



THREE-PHASE SYNCHRONOUS GENERATOR

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

EG355L-560N

Frequency	HZ	50				60			
Rated capacity (kVA)	S	665	700	700	700	762.5	833	845	880
Rated power (kW)	P	532	560	560	560	610	666	676	704
Voltage (V)	U	380	400	415	440	415	440	460	480
Efficiency of 25% load	%	90.5	90.4	90.3	89.7	90.4	90.5	90.6	90.6
50% load	%	93.9	94	93.9	93.7	93.9	94.1	94.1	94.2
75% load	%	94.7	94.8	94.8	94.8	94.7	94.9	95	95.1
100% load	%	94.7	94.8	94.9	95	94.8	95	95.1	95.2
Reactance at Class H									
Short-circuit ratio	Kcc	0.402	0.443	0.5	0.621	0.335	0.365	0.388	0.423
Direct axis synchronous reactance	Xd	2.839	2.697	2.505	2.229	3.275	3.066	2.954	2.825
Quadrature axis synchronous reactance	Xq	1.267	1.204	1.118	0.995	1.462	1.369	1.319	1.261
Direct axis transient reactance saturated	X'd	0.129	0.123	0.114	0.101	0.149	0.139	0.134	0.128
Direct axis subtransient reactance saturated	X''d	0.101	0.096	0.089	0.079	0.117	0.109	0.105	0.101
Quadrature axis subtransient reactance saturated	X''q	0.14	0.133	0.123	0.11	0.161	0.151	0.145	0.139
Zero sequence reactance unsaturated	X0	0.006	0.006	0.005	0.005	0.007	0.007	0.006	0.006
Leakage reactance	X1	0.055	0.052	0.049	0.043	0.064	0.06	0.057	0.055
Negative sequence reactance saturated	X2	0.12	0.11	0.11	0.09	0.14	0.13	0.13	0.12
Open circuit time constant	T'd0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Short-circuit transient time constant	T'd	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109
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	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017
No load excitation current	io(A)	1	1	1	1	1	1	1	1
Full load excitation current	ic(A)	3	3	3	3	3	3	3	3
Full load excitation voltage	uc(V)	45	45	45	45	45	45	45	45
No load losses	W	5740	6080	6350	6950	7910	8320	8640	9010
Heat dissipation at full load at Class H	W	29715	30530	29846	29412	33392	33789	34681	35418
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-2							
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	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Rotor winding resistance (20°C)	ohm	1.160	1.160	1.160	1.160	1.160	1.160	1.160	1.160
Exciter resistance (20°C)	ohm	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64
Cooling air requirement	m ³ /min	68.9	68.9	68.9	68.9	82.7	82.7	82.7	82.7
Energy storage constant (H)	sec.	0.1174	0.1174	0.1174	0.1174	0.1626	0.1537	0.147	0.1409
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							