



ALTERNATOR PRO35M G/4

three-phase brushless synchronous alternator with AVR - 4 poles

Technical Data Sheet

PRO35M G/4

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		12
Stator Winding Resistance		0.0019 at 20°C
Rotor Winding Resistance		1.7 at 20°C
Exciter Stator Resistance		12.5 at 20°C
Exciter Rotor Resistance		0.095 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 ISO8528-3 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
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		365%	329%	306%	251%	397%	369%	358%	329%
X' _d - dir. axis transient		21.1%	19.0%	17.7%	14.5%	22.9%	21.3%	20.7%	19.0%
X'' _d - dir. axis subtransient		11.1%	10.0%	9.3%	7.6%	12.1%	11.2%	10.9%	10.0%
X _q - quad. axis reactance		238%	215%	200%	164%	260%	241%	234%	215%
T' _{do} - O.C. field time constant	2500ms								
T' _d - Transient time constant	145ms								
T'' _d - Sub-transient time constant	9ms								

MECHANICAL DATA

Bearing non drive end			6316-2RS-C3
Bearing drive end (B3/B14 form)			6319-2RS1-C3
Weight of generator	in B2	kg	1658
	in B3/B14	kg	1682
	in B3/B9	kg	\

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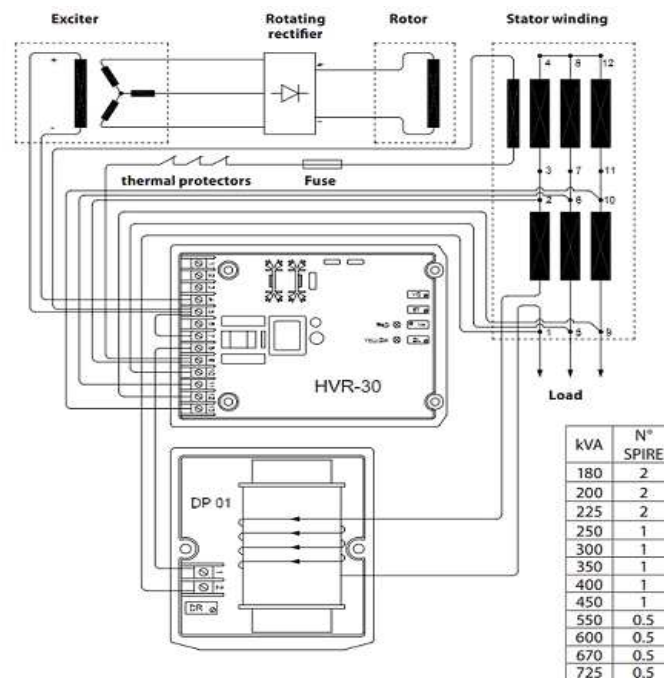
MOMENT OF INERZIA

B3/B9	kg·m ²	\
SAE 7½	kg·m ²	\
SAE 8	kg·m ²	\
SAE 10	kg·m ²	\
SAE 11½	kg·m ²	\
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

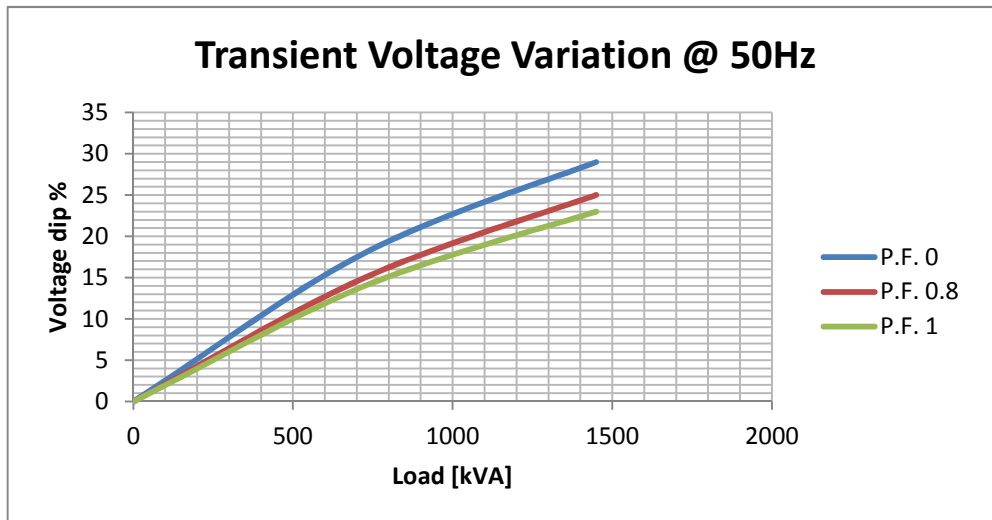
Altitude	Ambient temperature				
	25°C	40°C	45°C	50°C	55°C
< 1000m	1.09	1	0.96	0.93	0.91
1000m - 1500m	1.01	0.96	0.92	0.89	0.87
1500m - 2000m	0.96	0.91	0.87	0.84	0.83
2000m - 3000m	0.9	0.85	0.81	0.78	0.76

WIRING DIAGRAM

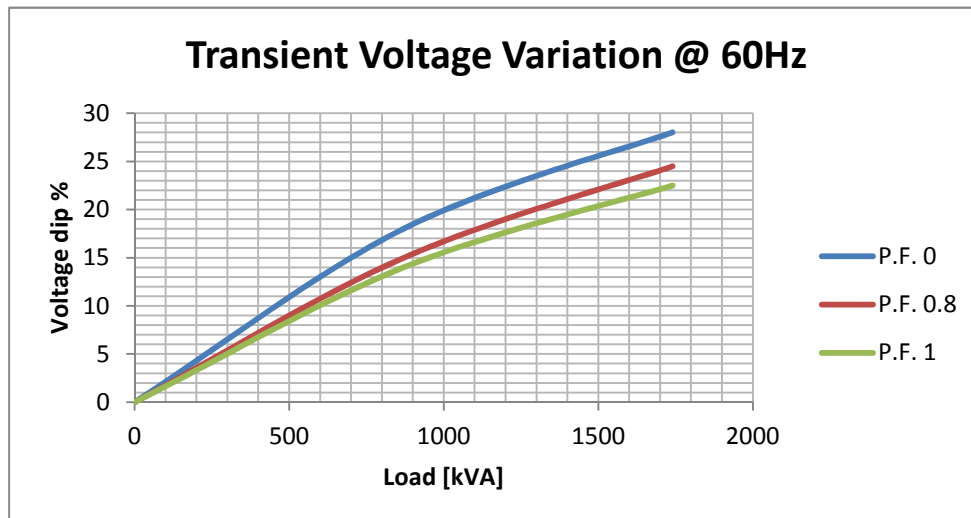


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TRANSIENT VOLTAGE VARIATION 50Hz

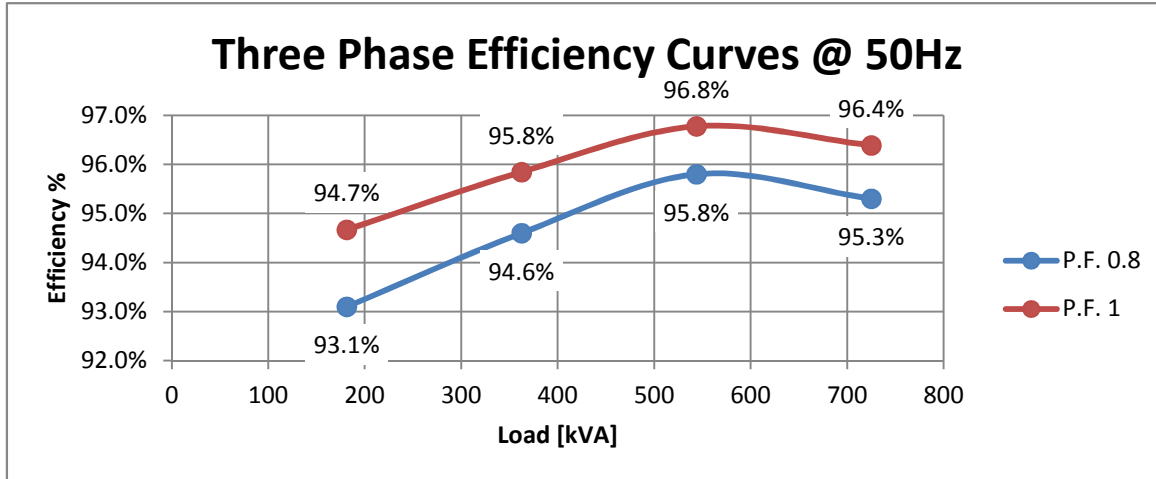


TRANSIENT VOLTAGE VARIATION 60Hz

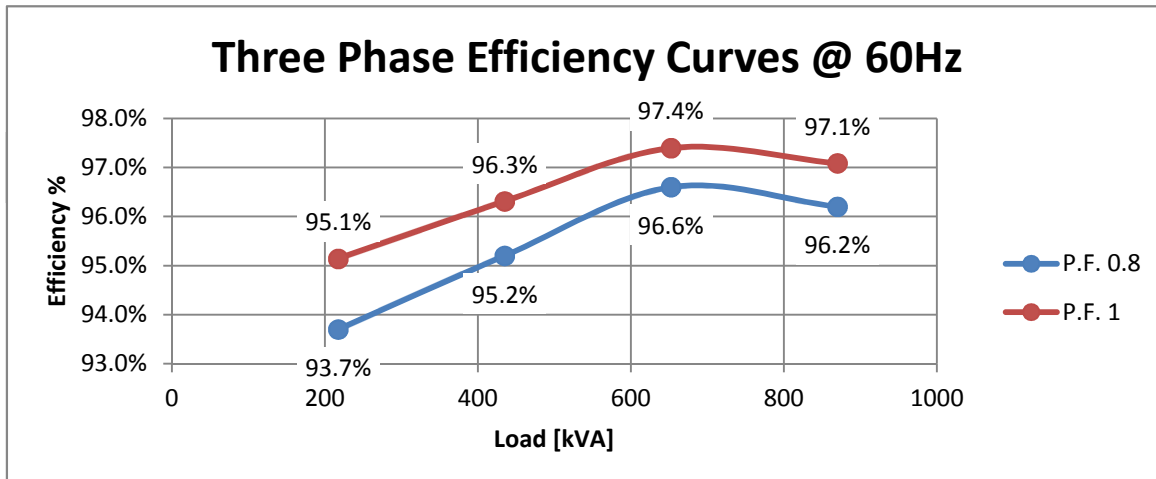


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EFFICIENCY 50Hz

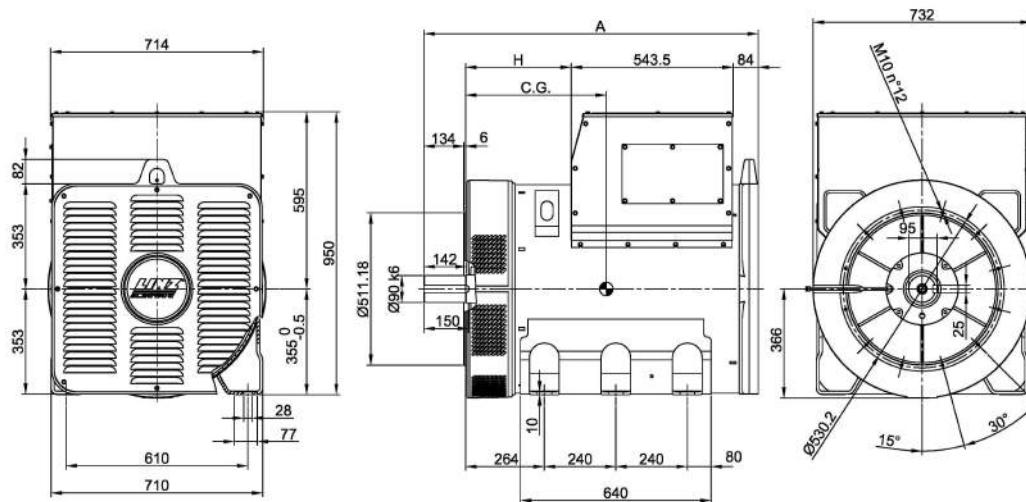


EFFICIENCY 60Hz

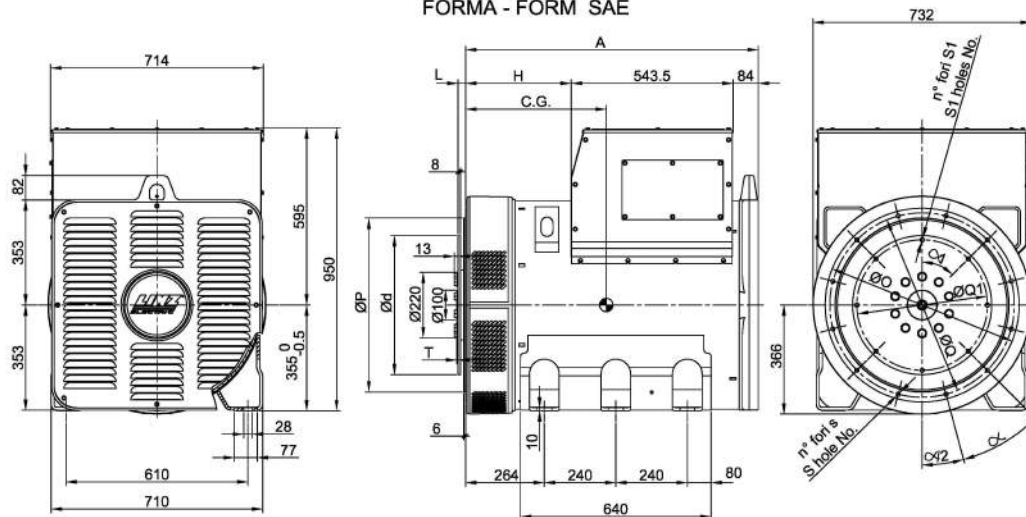


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FORMA - FORM B3/B14



FORMA - FORM SAE



FORMA - FORM		A	H	TIPO - TYPE	C.G.
B3/B14	PRO35 S	1122	354.5	PRO35S B/4	455
	PRO35 M	1247	479.5	PRO35S C/4	465
	PRO35 L	1347	579.5	PRO35S D/4	478
	PRO35 S	982	354.5	PRO35M E/4	516
SAE	PRO35 M	1107	479.5	PRO35M F/4	516
	PRO35 L	1207	579.5	PRO35M G/4	539
				PRO35L H/4	588

SAE N.	FLANGIE - FLANGES - BRIDAS						SAE N.	GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS						
	Ø O	Ø P	Ø Q	n. fori holes No.	S	α		L	Ø d	Ø Q1	n. fori holes No.	S1	α1	T
O	710	647.7	679.5	16	14	22.5°	14	25.4	466.72	438.15	8	14	45°	4.3
1/2	650	584.2	619.2	12	14	30°	18	15.7	571.5	542.92	6	17	60°	14
1	552	511.18	530.2	12	12	30°								