



ALTERNATOR PRO18L 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	60	
Rated Power at 60Hz	kVA	72	
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	11.7 at 50Hz	14 at 60Hz
Telephone Interference		<2%	
R.F.I. Suppression		Standard EN55011	

REGULATION DATA

AVR	HVR11	HVR30
Sensing	Single phase	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	0.082Ω at 20°C	
Rotor Winding Resistance	5.23Ω at 20°C	
Exciter Stator Resistance	13Ω at 20°C	
Exciter Rotor Resistance	0.72Ω at 20°C	
THD at full load	<3%	
THD at no load	<3%	
Excitation at no load	A _{dc}	0.86
Excitation at full load	A _{dc}	2.4

STANDARD

References	EN60034-1, ISO8538, EN55011
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ELECTRICAL DATA

Frequency		50Hz - 1500rpm				60Hz - 1800rpm			
		380/220	400/230	415/240	440/254	415/240	440/254	460/266	480/277
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	60	60	58	50	60	68	72	72
	kW	48	48	46.4	40	48	54.4	57.6	57.6
Rated Power in Class F (105°C/40°C)	kVA	55	55	50	45	48	62	66	66
	kW	44	44	40	36	38.4	49.6	52.8	52.8
Rated Power Standby (150°C/40°C)	kVA	62	62	60	52	62	70	76	76
	kW	49.6	49.6	48	41.6	49.6	56	60.8	60.8
Rated Power Standby (163°C/27°C)	kVA	65	65	62	55	64	72	78	78
	kW	52	52	49.6	44	51.2	57.6	62.4	62.4

EFFICIENCY IN CL. H

4/4		89.6%						91.4%
3/4		90.1%						92.2%
2/4		87.5%						89.1%
1/4		82.4%						84.3%

REACTANCES AND TIME CONSTANTS

pcc	0.63							
X _d - dir. axis synchronous	288%	260%	235%	179%	291%	292%	283%	260%
X' _d - dir. axis transient	23.3%	21.0%	19.0%	14.5%	23.5%	23.6%	22.9%	21.0%
X'' _d - dir. axis subtransient	7.8%	7.0%	6.3%	4.8%	7.8%	7.9%	7.6%	7.0%
X _q - quad. axis reactance	164%	148%	134%	102%	166%	166%	161%	148%
T' _{do} - O.C. field time constant	195 ms							
T' _d - Transient time constant	15 ms							
T'' _d - Sub-transient time constant	9 ms							

MECHANICAL DATA

Bearing non drive end	6307-2RS-C3		
Bearing drive end (B3/B14 form)	6309-2RS-C3		
Weight of generator	in B2	kg	271
	in B3/B14	kg	260

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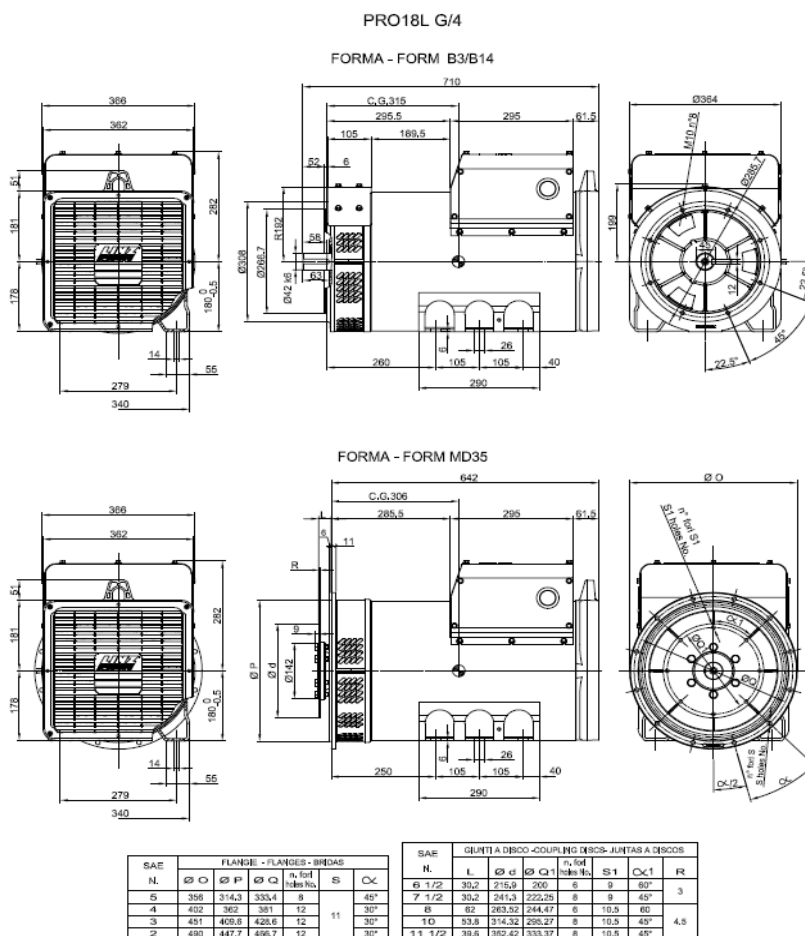
MOMENT OF INERZIA

SAE 7½	kg·m ²	0.534
SAE 8	kg·m ²	0.547
SAE 10	kg·m ²	0.572
SAE 11½	kg·m ²	0.598
B3/B14	kg·m ²	0.523

POWER VARIATION ACCORDING TO TEMPERATURE AND ALTITUDE

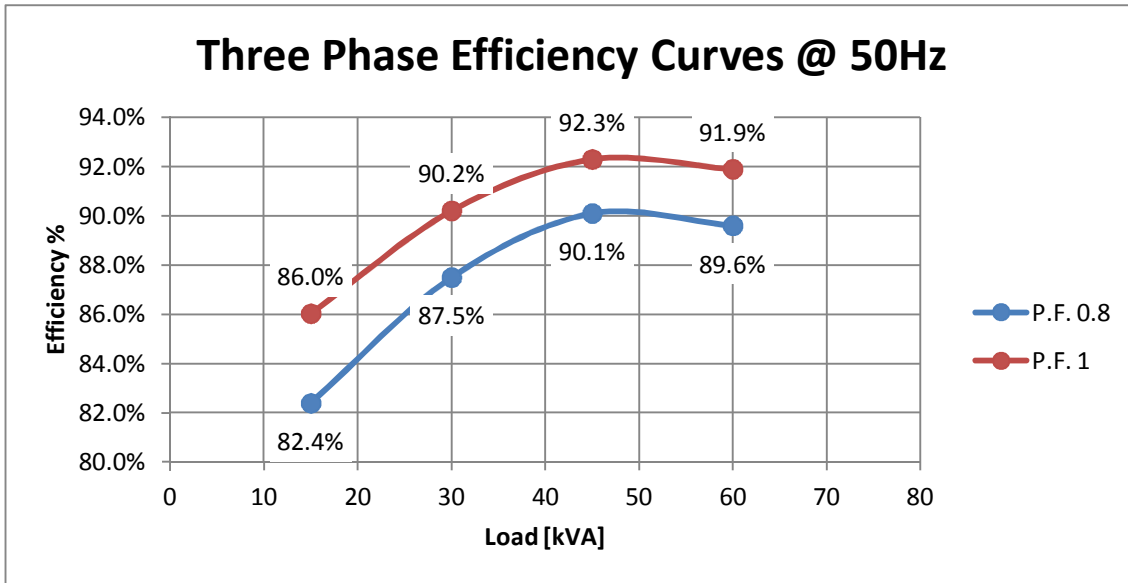
Altitude	Ambient temperature				
	25°C	40°C	45°C	50°C	55°C
< 1000m	1.09	1	0.96	0.93	0.91
1000m - 1500m	1.01	0.96	0.92	0.89	0.87
1500m - 2000m	0.96	0.91	0.87	0.84	0.83
2000m - 3000m	0.9	0.85	0.81	0.78	0.76

DIMENSIONS

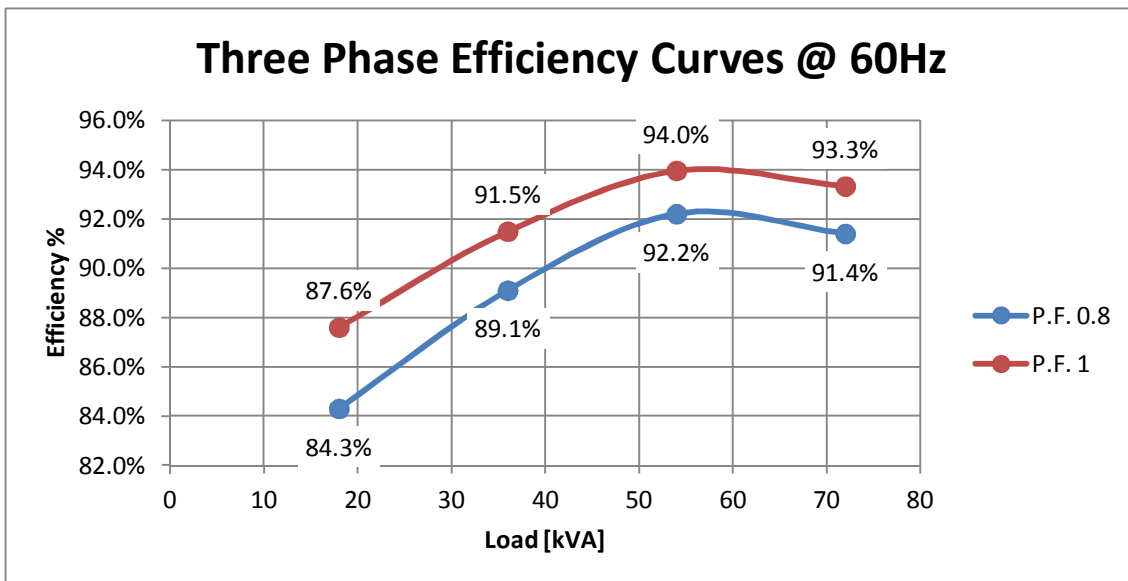


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EFFICIENCY 50Hz

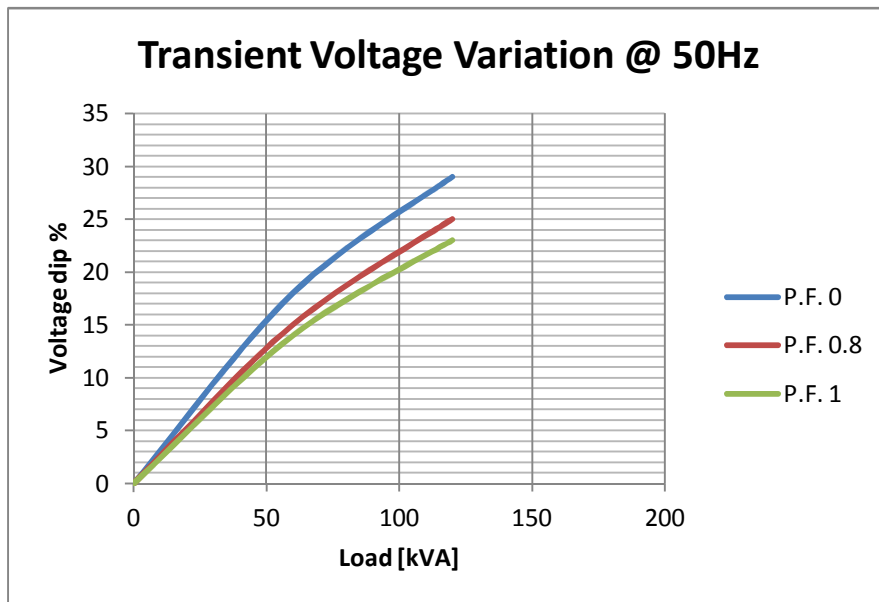


EFFICIENCY 60Hz



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TRANSIENT VOLTAGE VARIATION 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

