

TECHNICAL DATA SHEET



**ALTERNATOR E1C13S A/4**

*Single-Phase brushless synchronous alternator with capacitor - 4 poles*

## E1C13S A/4

### COMMON DATA

Rated Power at 50Hz	kVA	5,5	
Rated Power at 60Hz	kVA	7,0	
Rated Power Factor		1,0	
Nominal Temperature	°C	40	
Control System		self-excited	
Execution		brushless	
Regulation Type		Capacitor	
Insulation Class		H	
Protection		IP21	
Maximum Over speed	rpm	2250	
Overload		110% of rated power for one hour in a cycle of 6 hours	
Air Flow Requirement	m <sup>3</sup> /min	3,1 at 50Hz	3,6 at 60Hz
R.F.I. Suppression		Standard EN55011	

### REGULATION DATA

Capacitor	Capacitor with Aluminum Technology		
Voltage Regulation	±5%		
Sustained Short Circuit	> 250% of rated current		

### WINDING DATA

Stator Winding	Single layer with auxiliary winding		
Rotor Winding	with damping cage		
Number of Leads of Stator	4		
Stator Winding Resistance	Ω	0,73 at 20°C	
Rotor Winding Resistance	Ω	0,83 at 20°C	
THD at full load	<5,5%		
THD at no load	<5,0%		

### STANDARD

References	EN60034-1 ISO8528-3 EN55011
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### ON REQUEST

UL 1446, Systems of Insulating Materials - General CSA-C22.2 No. 0, Appendix B, General Requirements - Canadian Electrical Code, Part I

CAN/CSA - C22.2 No. 100-14 (R2009) Motors and Generators, UL1004-1 2nd ed. Rotating Electrical Machines - General Requirements, UL1004-4 2nd ed. Electric Generators

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### ELECTRICAL DATA

Frequency		50Hz - 1500rpm	60Hz - 1800rpm
Voltage Series Star	V	<b>115/230</b>	<b>110/220</b>
Rated Power in Class H (125°C/40°C)	kW	5,5	7,0
Rated Power in Class F (105°C/40°C)	kW	5,0	6,5
Rated Power Standby (150°C/40°C)	kW	5,8	7,5
Rated Power Standby (163°C/27°C)	kW	6,0	7,8

### EFFICIENCY IN CL. H

4/4	77,0%	78,0%
3/4	78,0%	78,5%
2/4	73,0%	74,0%
1/4	71,5%	72,0%

### MECHANICAL DATA

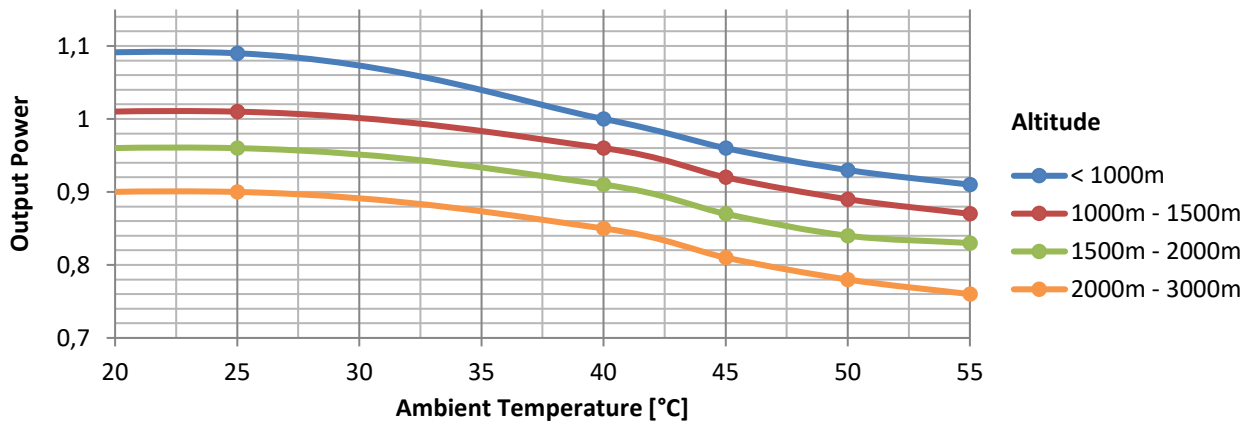
Bearing non drive end		6305-2Z-C3
Bearing drive end (B3/B14 form)		6208-2Z-C3
Weight of generator	in B2	kg 51,1
	in B3/B14	kg 47,0
	in B3/B9	kg 44,0

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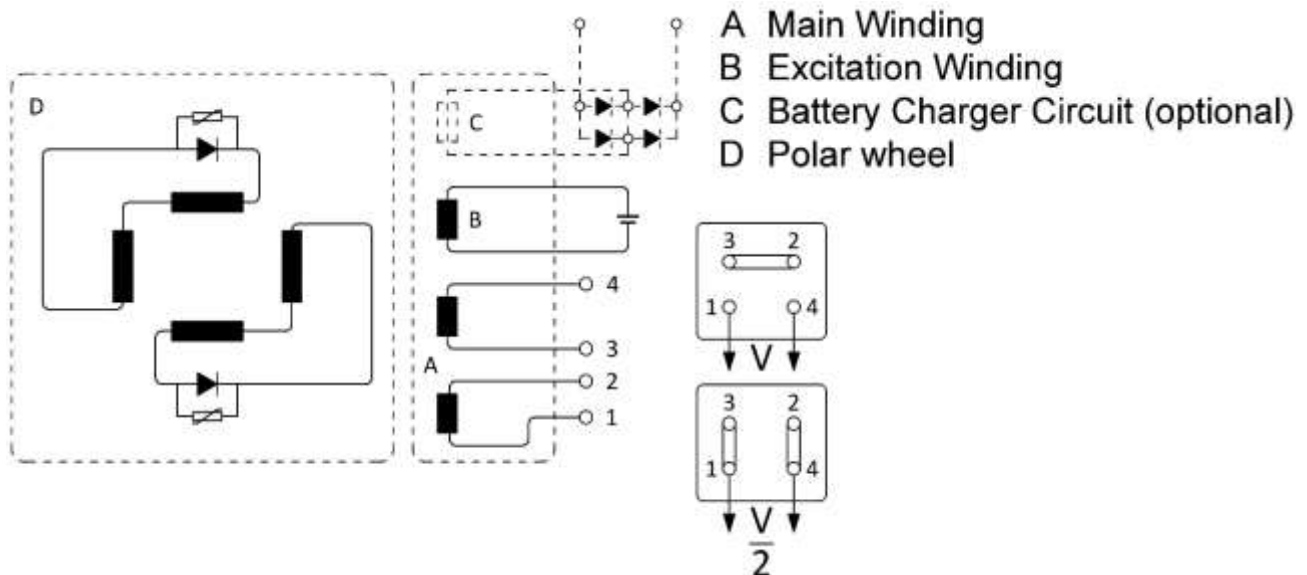
## MOMENT OF INERZIA

B3/B9	kg·m <sup>2</sup>	0,044
B2	kg·m <sup>2</sup>	0,042
B3/B14	kg·m <sup>2</sup>	0,044

## DERATING CURVES



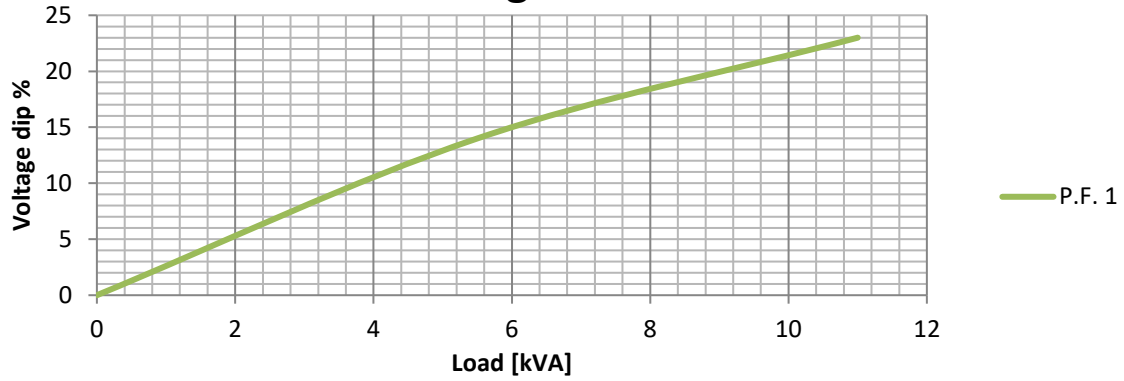
## WIRING DIAGRAM



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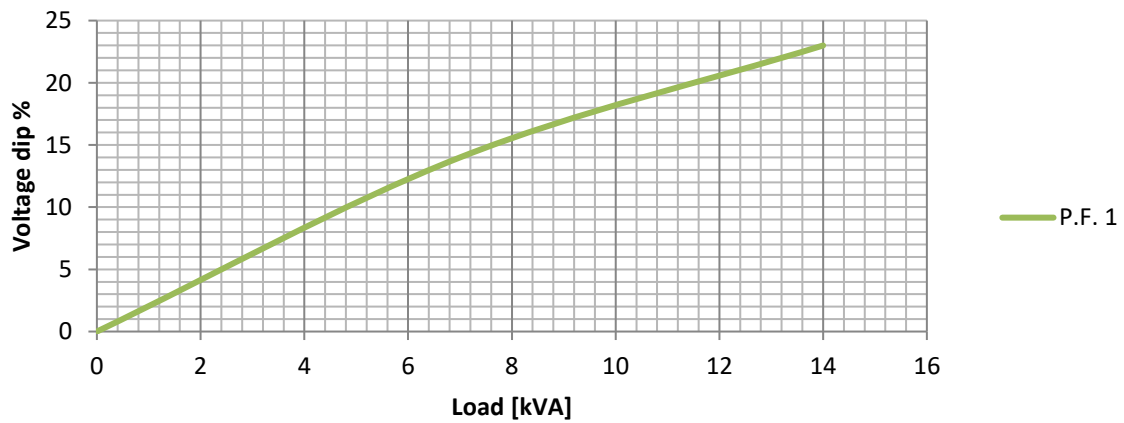
## TRANSIENT VOLTAGE VARIATION 50Hz

### Transient Voltage Variation @ 50Hz



## TRANSIENT VOLTAGE VARIATION 60Hz

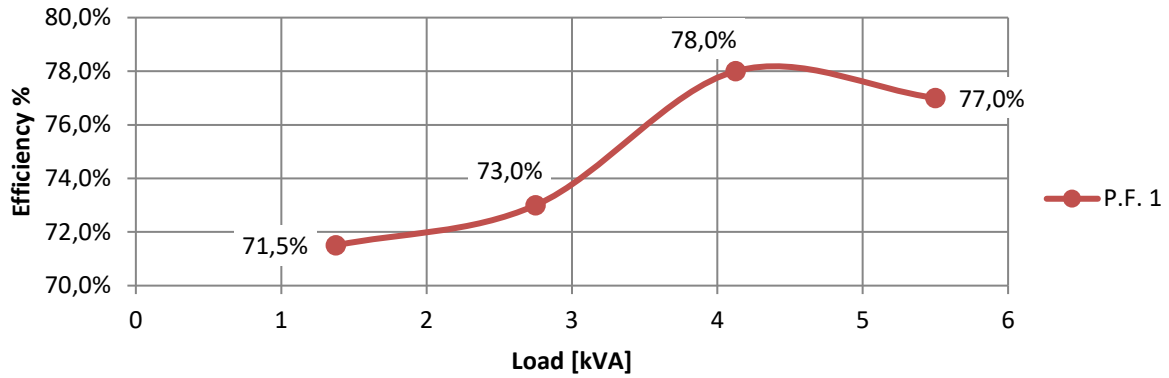
### Transient Voltage Variation @ 60Hz



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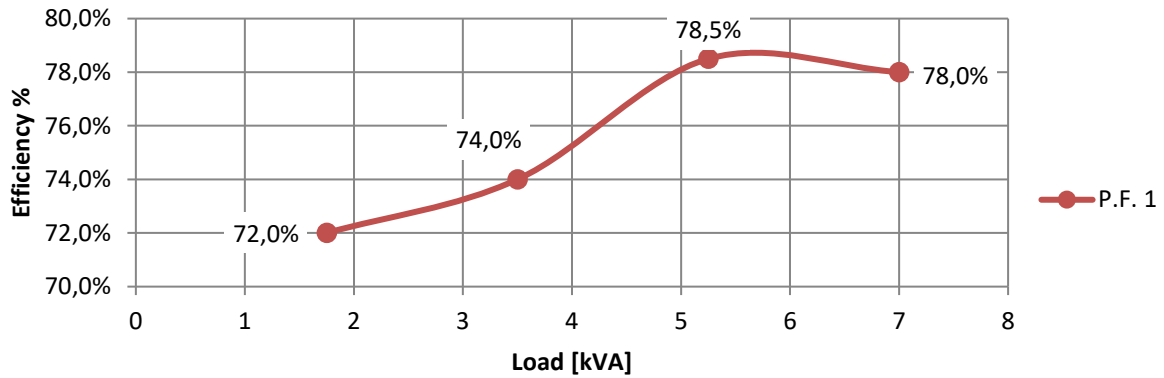
## EFFICIENCY 50Hz

### Efficiency Curves @ 50Hz



## EFFICIENCY 60Hz

### Efficiency Curves @ 60Hz



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