



THREE-PHASE SYNCHRONOUS GENERATOR

UNA337-H

Datasheet For 4 Poles - 50Hz @ 1500rpm / 60Hz @ 1800rpm

Ambient Temperature	40°C	Excitation	Brushless	Short Circuit Current Capacity (with AUX OR PMG)	≥300%
Temperature Rise	125K	Winding Pitch	2 / 3	Method of Cooling	IC01
Service Duty	Continuous	Power Factor	0.8	Direction of Rotation (viewing from Drive End)	CW
Phase	3	Insulation Class	Class H	Maximum Over-speed	2250 rpm
Pole	4	Waveform : TIF	<50	Degree of Protection	IP23
Voltage Regulation Accuracy	+/- 0.5%	Waveform : THF	<2%	Radio interference	Class B Group 1
AVR Model	ETC-01	Altitude	≤1000 m.a.s.l	Total Harmonic Content	< 3% - At no load

Electrical and Mechanical Characteristic

Frequency	Hz	50			60				
		1500			1800				
Round per minute	rpm								
Voltage (Y Connection) - Series Star	V	380	400	415	380	416	440	460	480
Voltage (YY Connection) - Parallel Star	V	190	200	208	190	208	220	230	240
Voltage (Δ Connection) - Series Delta	V	220	230	240	220	240	254	266	277
Voltage (ΔΔ Connection) - Parallel Delta	V	110	115	120	110	120	127	133	138
Rated power at Class H (125K) temperature rise	kVA	95.0	100.0	95.0	95	104	110	115	120
	kW	76	80	76	76	83	88	92	96
Efficiency at Class H (P.F.=0.8)	100%	90.0	90.1	90.2	90.0	90.2	90.4	90.6	90.8
	75%	90.6	90.7	90.8	90.7	90.9	91.1	91.3	91.5
	50%	90.4	90.5	90.6	90.4	90.6	90.8	91.0	91.2
Efficiency at Class H (P.F.=1.0)	100%	92.0	92.1	92.2	92.0	92.2	92.4	92.6	92.8
	75%	92.7	92.8	92.9	92.7	92.9	93.1	93.3	93.5
	50%	92.5	92.6	92.7	92.4	92.6	92.8	93.0	93.2
Short-circuit ratio	Kcc	0.3338	0.3514	0.3981	0.2782	0.3055	0.3221	0.3365	0.3514
Direct axis synchronous reactance unsaturated	Xd	2.9958	2.8460	2.5118	3.5946	3.2734	3.1045	2.9718	2.8460
Quadrature axis synchronous reactance unsaturated	Xq	1.7389	1.6520	1.4580	2.0866	1.9001	1.8021	1.7250	1.6520
Direct axis transient reactance saturated	X'd	0.1863	0.1770	0.1562	0.2236	0.2036	0.1931	0.1848	0.1770
Direct axis subtransient reactance saturated	X''d	0.1589	0.1510	0.1333	0.1907	0.1737	0.1647	0.1577	0.1510
Quadrature axis subtransient reactance saturated	X''q	0.1789	0.1700	0.1500	0.2147	0.1955	0.1854	0.1775	0.1700
Zero sequence reactance unsaturated	X0	0.0347	0.0330	0.0291	0.0417	0.0380	0.0360	0.0345	0.0330
Leakage reactance	X _L	0.1074	0.1020	0.0900	0.1288	0.1173	0.1113	0.1065	0.1020
Negative sequence reactance saturated	X2	0.1689	0.1605	0.1417	0.2027	0.1846	0.1751	0.1676	0.1605
Open circuit time constant (sec.)	T'do	1.0090							
Short-circuit transient time constant (sec.)	T'd	0.0490							
Subtransient time constant (sec.)	T''d	0.0088							
Armature time constant (sec.)	T _α	0.0132							
No load excitation current	io(A)	0.45				0.45			
Full load excitation current	ic(A)	1.9				1.8			
Full load excitation voltage	uc(V)	45				43			
Stator Winding Resistance (20°C)	ohm	0.06266							
Rotor Winding Resistance (20°C)	ohm	1.1425							
Exciter Stator Resistance (20°C)	ohm	17.6594							
Exciter Rotor Phase resistance	ohm	0.07815							
Cooling air requirement	m ³ /sec	0.275				0.33			
Configuration		Single Bearing				Double Bearing			
Type of Construction		B2 - SAE				IM B34			
Inertia (J) [kgm2]		1.13				1.08			
Total Weight		328				344			
Drive end bearing / Lubrication		Not supply				6315 C3-2Z / Prelubricated - sealed for life			
Non-drive end bearing / Lubrication		6310 C3-2Z / Prelubricated - sealed for life							
Voltage Recovery Time - sec.		1.0							
Stator winding		DOUBLE LAYER CONCENTRIC							
Number of Terminal		12							
Rotor		with damping cage							
Overload		110% rated load for 1 hour							

STANDARD COMPLIANCE - IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

Data and Technical Specification are subject to change in order to update or improve the products, without prior notice