



ALTERNATOR SP10M G

single-phase brushless synchronous alternator with capacitor - 2 poles

Technical Data Sheet

SP10M G

COMMON DATA

Rated Power at 50Hz	kVA	5
Rated Power at 60Hz	kVA	6
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	3.7 at 50Hz 4.6 at 60Hz
R.F.I. Suppression		Standard EN55011

REGULATION DATA

capacitor		Capacitor
Capacitor	μF	25
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		2
Stator Winding Resistance		0.97 at 20°C
Rotor Winding Resistance		4.27 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		230			220	
Rated Power in Class H (125°C/40°C)	kW		5			6	
Rated Power in Class F (105°C/40°C)	kW		4.5			5.5	

EFFICIENCY IN CL. H

4/4		76.0%			77.5%	
3/4		77.0%			78.0%	

MECHANICAL DATA

Bearing non drive end			6204-2Z-C3
Bearing drive end (B3/B14 form)			\
Weight of generator	in B2	kg	\
	in B3/B14	kg	\
	in B3/B9	kg	21

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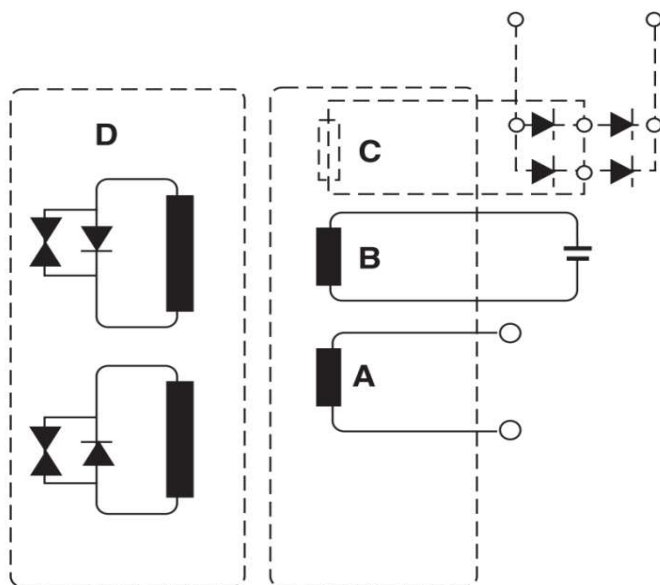
MOMENT OF INERZIA

B3/B9	kg·m ²	0.014
B3/B14	kg·m ²	\

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

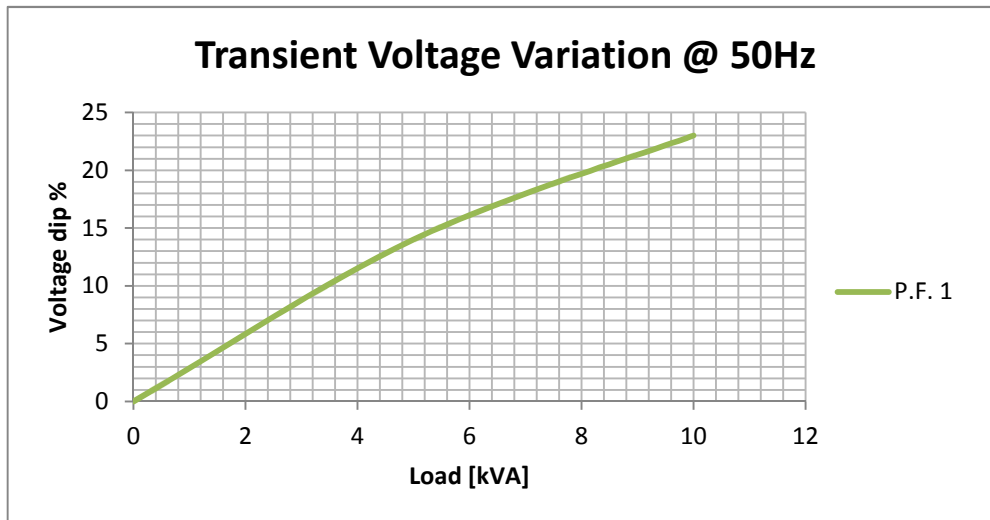
WIRING DIAGRAM



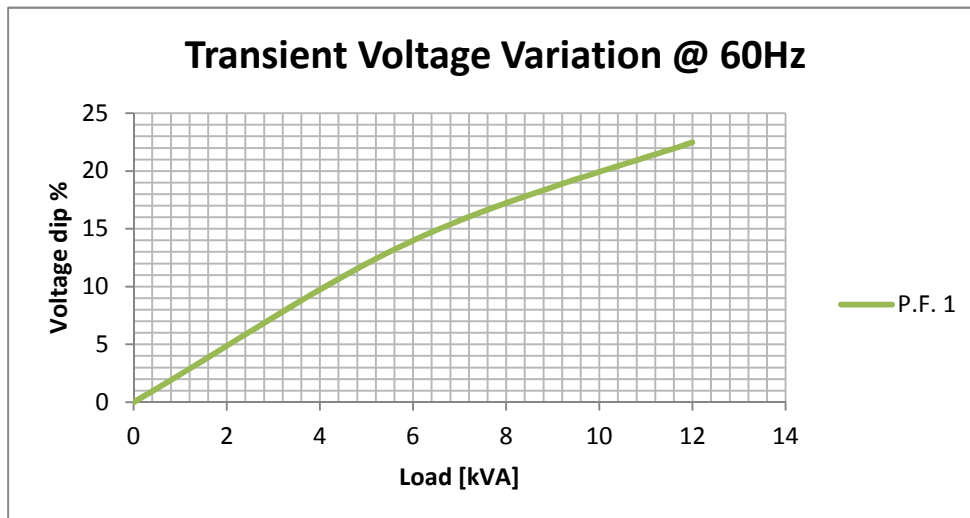
- A** Main Winding
- B** Excitation Winding
- C** Battery Charger Circuit (optional)
- D** Polar wheel

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TRANSIENT VOLTAGE VARIATION 50Hz

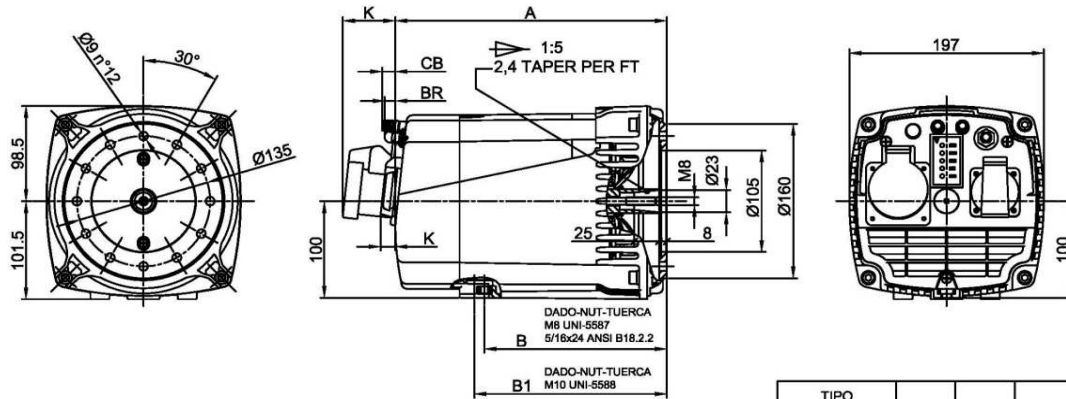


TRANSIENT VOLTAGE VARIATION 60Hz

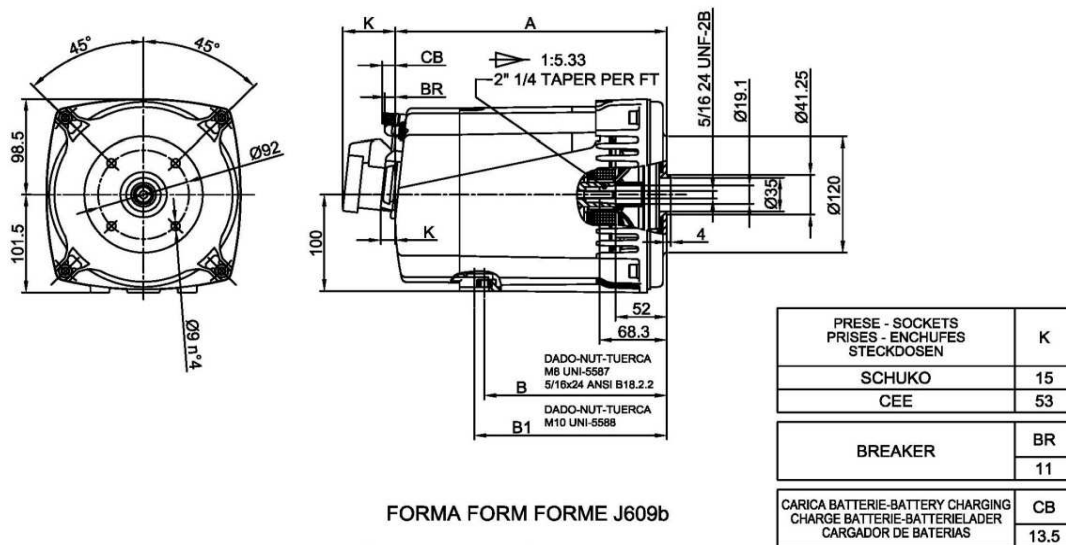


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FORMA FORM FORME B9 C.23



FORMA FORM FORME J609a



FORMA FORM FORME J609b

