

TECHNICAL DATA SHEET



**ALTERNATOR E1C10S B**

*Single-Phase brushless synchronous alternator with capacitor - 2 poles*

## E1C10S B

### COMMON DATA

Rated Power at 50Hz	kVA	2,2	
Rated Power at 60Hz	kVA	2,7	
Rated Power Factor		1	
Nominal Temperature	°C	40	
Control System		self-excited	
Execution		brushless	
Regulation Type		capacitor	
Insulation Class		H	
Protection		IP21	
Maximum Over speed	rpm	4500	
Overload		110% of rated power for one hour in a cycle of 6 hours	
Air Flow Requirement	m <sup>3</sup> /min	3,8 at 50Hz	4,8 at 60Hz
R.F.I. Suppression		Standard EN55011	

### REGULATION DATA

Capacitor		Capacitor	
Capacitor	μF	14	
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	3,04 at 20°C	
Rotor Winding Resistance	Ω	3,4 at 20°C	
THD at full load		<6%	
THD at no load		<5%	

### 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 - 3000rpm	60Hz - 3600rpm
Voltage Series Star	V	<b>115/230</b>	<b>110/220</b>
Rated Power in Class H (125°C/40°C)	kW	2,2	2,7
Rated Power in Class F (105°C/40°C)	kW	2,0	2,4

### EFFICIENCY IN CL. H

4/4	73,0%	74,0%
3/4	73,5%	74,5%

### MECHANICAL DATA

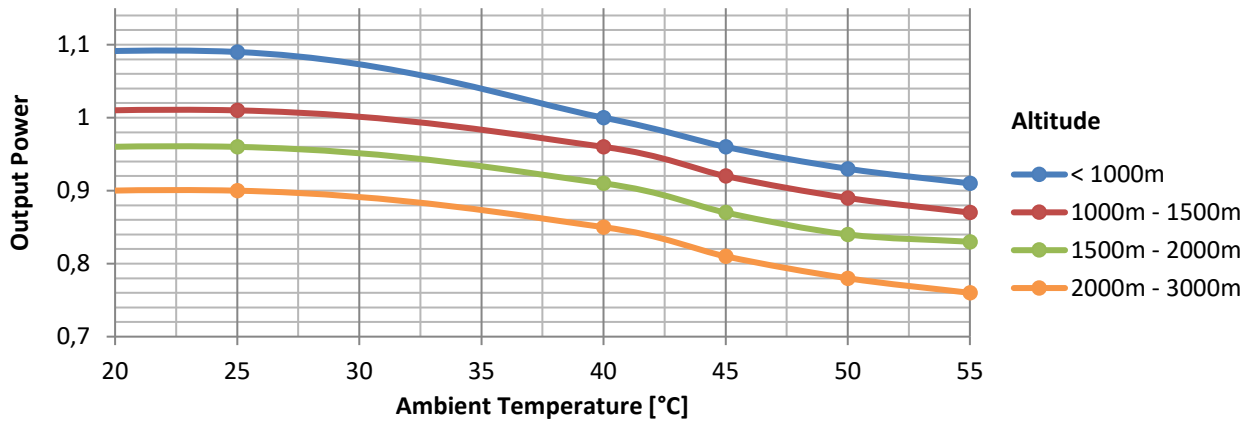
Bearing non drive end		6204-2Z-C3
Bearing drive end (B3/B14 form)		6305-2Z-C3
Weight of generator	in B2	kg
	in B3/B14	kg
	in B3/B9	kg

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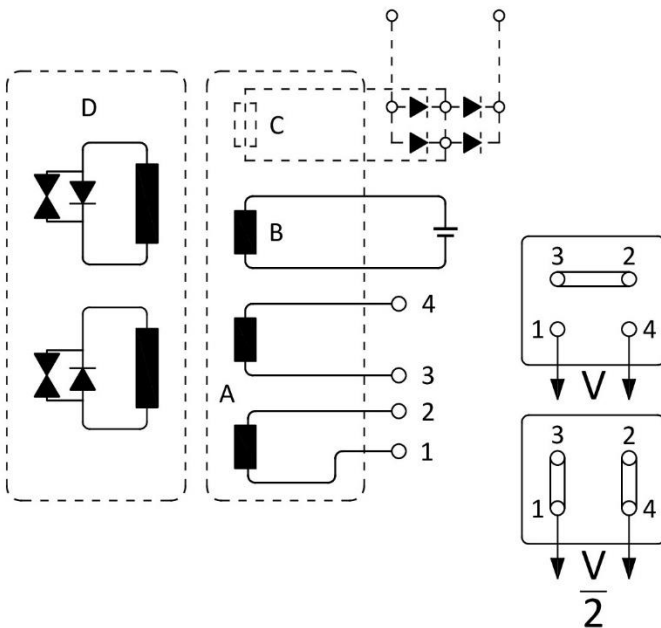
## MOMENT OF INERZIA

B3/B9	kg·m <sup>2</sup>	0,01
B3/B14	kg·m <sup>2</sup>	0,01

## DERATING CURVES



## WIRING DIAGRAM

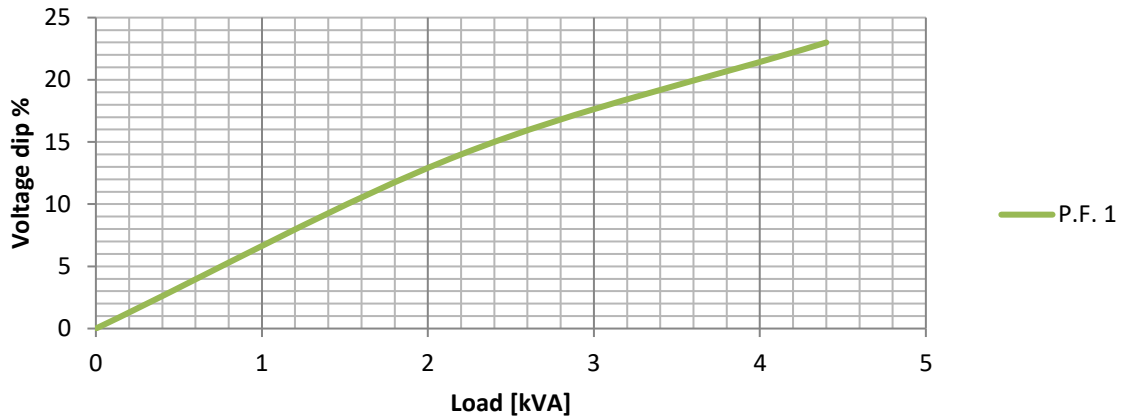


- A Main Winding
- B Excitation Winding
- C Battery Charger Circuit
- D Polar wheel

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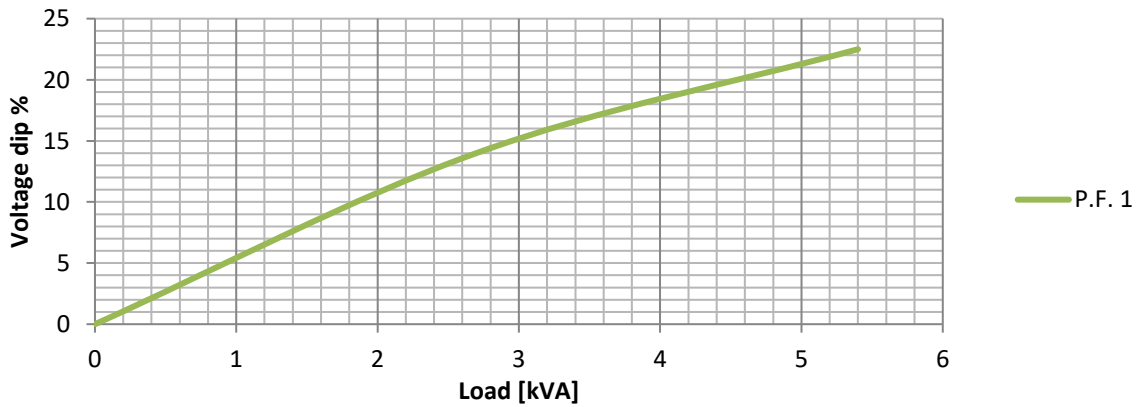
## TRANSIENT VOLTAGE VARIATION 50Hz

### Transient Voltage Variation @ 50Hz



## TRANSIENT VOLTAGE VARIATION 60Hz

### Transient Voltage Variation @ 60Hz



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