



ALTERNATOR E1C10S E

single-phase brushless synchronous alternator with capacitor - 2 poles

Technical Data Sheet

E1C10S E

COMMON DATA

Rated Power at 50Hz	kVA	3.5	
Rated Power at 60Hz	kVA	4.3	
Rated Power Factor		1	
Nominal Temperature	°C	40	
Control System		self excited	
Execution		brushless	
Regulation Type		capacitor	
Insulation Class		H	
Protection		IP21	
Maximum Overspeed	rpm	4500	
Overload		110% of rated power for one hour in a cycle of 6 hours	
Air Flow Requirement	m ³ /min	3.75 at 50Hz	4.7 at 60Hz
R.F.I. Suppression		Standard EN55011	

REGULATION DATA

capacitor		Capacitor	
Capacitor	μF	20	
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		1.6 at 20°C	
Rotor Winding Resistance		3.48 at 20°C	
THD at full load		<6%	
THD at no load		<5%	

STANDARD

References		EN60034-1 ISO8528-3 EN55011	
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ELECTRICAL DATA

Frequency		50Hz - 3000rpm		60Hz - 3600rpm	
Voltage Series Star	V		115/230		110/220
Rated Power in Class H (125°C/40°C)	kW		3.5		4.3
Rated Power in Class F (105°C/40°C)	kW		3.2		3.9

EFFICIENCY IN CL. H

4/4		75.0%			76.0%
3/4		75.5%			76.5%

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	20.7
	in B3/B9	kg	20

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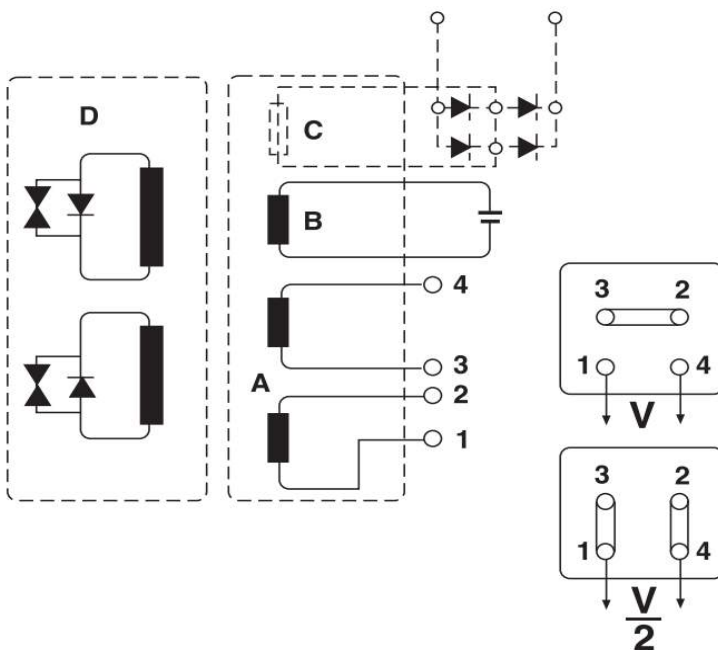
MOMENT OF INERZIA

B3/B9	kg·m ²	0.0115
B3/B14	kg·m ²	0.0115

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

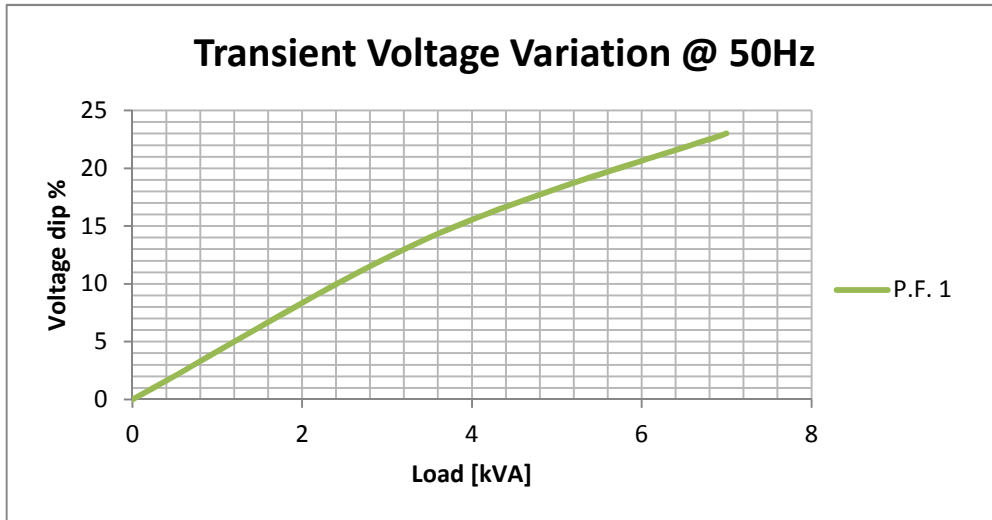
WIRING DIAGRAM



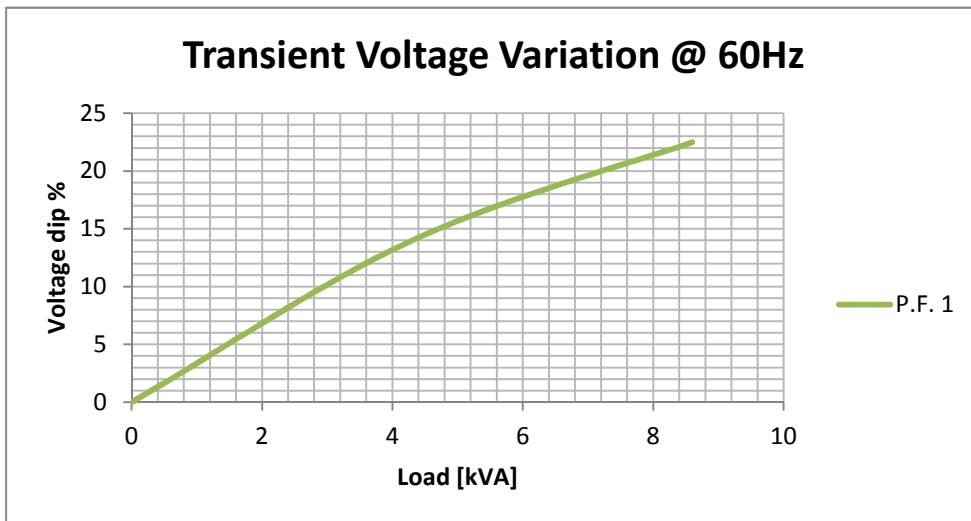
- A Main Winding**
- B Excitation Winding**
- C Battery Charger Circuit**
- D Polar wheel**

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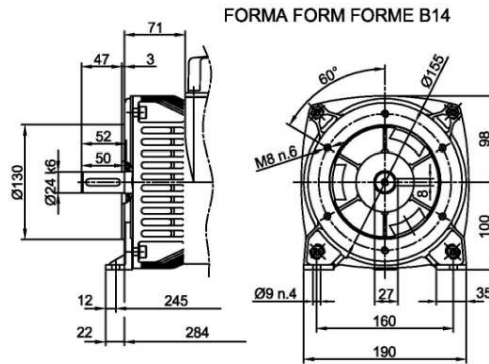
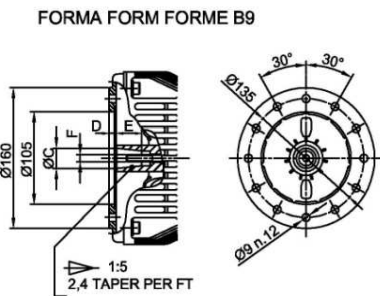
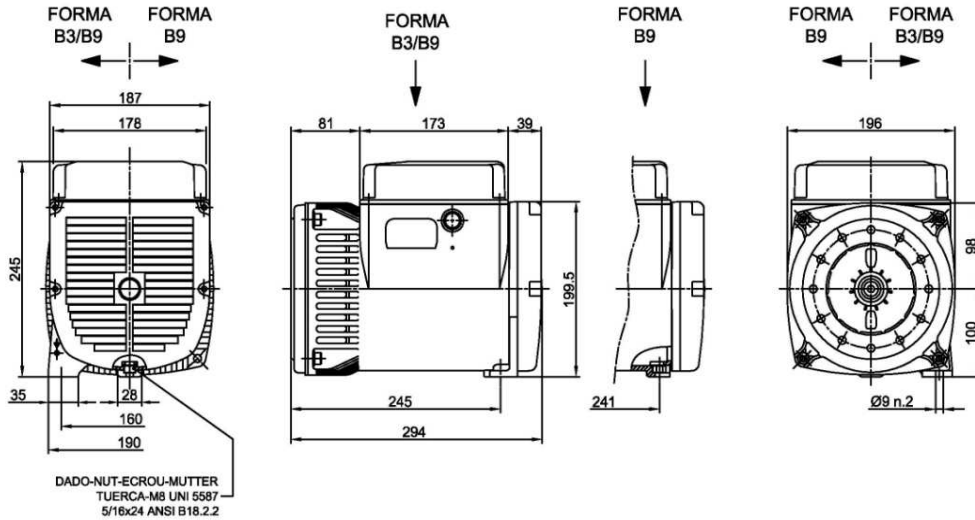
TRANSIENT VOLTAGE VARIATION 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz



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FORMA FORM FORME FORME	ØC	D	E	F
cono Ø23	Ø23	8	25	M8
cono Ø30	Ø30	16	30	M14x1.5

