.039	2.992	2.833	2.71	2.597
Quadrature axis synchronous reactance	Xq	1.207	1.146	1.065	0.9	1.32	1.25	1.196	1.146
Direct axis transient reactance saturated	X'd	0.143	0.136	0.126	0.107	0.157	0.148	0.142	0.136
Direct axis subtransient reactance saturated	X''d	0.109	0.104	0.096	0.081	0.119	0.113	0.108	0.104
Quadrature axis subtransient reactance saturated	X''q	0.134	0.128	0.119	0.1	0.147	0.139	0.133	0.128
Zero sequence reactance unsaturated	X0	0.006	0.006	0.006	0.005	0.007	0.007	0.006	0.006
Leakage reactance	X1	0.066	0.063	0.059	0.05	0.073	0.069	0.066	0.063
Negative sequence reactance saturated	X2	0.12	0.12	0.11	0.09	0.13	0.13	0.12	0.12
Open circuit time constant	T'd0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Short-circuit transient time constant	T'd	0.268	0.268	0.268	0.268	0.268	0.268	0.268	0.268
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	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
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)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Full load excitation voltage	uc(V)	78	78	78	78	78	78	78	78
No load losses	W	27890	29700	30580	33060	39840	41460	43080	45000
Heat dissipation at full load at Class H	W	98965	102607	101303	97477	108727	111720	114401	117814
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	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Rotor winding resistance (20°C)	ohm	1.730	1.730	1.730	1.730	1.730	1.730	1.730	1.730
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.	0.2273	0.2273	0.2273	0.2273	0.3281	0.2974	0.2974	0.2974
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							