

## THREE-PHASE SYNCHRONOUS HIGH VOLTAGE GENERATOR

**TH468F** 

## Datasheet For 4 Poles - 50Hz @ 1500rpm

Ambient Temperature	40 ℃	Excitation	Brushless	<b>Short Circuit Current Capacity (with PM</b>	<b>(G)</b> ≥300%
Temperature Rise	125K	Winding Pitch	5 / 6	Method of Cooling	IC01
Service Duty	Continuous	Power Factor	0.8	<b>Direction of Rotation</b>	Counter-clockwise
Phase	3	Insulation Class	Class H	Maximum Over-speed	1800 rpm
Pole	4	Waveform : TIF	< 50	<b>Degree of Protection</b>	IP23
Voltage Regulation	+/- 0.5%	Waveform: THF	<2%	Radio interference	Class B Group 1
AVR Model	ETC-06	Altitude	≤1000 m.a.s.1	Total Harmonic Content	< 2% - At no load

## **Electrical and Mechanical Characteristic**

Frequency	Hz	50
Round per minute	rpm	1500
Voltage ( Y Connection ) -Star	V	10500
D-4-1	kVA	1000.0
Rated power at Class H (125K) temperature rise	kW	800
Rated current	A	55.0
	100%	93.8
Efficiency at Class H (P.F.=0.8)	75%	94.3
	50%	94.1
	100%	95.3
Efficiency at Class H (P.F.=1.0)	75%	95.6
	50%	95.4
Short-circuit ratio	Kcc	0.4600
Direct axis synchronous reactance unsaturated	Xd	2.5300
Quadrature axis synchronous reactance unsaturated	Xq	1.3150
Direct axis transient reactance saturated	X'd	0.2270
Direct axis subtransient reactance saturated	X''d	0.2120
Quadrature axis subtransient reactance saturated	X''q	0.2260
Zero sequence reactance unsaturated	X0	0.1110
Leakage reactance	$\mathbf{X}_{L}$	0.1490
Negative sequence reactance saturated	X2	0.2190
Open circuit time constant (sec.)	T'do	2.9960
Short-circuit transient time constant (sec.)	T'd	0.2960
Subtransient time constant (sec.)	T''d	0.0017
Armature time constant (sec.)	Τα	0.0320
No load excitation current	io(A)	1.3
Full load excitation current	ic(A)	4.1
Full load excitation voltage	uc(V)	44
Stator Winding Resistance (20°C)	ohm	1.863
Rotor Winding Resistance (20°C)	ohm	0.7491
Exciter Stator Resistance (20°C)	ohm	7.487
Exciter Stator Resistance (20°C)  Exciter Rotor Phase resistance	ohm	0.02376
Cooling air requirement	m <sup>3</sup> /sec	1.25
cooming an requirement	m /sec	1.20

Configuration	Single Bearing	Double Bearing		
<b>Type of Construction</b>	B2 - SAE	IM B20		
Inertia (J) [kgm2]	40.6	38.4		
Total Weight	3268	3310		
Drive end bearing / Lubrication	Not supply	6328 C3 / With grease nipple		
Non-drive end bearing / Lubrication	6322 C3	6322 C3 / With grease nipple		
Recovery time - sec.		0.5		
Stator winding	DOU	DOUBLE LAYER LAP		
Number of Terminal		6		
Rotor	wit	with damping cage		
Overload	110% r	110% rated load for 1 hour		