



## **ALTERNATOR SP10S E**

*single-phase brushless synchronous alternator with capacitor - 2 poles*

Technical Data Sheet

## SP10S 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 <sup>3</sup> /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		2	
Stator Winding Resistance		1.55 at 20°C	
Rotor Winding Resistance		3.54 at 20°C	
THD at full load		<6%	
THD at no load		<5%	

### STANDARD

References		EN60034-1 ISO8528-3 EN55011	
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## SP10S E

### ELECTRICAL DATA

Frequency		50Hz - 3000rpm		60Hz - 3600rpm	
Voltage Series Star	V		<b>230</b>		<b>220</b>
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		75.5%		76.5%	
3/4		76.0%		77.0%	

### 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	17.7

# SP10S E

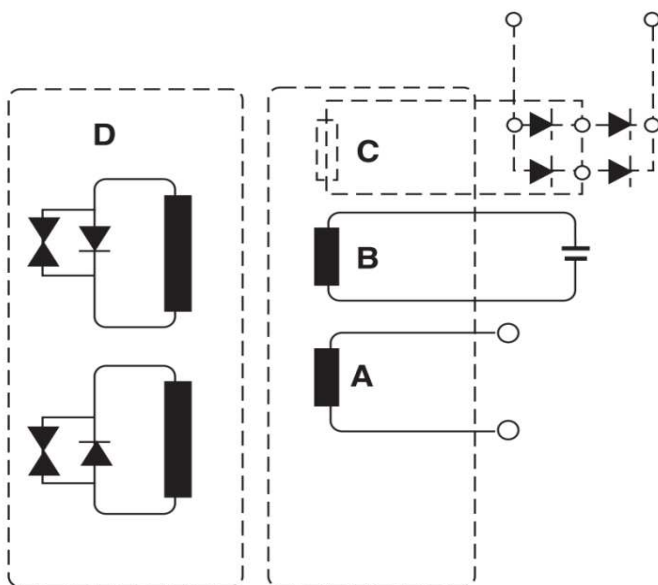
**MOMENT OF INERZIA**

B3/B9	kg·m <sup>2</sup>	0.012
B3/B14	kg·m <sup>2</sup>	\

**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

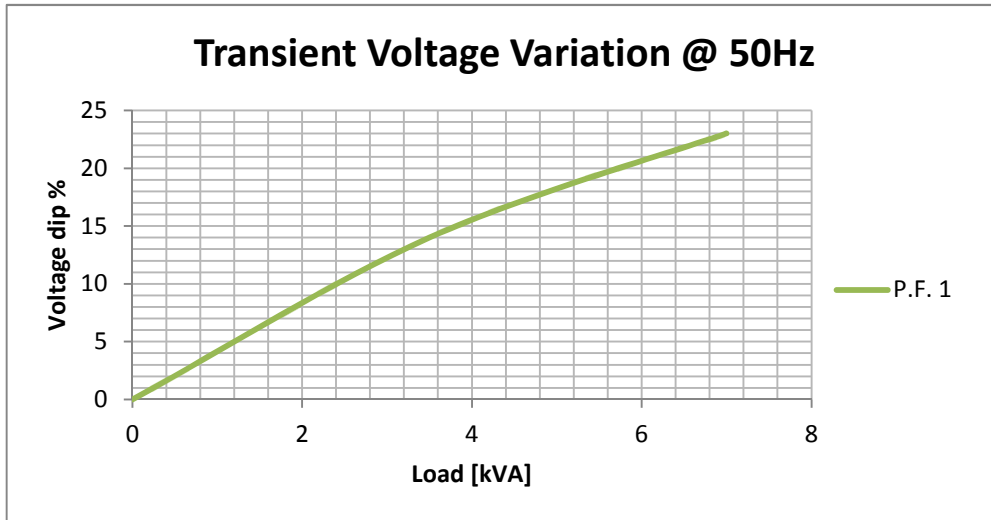
**WIRING DIAGRAM**



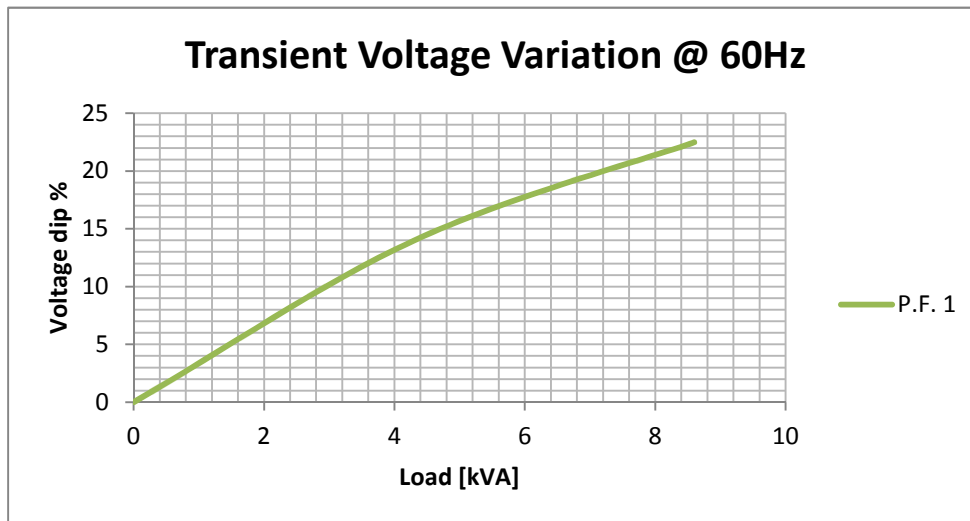
- A** Main Winding
- B** Excitation Winding
- C** Battery Charger Circuit (optional)
- D** Polar wheel

# SP10S E

## TRANSIENT VOLTAGE VARIATION 50Hz

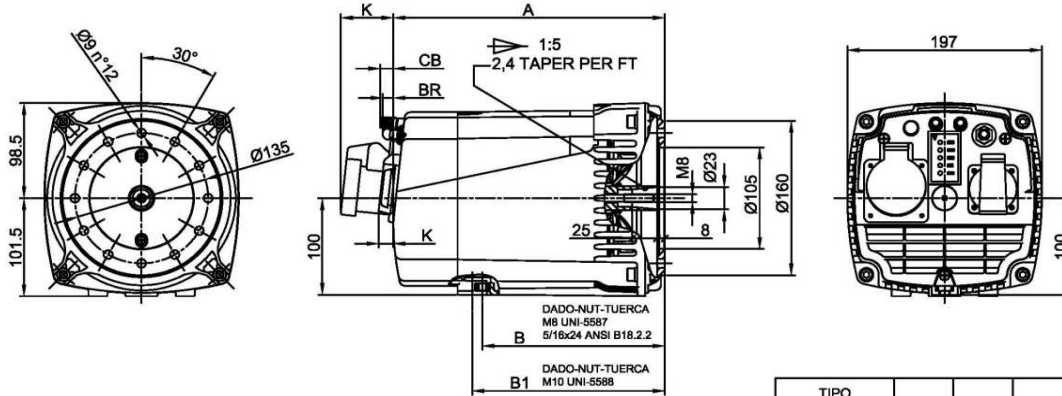


## TRANSIENT VOLTAGE VARIATION 60Hz



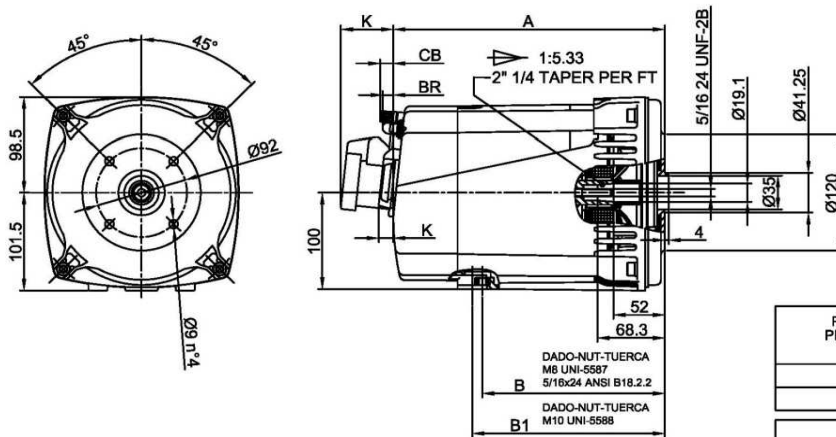
# SP10S E

FORMA FORM FORME B9 C.23



TIPO TYPE TYP	A	B	B1
SP10 S	275	185	195
SP10 M	303	213	223

FORMA FORM FORME J609a



PRESE - SOCKETS PRISES - ENCHUFES STECKDOSEN	K
SCHUKO	15
CEE	53
BREAKER	BR
	11
CARICA BATTERIE-BATTERY CHARGING CHARGE BATTERIE-BATTERIELADER CARGADOR DE BATERIAS	CB
	13.5

FORMA FORM FORME J609b

