



## TECHNICAL DATA SHEET



## ALTERNATOR E1S10L L

*Three-Phase synchronous alternator with brushes and compound - 2 poles*



## E1S10L L

### COMMON DATA

Rated Power at 50Hz	kVA	10,0	
Rated Power at 60Hz	kVA	12,0	
Rated Power Factor		0,8	
Nominal Temperature	°C	40	
Control System		self-excited	
Execution		with brushes	
Regulation Type		compound	
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	3,6 at 50Hz	4,5 at 60Hz
R.F.I. Suppression		Standard EN55011	

### REGULATION DATA

Compound		Compound
Voltage Regulation		±4%
Sustained Short Circuit		> 300% of rated current

### WINDING DATA

Stator Winding		Single layer with auxiliary winding
Rotor Winding		with damping cage
Number of Leads of Stator		6
Stator Winding Resistance	Ω	0,65 at 20°C
Rotor Winding Resistance	Ω	23,5 at 20°C
THD at full load		<4% (L-L)
THD at no load		<3% (L-L)
Excitation at no Load	Adc	1,3
Excitation at full Load	Adc	4,5

### 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



## E1S10L L

### ELECTRICAL DATA

Frequency		50Hz - 3000rpm	60Hz - 3600rpm
Voltage Series Star	V	<b>400/230</b>	<b>480/277</b>
Rated Power in Class H (125°C/40°C)	kVA	10,0	12,0
	kW	8,0	9,6
Rated Power in Class F (105°C/40°C)	kVA	9,3	11,0
	kW	7,44	8,8

### EFFICIENCY IN CL. H

4/4	82,6%	82,7%
3/4	83,1%	83,3%

### REACTANCES AND TIME CONSTANTS

Pcc	0,67
X <sub>d</sub> - dir. axis synchronous	290%
X' <sub>d</sub> - dir. axis transient	20,0%
X'' <sub>d</sub> - dir. axis subtransient	6,5%
X <sub>q</sub> - quad. axis reactance	170%
T' <sub>do</sub> - O.C. field time constant	550ms
T' <sub>d</sub> - Transient time constant	33ms
T'' <sub>d</sub> - Sub-transient time constant	6,0ms

### 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	42,1
	in B3/B9 kg	41,4

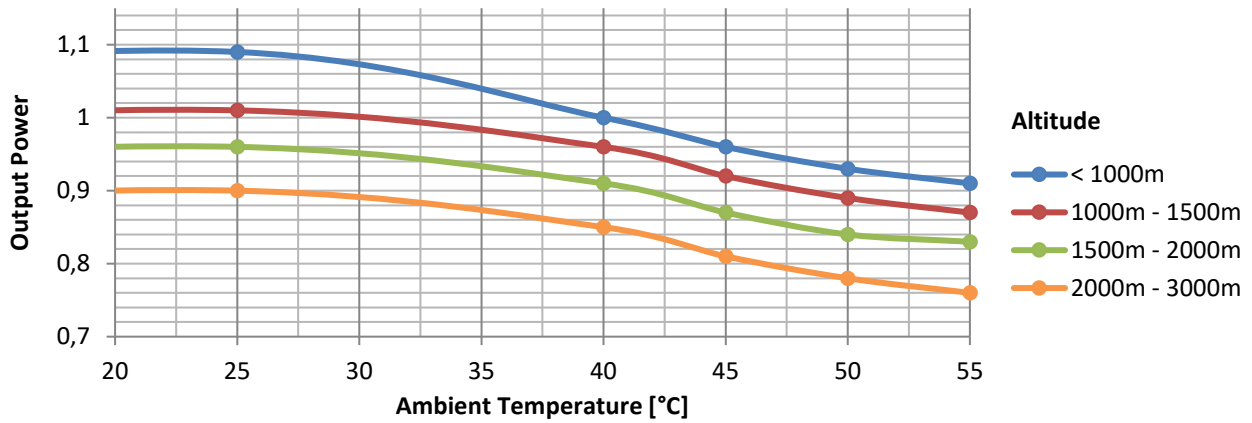


# E1S10L L

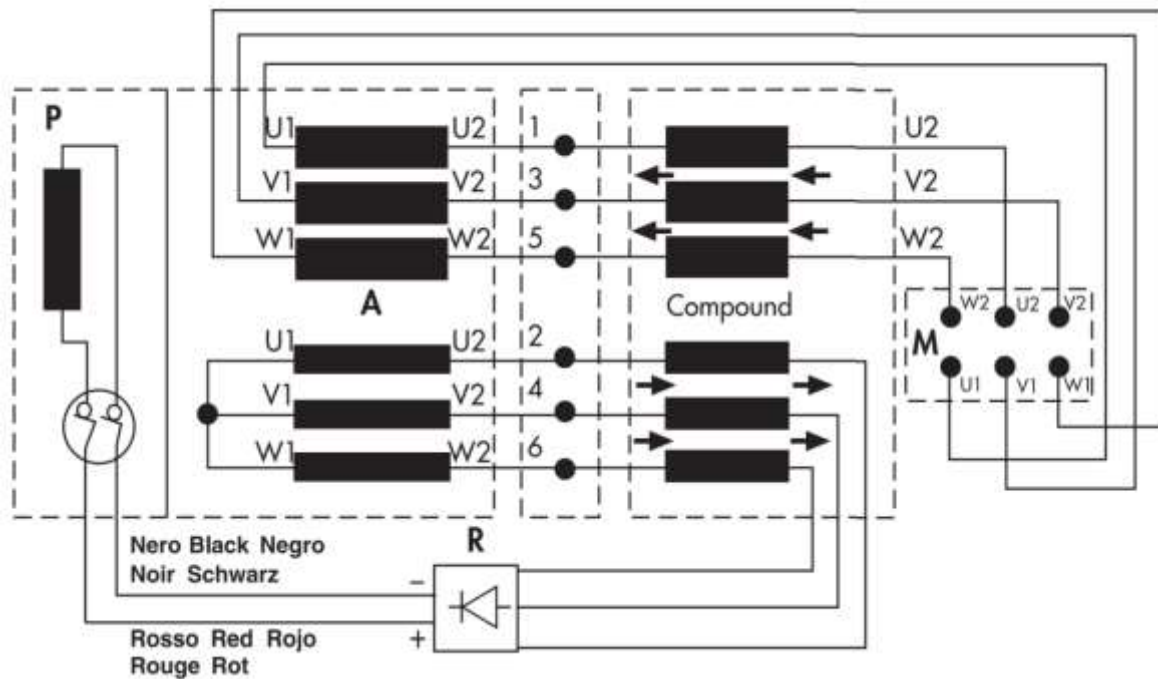
## MOMENT OF INERZIA

B3/B9	kg·m <sup>2</sup>	0,022
B3/B14	kg·m <sup>2</sup>	0,022

## DERATING CURVES



## WIRING DIAGRAM

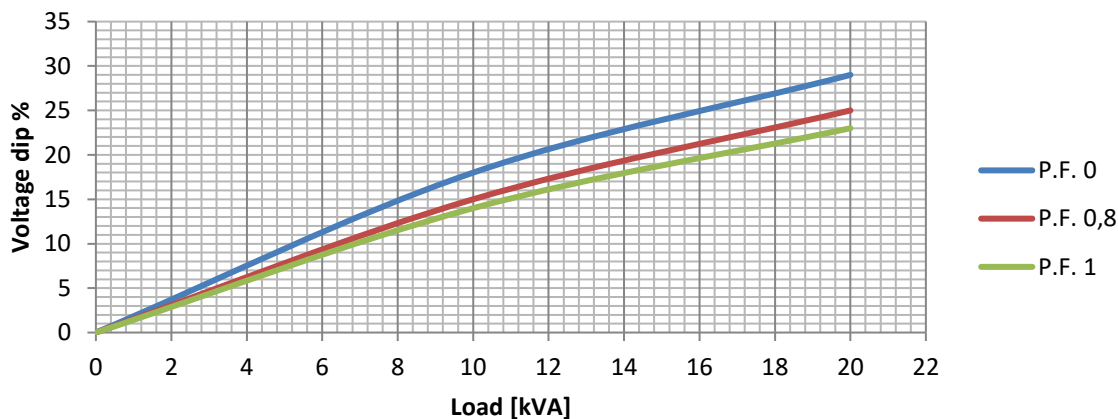




# E1S10L L

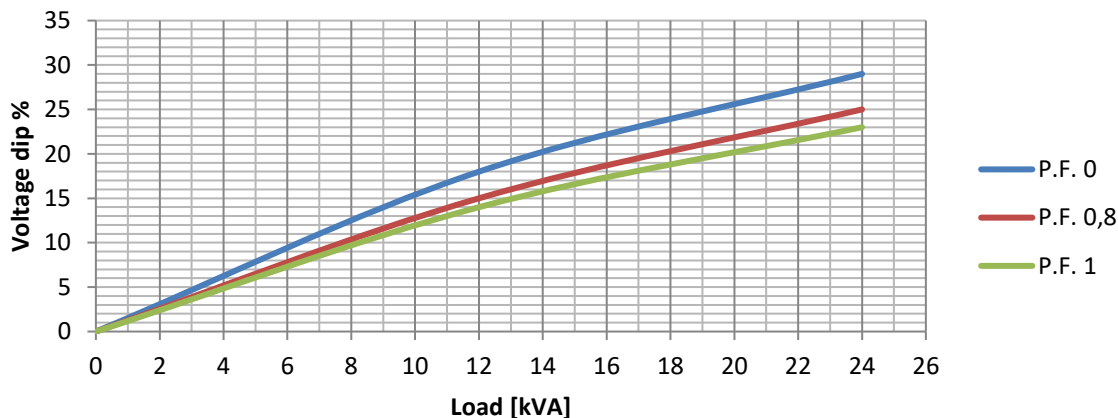
## TRANSIENT VOLTAGE VARIATION 50Hz

### Transient Voltage Variation @ 50Hz



## TRANSIENT VOLTAGE VARIATION 60Hz

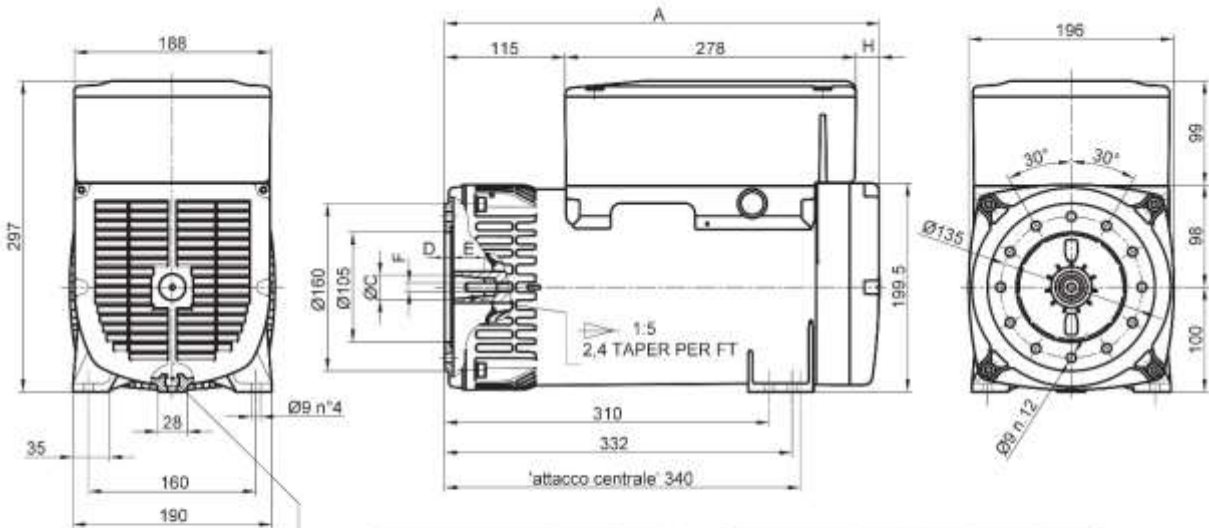
### Transient Voltage Variation @ 60Hz





# E1S10 L L

FORMA FORM FORME B3/B9

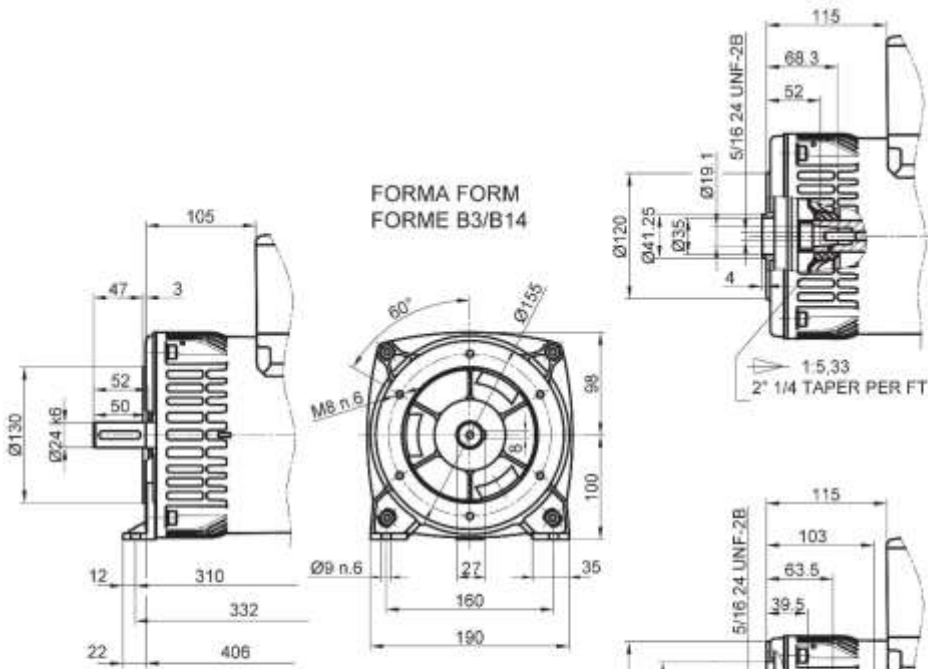


DADO-NUT-ECROU-MUTTER  
TUERCA-M8 UNI 5587  
5/16x24 ANSI B18.2.2

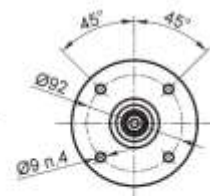
TIPO TYPE TYP	A	H
E1S10M - E1E10M	394	1
E1S10L - E1E10L	416	23

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

FORMA FORM  
FORME B3/B14



FORMA FORM  
FORME J609a



FORMA FORM  
FORME J609b

