



ALTERNATOR PRO35M G/4

Three-phase brushless synchronous alternator with AVR - 4 poles

Technical Data Sheet

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COMMON DATA

Rated Power at 50Hz	kVA	725	
Rated Power at 60Hz	kVA	870	
Rated Power Factor		0.8	
Nominal Temperature	°C	40	
Control System		Self excited	
Execution		brushless	
Regulation Type		AVR	
Insulation Class		H	
Protection		IP23	
Maximum Overspeed	rpm	2250	
Overload		110% of rated power for one hour in a cycle of 6 hours	
Air Flow Requirement	m ³ /min	54.5 at 50Hz	64 at 60Hz
R.F.I. Suppression		Standard EN55011	

REGULATION DATA

AVR	HVR30		
Sensing	Three phase		
Voltage Regulation	± 1%		
Sustained Short Circuit	>300% of rated current		

WINDING DATA

Stator Winding	Double layer with auxiliary winding		
Rotor Winding	with damping cage		
Winding Pitch	2/3		
Number of Leads of Stator Winding	12		
Stator Winding Resistance	0.0019Ω at 20°C		
Rotor Winding Resistance	1.7Ω at 20°C		
Exciter Stator Resistance	12.5Ω at 20°C		
Exciter Rotor Resistance	0.095Ω at 20°C		
THD at full load	<3%		
THD at no load	<2.5%		
Excitation at no load	A _{dc}	0.52	
Excitation at full load	A _{dc}	2.35	

STANDARD

References	EN60034-1, ISO8538, EN55011
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ELECTRICAL DATA

Frequency		50Hz - 1500rpm				60Hz - 1800rpm			
Voltage Series Star	V	380/220	400/230	415/240	440/254	415/240	440/254	460/266	480/277
Voltage Parallel Star	V	190/110	200/115	207/120	220/127	207/120	220/127	230/133	240/138
Voltage Series Delta	V	220	230	240	254	240	254	266	277
Rated Power in Class H (125°C/40°C)	kVA	725	725	725	670	785	820	870	870
	kW	580	580	580	536	628	656	696	696
Rated Power in Class F (105°C/40°C)	kVA	650	650	650	600	700	740	780	780
	kW	520	520	520	480	560	592	624	624
Rated Power Standby (150°C/40°C)	kVA	765	765	765	710	830	865	920	920
	kW	612	612	612	568	664	692	736	736
Rated Power Standby (163°C/27°C)	kVA	795	795	795	735	860	895	950	950
	kW	636	636	636	588	688	716	760	760

EFFICIENCY IN CL. H

4/4		95.3%						96.2%
3/4		95.8%						96.6%
2/4		94.6%						95.2%
1/4		93.1%						93.7%

REACTANCES AND TIME CONSTANTS

pcc		0.31						
X _d - dir. axis synchronous		329%						329%
X' _d - dir. axis transient		19.0%						19.0%
X'' _d - dir. axis subtransient		10.0%						10.0%
X _q - quad. axis reactance		215%						215%
T' _{do} - O.C. field time constant	2500 ms							
T' _d - Transient time constant	145 ms							
T'' _d - Sub-transient time constant	9 ms							

MECHANICAL DATA

Bearing non drive end	6316-2RS-C3		
Bearing drive end (B3/B14 form)	6319-C3		
Weight of generator	in B2	kg	1640
	in B3/B14	kg	1645

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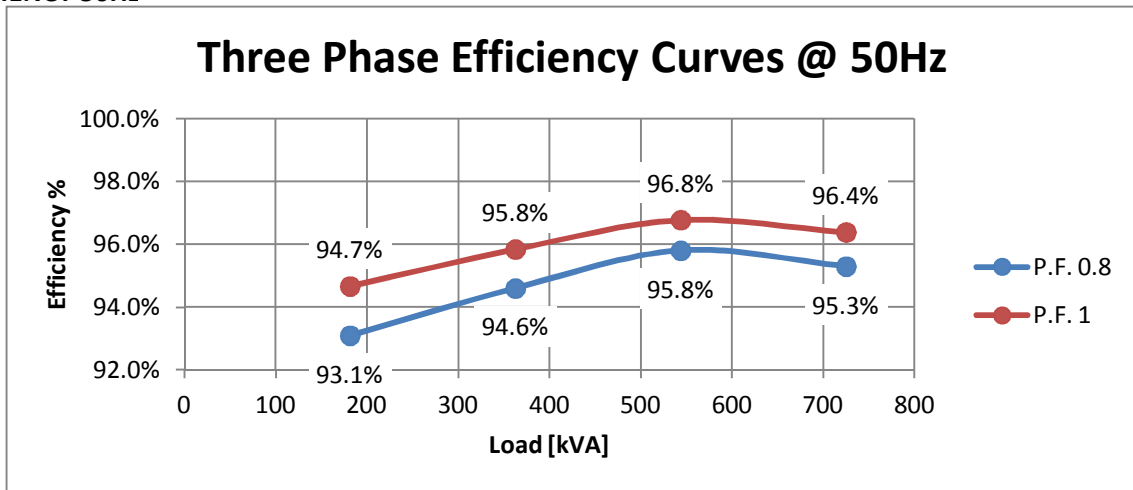
MOMENT OF INERZIA

SAE 14	kg·m ²	12.757
SAE 18	kg·m ²	13.097
B3/B14	kg·m ²	12.242

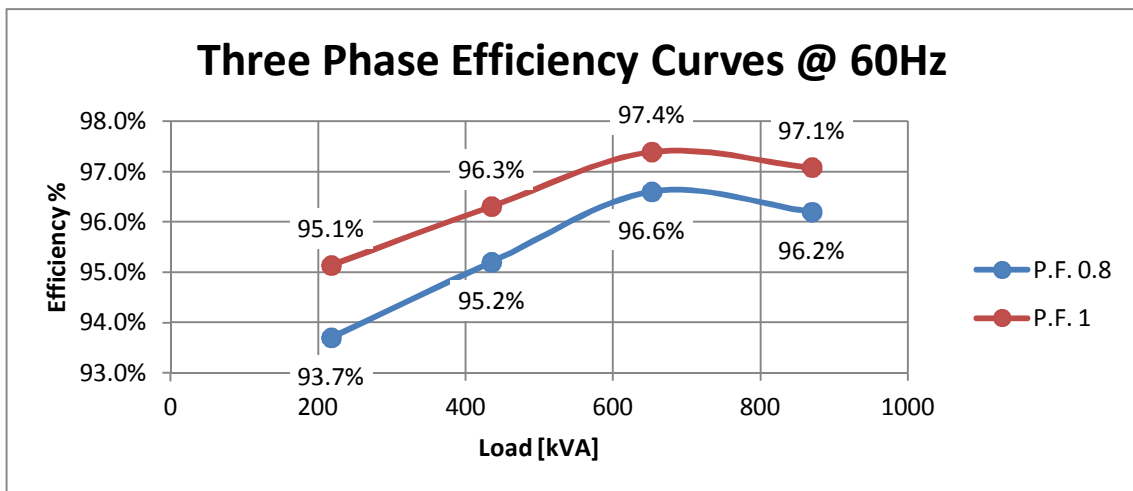
POWER VARIATION ACCORDING TO TEMPERATURE AND ALTITUDE

Altitude	Ambient temperature				
	25°C	40°C	45°C	50°C	55°C
< 1000m	1.09	1	0.96	0.93	0.91
1000m - 1500m	1.01	0.96	0.92	0.89	0.87
1500m - 2000m	0.96	0.91	0.87	0.84	0.83
2000m - 3000m	0.9	0.85	0.81	0.78	0.76

EFFICIENCY 50Hz

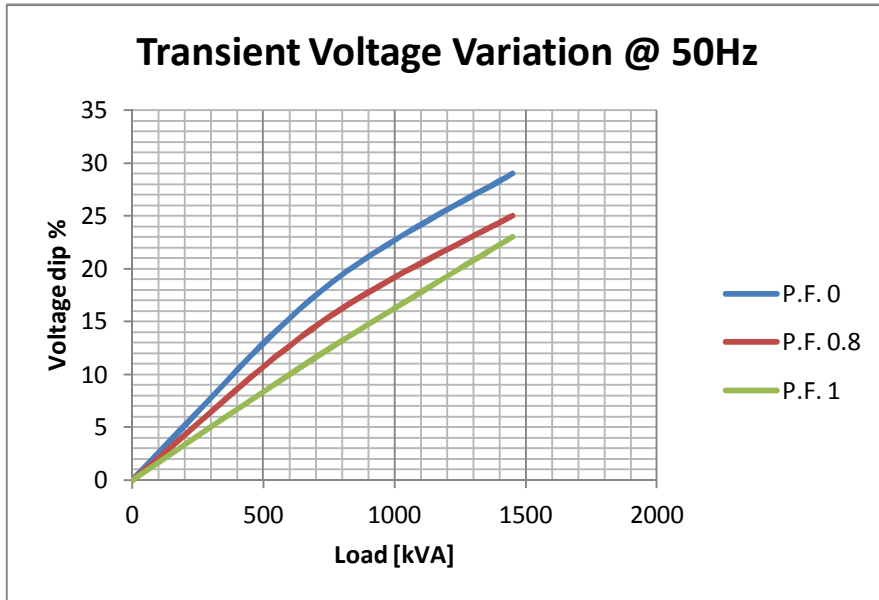


EFFICIENCY 60Hz

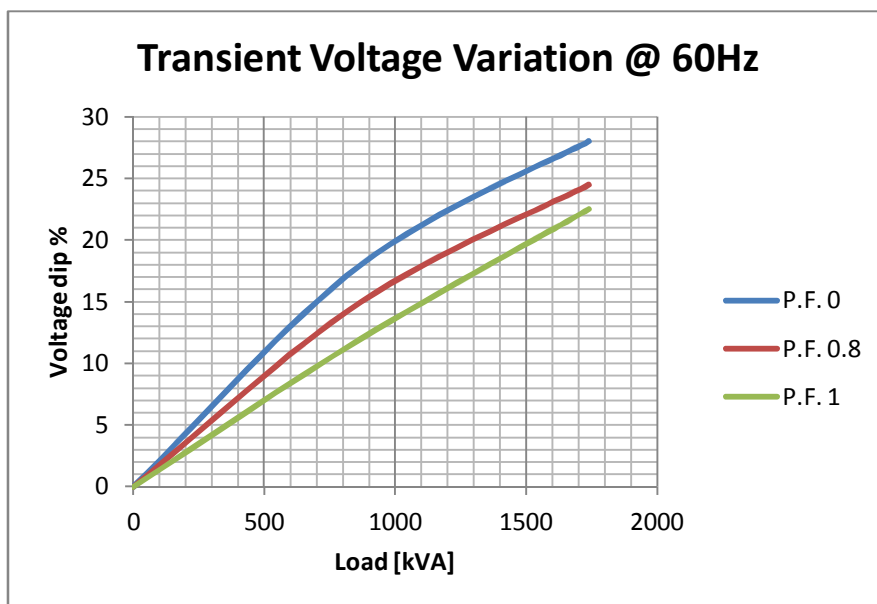


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TRANSIENT VOLTAGE VARIATION 50Hz

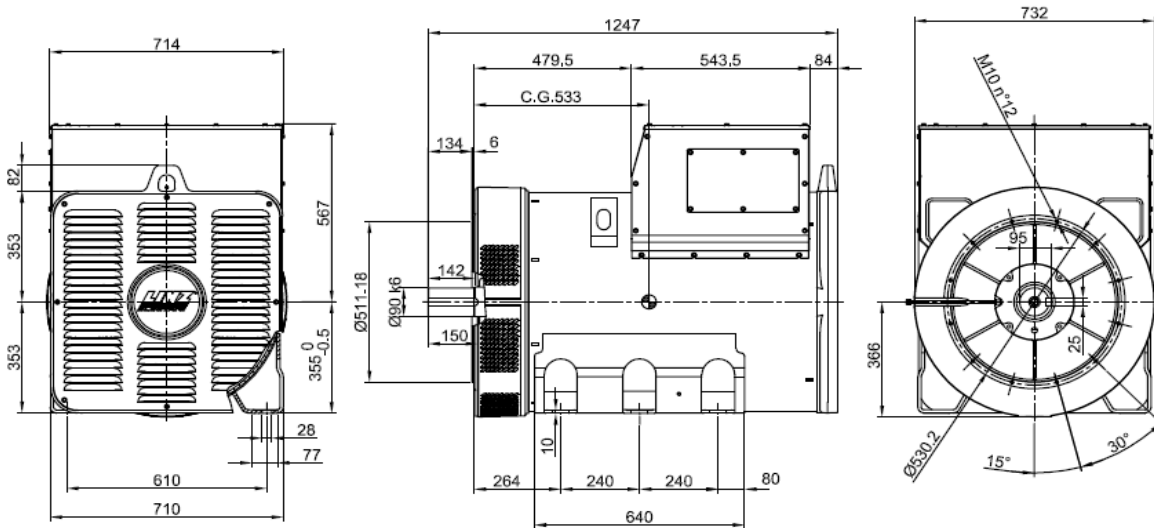


TRANSIENT VOLTAGE VARIATION 60Hz

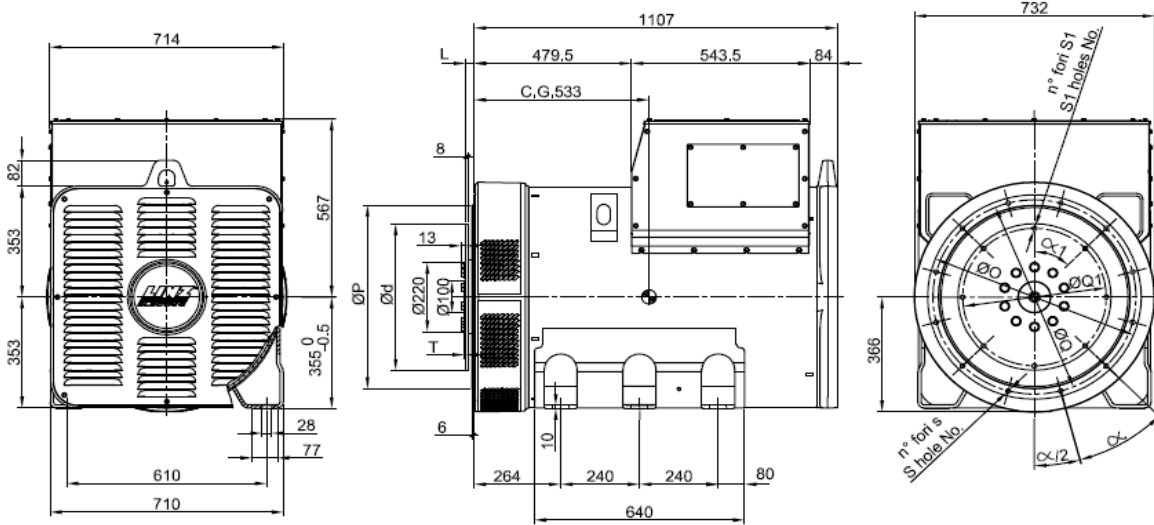


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FORMA - FORM B3/B14



FORMA - FORM MD35



SAE N.	FLANGIE - FLANGES - BRIDAS					
	Ø O	Ø P	Ø Q	n. fori holes No.	S	α
O	710	647.7	679.5	16	14	22.5°
1/2	650	584.2	619.2	12	14	30°
1	552	511.18	530.2	12	12	30°

SAE N.	GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS						
	L	Ø d	Ø Q1	n. fori holes No.	S1	α1	T
14	25.4	466.72	438.15	8	14	45°	4.3
18	15.7	571.5	542.92	6	17	60°	14