

250 CONT 230 kVA



Ratings and Dimensions

Frequency	50 Hz.									
Wire Connection	12 Wire Three Pheese									
Power Factor	0	,8	0	,8	0	,8	0,8			
Winding No.	#1	#125 #125			#125		#125			
Y Series Star	38	80 400			4:	15	440			
YY Parallel Star	19	90 200		00	208		220			
△ Series Delta	22	20	230		240		254			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	212.0	169.6	212.0	169.6	212.0	169.6	N/A	N/A		
Cont. H 125/40°C	230.0	184.0	230.0 184.0		230.0	184.0	N/A	N/A		
Stdby H 150/40°C	250.0	200.0	250.0 200.0		250.0	200.0	N/A	N/A		
Stdby H 163/27°C	262.0	209.6	262.0	209.6	262.0	209.6	N/A	N/A		

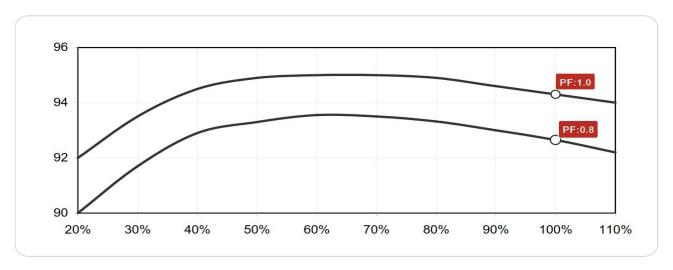
Frequency	50 Hz.									
Wire Connection		12 Wire Si	ngle Phase		4 Wire Single Phase					
Power Factor	0	,8	1		0,8		1			
Winding No.	#1	.25			#41		#41			
ΔΔ Double Delta	220-23	0-240V	220-230-240V		220-230-240V		220-230-240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	127	101	127	127	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	139	111	139	139	N/A	N/A	N/A	N/A		
Stdby H 150/40°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Stdby H 163/27°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Frequency	60 Hz.									
Wire Connection	12 Wire Three Pheese									
Power Factor	0,8 0,8				0	,8	0,8			
Winding No.	#1	125 #125			#125		#125			
Y Series Star	4:	16	440			50	480			
YY Parallel Star	20	08	220		230		240			
△ Series Delta	24	40	254		266		277			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	250.0	200.0	265.0	212.0	276.0	220.8	276.0	220.8		
Cont. H 125/40°C	270.0	216.0	282.0 225.6		295.0	236.0	302.0	241.6		
Stdby H 150/40°C	288.0	230.0	302.0 241.6		314.0	251.2	320.0	256.0		
Stdby H 163/27°C	295.0	236.0	305.0	244.0	320.0	256.0	327.0	261.6		

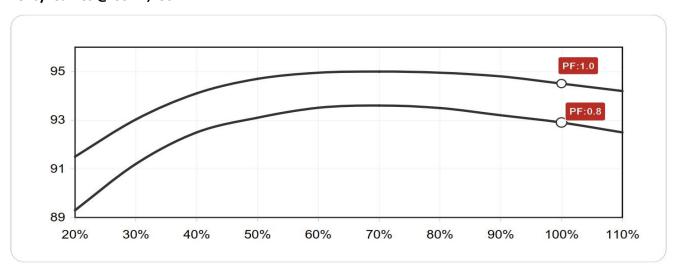
Frequency	60 Hz.									
Wire Connection		12 Wire Si	ngle Phase		4 Wire Single Phase					
Power Factor	0	,8		1	0,	,8	1			
Winding No.	#1	25	#125		#42		#42			
ΔΔ Double Delta	24	0V	240V		240V		240V			
	kVA	kW	kVA	kW	kVA	kW	kVA	kW		
Cont. F 105/40°C	155	124	155	155	N/A	N/A	N/A	N/A		
Cont. H 125/40°C	162	130	162	162	N/A	N/A	N/A	N/A		
Stdby H 150/40°C	N/A	N/A	N/A	N/A N/A		N/A	N/A	N/A		
Stdby H 163/27°C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Effiency and Motor Starting

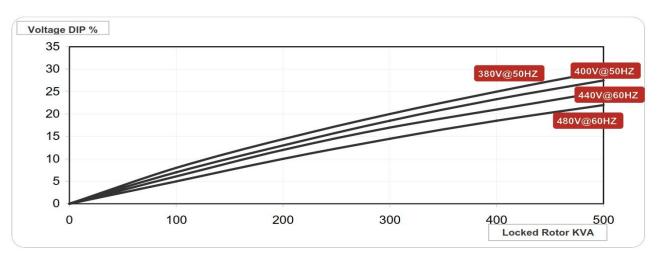
Effiency Curve @ 50 Hz,400V



Effiency Curves @ 60 Hz,480V



Motor Starting Curves @ 50 Hz, 60 Hz Locked Rotor



Technical Data Sheet

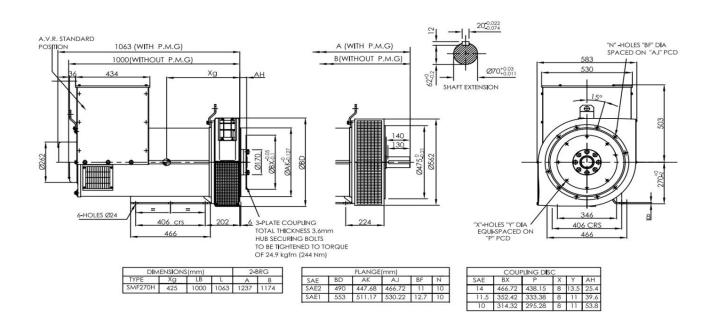
STANDARD(S) OPTIONAL(O) INFORMATION (I) SPECIFICATION

1			
EXCITATION	SELF-EXCITED	S	SUSTAINED SHORT-CIRCUIT: NOT AVAILABLE
SYSTEM	ARAP		
0.0.1	PMG		
	SX460	S	REGULATION PRECISION : +/-1,0 %
AVR	SX440	0	REGULATION PRECISION : +/-1,0 %
7.417	MX341		
	MX321		
WINDING	Н	S	
INSULATION	F		
WINDING PITCH	2/3	S	HIGHER FLEXIBILITY IN USE,BETTER MOTOR STARTING ABILITY
WINDING PITCH	5/6	0	COST-EFFECTIVE POWER SUPPLY SCHEME
	STANDARD	S	
WINDING	"ANTI-HARSH"	0	SPECIAL TREATMENT OF WINDING TO AGINST HASRH ENVIROMENT
PROTECTION	SPACE HEATER	0	TO HEAT UP AIR TO REMOVE THE HUMMINITY AROUND WINDING
	THERMAL SENSOR	0	TO DETECT THE WINDING TEMPERATURE OR BEARING'S
	CT100	0	
54541151	CT200		
PARALLEL	CT400		
OPERATION	CT600		
	CT1000		
	12	S	12 LEADS OF WINDING ENDS,
WINDING LEADS	6	0	6 LEADS OF WINDING ENGS
	IP23	S	STANDARD MACHINE PROTECTION
MACHINE	IP44	0	TO AGINST : 1mm OBJECT AND SPLASHING WATER
PROCTIION	IP54		
	1	0	
POWER FACTOR	0,8	S	
	SINGLE BEARING	S	
CONNECTION TO	DOUBLE BEARING	0	
ENGINE	BELT DRIVE	0	
-	VERTICAL		
OVERSPEED	7 2 7 7 7 7 7	1	MAX ROTATING SPEED : 2250 RPM
	<=1000m	i	DERATING IS NO NEED
ATTITUDE	>1000m	i	DERATING NEEDED, REFERS TO RATING BOOK
	TDF/THC	i	NO LOAD < 1,5 %, NON DISTORATING BALANCED LINEAR LOAD< 5,0 %
ELECTIRICAL	TIF	i	<50
FEATRUES	THF	i	<2%
	DRIVE -END	i	BALL 6309 - 2RS DOUBLE BEARING CONF. ONLY
BEARING	NON DRIVE END	i	BALL 6306 - 2RS
	NET	i	SINGLE BEARING 656 KG DOUBLE BEARING : 684KG
WEIGHT	GROSS	<u>'</u> I	SINGLE BEARING 690 KG DOUBLE BEARING : 684KG SINGLE BEARING 690 KG DOUBLE BEARING : 718KG
PACKING SIZE	UNUSS	<u>'</u> I	
FACKING SIZE			SINGLE B. : 1100 x680x890 mm DOUBLE B. : 1100x680X890mm

Technical Data Sheet

STANDARD(S) OPTIONAL(O) INFORMATION (I)	SPECI	SPECIFICATION							
SERIES STAR (V)	380	400	415	440	416	440	460	480	
PARALLEL STAR (V)	190	200	208	220	208	220	230	240	
SERIES DELTA (V)	220	230	240	254	240	254	266	277	
Xd - Direct axis synchro. Reactance unsaturated	1.939	1.750	1.626	_	2.651	2.475	2.370	2.221	
X'd - Direct axis transient reactance saturated.	0.103	0.093	0.086		0.164	0.153	0.147	0.137	
X"d - Direct axis sub transient reactance saturated	0.070	0.064	0.059	_	0.096	0.090	0.086	0.080	
Xq - Qadro. Axis synchro.reactance unsaturated.	0.886	0.800	0.743	_	1.206	1.126	1.078	1.010	
X"q - Quadro. Axis sub transiet reactance saturated.	0.163	0.147	0.137	-	0.138	0.129	0.123	0.116	
X2 - Negative sequence reactance unsturated	0.117	0.105	0.098	_	0.117	0.109	0.105	0.098	
Xo -Zero sequence reactance unsaturated.	0.044	0.040	0.037	_	0.048	0.045	0.043	0.040	
T'd- Short - Circuit transiet time constant		0.045s							
T"d - Sub Transiet time constant		0.015s							
T'do- Open circuit time constant		1,27s							
Ta- Armature time constant		0.03s							
Kcc - Short Circuit Ratio		1/Xd							

Outline Drawing



Maranello designs, manufactures and markets the alternators which comply with the national and international standards. The alternator can be broadly used in the all-purposed application, such as backup, rental, telecom and marine, and also can be used in a.

Compliant with Standards

Other certifications can be considered on request.

Electrical Features

Automatic Voltage Regulator (AVR)

The high efficiency semiconductors of the AVR ensure positive build-up from initial low levels of residual voltage.

2/3 Winding Pitch

Effectively eliminates the effect of the third harmonics so as to avoid excessive neutral currents.

Varible Voltage Output

Standard voltage output can be achieved through the reconnectable 12 wire, and the beyond-the-standard voltage might be achieved by optional winding.

Overload Capability

Be capable of running at constant load limited to the insulation class with the possibility of overload up to 10% for 1 hour every 12 hours. (Continuous Duty -S1).

High Efficiency and Motor Starting Capacity

Optimizing design greatly improves the efficiency and motor starting capacity.

Mechanical Features

Bracket + Flexible Disc

The combination of casting braket and flexible disc makes product to be coupled with any brand of engine whose interface is international design

Terminal Box

Metal-made and accessed easily, it also can be customized on requests.

Shaft and Key

Rotors assembly is dymastically balanced under ISO8528 and BS5000 regulation, and double-bearing is balanced with half-key.

Bearing

Bearing is greased in the factory for life, and regreasable bearing is available on request.

Machine Protection

The standard protection is IP23, and IP44 is optional

Insulation and Impregnation

H-class Insulation

Materials used in the insulation system is classed "H", specially the copper wire applied is able to withstand 200°C

Vacuum Pressure Impregnation (VPI)

The advanced impregnation equipment is applied to ensure the electrical insulation and mechanical strength.

Winding Protection

Standard:

The winding is protected against relative humidity< 95%.

Optional:

The special-treated winding ("ANTI-HARSH") is recommended to apply for the environment humidity > 95%, or harsh environment such as atmospheric contaminants or salty water spr