



THREE-PHASE SYNCHRONOUS GENERATOR

UNA337-D

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	65.0	70.0	65.0	65.0	72.5	77.5	80.0	84.0	
	kW	52	56	52	52	58	62	64	67.2	
Efficiency at Class H (P.F.=0.8)	100%	88.5	88.6	88.7	88.4	88.5	88.8	89.0	89.1	
	75%	89.3	89.4	89.5	89.3	89.4	89.7	89.9	90	
	50%	88.8	88.9	89.0	88.7	88.8	89.1	89.3	89.4	
Efficiency at Class H (P.F.=1.0)	100%	90.7	90.8	90.9	90.6	90.7	91.0	91.2	91.3	
	75%	91.5	91.6	91.7	91.5	91.6	91.9	92.1	92.2	
	50%	91.1	91.2	91.3	90.9	91.0	91.3	91.5	91.6	
Short-circuit ratio	Kcc	0.3289	0.3440	0.3923	0.2741	0.2947	0.3082	0.3261	0.3384	
Direct axis synchronous reactance unsaturated	Xd	3.0404	2.9550	2.5492	3.6481	3.3930	3.2443	3.0665	2.9550	
Quadrature axis synchronous reactance unsaturated	Xq	1.6863	1.6390	1.4139	2.0234	1.8819	1.7995	1.7008	1.6390	
Direct axis transient reactance saturated	X'd	0.2109	0.2050	0.1768	0.2531	0.2354	0.2251	0.2127	0.2050	
Direct axis subtransient reactance saturated	X''d	0.1831	0.1780	0.1536	0.2198	0.2044	0.1954	0.1847	0.1780	
Quadrature axis subtransient reactance saturated	X''q	0.1965	0.1910	0.1648	0.2358	0.2193	0.2097	0.1982	0.1910	
Zero sequence reactance unsaturated	X0	0.0360	0.0350	0.0302	0.0432	0.0402	0.0384	0.0363	0.0350	
Leakage reactance	X _L	0.1317	0.1280	0.1104	0.1580	0.1470	0.1405	0.1328	0.1280	
Negative sequence reactance saturated	X2	0.1893	0.1840	0.1587	0.2272	0.2113	0.2020	0.1909	0.1840	
Open circuit time constant (sec.)	T'do						0.9980			
Short-circuit transient time constant (sec.)	T'd						0.0547			
Subtransient time constant (sec.)	T''d						0.0081			
Armature time constant (sec.)	T _a						0.0116			
No load excitation current	io(A)	0.5			0.5					
Full load excitation current	ic(A)	2.2			2.1					
Full load excitation voltage	uc(V)	46			44					
Stator Winding Resistance (20°C)	ohm						0.113			
Rotor Winding Resistance (20°C)	ohm						0.9608			
Exciter Stator Resistance (20°C)	ohm						15.9281			
Exciter Rotor Phase resistance	ohm						0.07139			
Cooling air requirement	m ³ /sec	0.22			0.264					
Configuration		Single Bearing				Double Bearing				
Type of Construction		B2 - SAE				IM B34				
Inertia (J) [kgm ²]		0.903				0.85				
Total Weight		261				276				
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