

THREE-PHASE SYNCHRONOUS GENERATOR
TH468G

Datasheet For 4 Poles - 50Hz @ 1500rpm

Ambient Temperature	40°C	Short Circuit Current Capacity	>300%
Temperature Rise	105°C	Waveform : TIF	<50
Insulation Class	Class F	Waveform : THF	<2%
Power Factor	0.8	Total Harmonic Content	< 2% - At no load
Excitation	Brushless	Method of Cooling	IC01
Winding Pitch	Five Sixth (5/6)	Direction of Rotation	Counter-clockwise
Pole	4	Maximum Over-speed	2250 rpm
Voltage Regulation - in steady state condition	+/- 0.5%	Degree of Protection / Enclosure	IP23
Duty	S1 - Continuous	Altitude	≤1000 m.a.s.l
AVR Model AVR	AVC125-10	Radio interference	Class B Group 1

Electrical and Mechanical Characteristic

Frequency	Hz	50
Voltage (series star)	V	6300
Rated power at Class F (105° C) temperature rise	kVA	1250
	kW	1000
Rated current	A	114.6
Efficiency at Class F (P.F.=0.8)	4/4%	94.9
	3/4%	95
	2/4%	93.9
Efficiency at Class F (P.F.=1.0)	4/4%	96.1
	3/4%	96.2
	2/4%	95.3

Reactance (%) at Class F

Short-circuit ratio	Kcc	0.61
Direct axis synchronous reactance unsaturated	Xd	1.647
Quadrature axis synchronous reactance unsaturated	Xq	0.994
Direct axis transient reactance saturated	X'd	0.148
Direct axis subtransient reactance saturated	X" d	0.136
Quadrature axis subtransient reactance saturated	X" q	0.149
Zero sequence reactance unsaturated	X0	0.071
Leakage reactance	Xσ1	0.088
Negative sequence reactance saturated	X2	0.142

Open circuit time constant (sec.)	T'do	3.364
Short-circuit transient time constant (sec.)	T'd	0.283
Subtransient time constant (sec.)	T" d	0.00168
Armature time constant (sec.)	Ta	0.0346
No load excitation current	io(A)	1.4
Full load excitation current	ic(A)	3.6
Full load excitation voltage	uc(V)	42
Stator Winding Resistance (20°C)	ohm	0.3372(Star series)
Rotor Winding Resistance (20°C)	ohm	0.8397
Exciter Stator Resistance (20°C)	ohm	6.763
Exciter Rotor Phase resistance		0.02376 Ω PER PHASE @20°C
Cooling air requirement	m ³ /sec	2.67

Configuration	Single Bearing	Double Bearing
Type of Construction	B2 - SAE	IM B20
Inertia (J) [kgm2]	44.2	44
Total Weight - kgs	3640	3661
Drive end bearing / Lubrication	Not supply	6328C3-2Z
Non-drive end bearing / Lubrication	6322C3	
Recovery time - sec.	0.5	
Stator winding	DOUBLE LAYER LAP	
Number of Terminal	3	
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