

ALTERNATOR PRO18L F/4

Three-phase brushless synchronous alternator with AVR - 4 poles

Technical Data Sheet

PRO18L F/4

COMMON DATA

Rated Power at 50Hz	kVA	50	
Rated Power at 60Hz	kVA	60	
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	10 at 50Hz	11.5 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	250% 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	0.052Ω at 20°C	
Rotor Winding Resistance	4.53Ω 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}	0.91
Excitation at full load	A _{dc}	2.25

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
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	50	50	48	42	56	57	58	60
	kW	40	40	38.4	33.6	44.8	45.6	46.4	48
Rated Power in Class F (105°C/40°C)	kVA	45	45	43.5	40	50	52	53	54
	kW	36	36	34.8	32	40	41.6	42.4	43.2
Rated Power Standby (150°C/40°C)	kVA	53	53	51	48	58	61	63	64
	kW	42.4	42.4	40.8	38.4	46.4	48.8	50.4	51.2
Rated Power Standby (163°C/27°C)	kVA	55	55	53	50	60	63	65	66
	kW	44	44	42.4	40	48	50.4	52	52.8

EFFICIENCY IN CL. H

4/4		89.4%						91.2%
3/4		90.0%						92.0%
2/4		88.1%						88.7%
1/4		85.8%						86.2%

REACTANCES AND TIME CONSTANTS

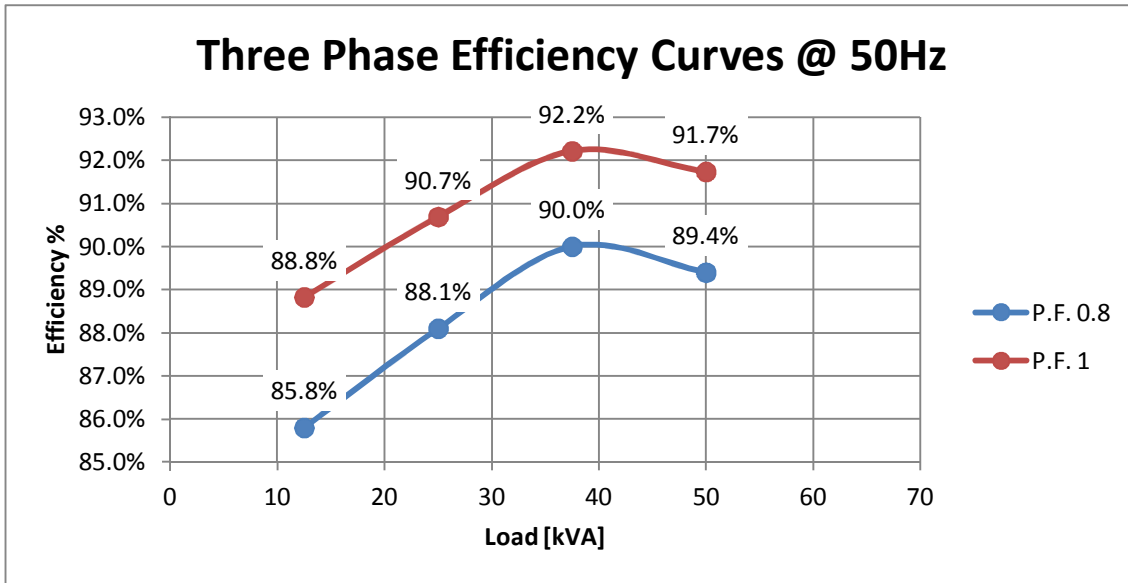
pcc	0.62							
X _d - dir. axis synchronous	283%	255%	229%	177%	320%	288%	268%	255%
X' _d - dir. axis transient	22.2%	20.0%	17.9%	13.9%	25.1%	22.6%	21.1%	20.0%
X'' _d - dir. axis subtransient	7.8%	7.0%	6.3%	4.9%	8.8%	7.9%	7.4%	7.0%
X _q - quad. axis reactance	162%	146%	131%	101%	183%	165%	154%	146%
T' _{do} - O.C. field time constant	188 ms							
T' _d - Transient time constant	14 ms							
T'' _d - Sub-transient time constant	9 ms							

MECHANICAL DATA

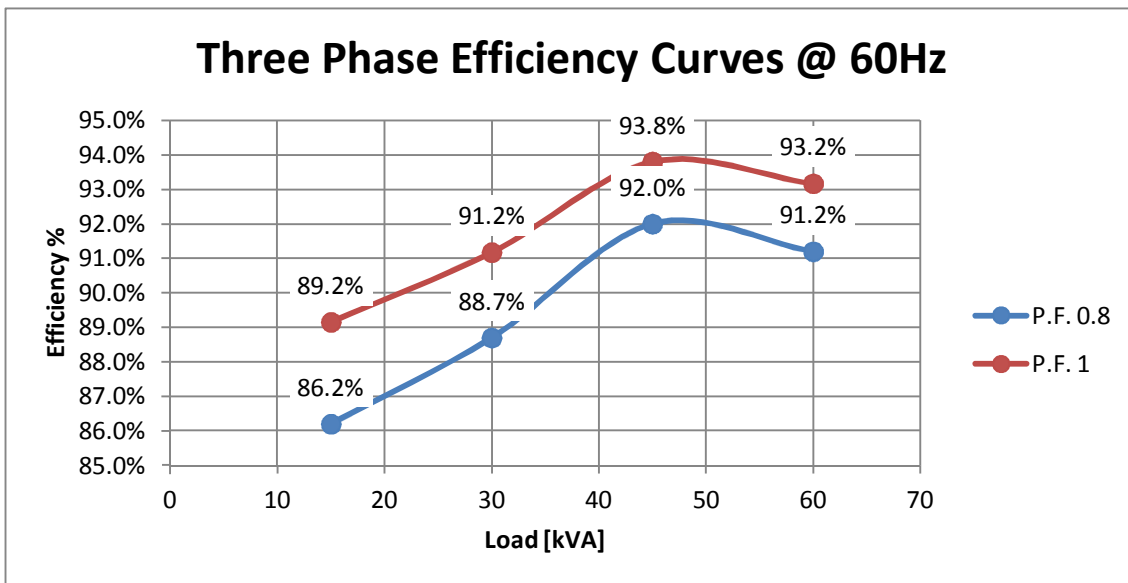
Bearing non drive end	6307-2RS-C3		
Bearing drive end (B3/B14 form)	6309-2RS-C3		
Weight of generator	in B2	kg	240
	in B3/B14	kg	235

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EFFICIENCY 50Hz

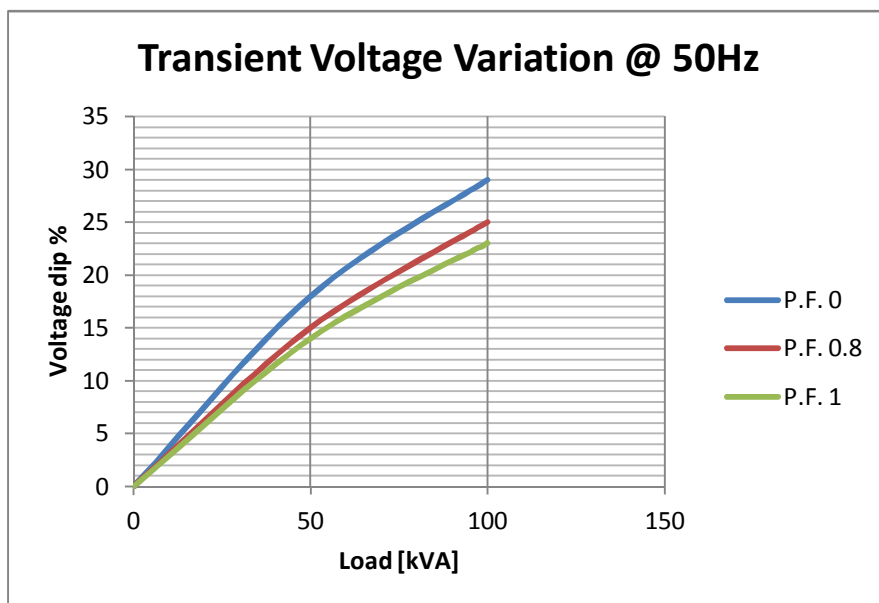


EFFICIENCY 60Hz



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TRANSIENT VOLTAGE VARIATION 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

