

TECHNICAL DATA SHEET



**ALTERNATOR E1S10L L KE**

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

## E1S10L L KE

### COMMON DATA

Rated Power at 50Hz	kVA	9,0	
Rated Power at 60Hz	kVA	11,0	
Rated Power Factor		0,8	
Nominal Temperature	°C	40	
Control System		self-excited	
Execution		with brushes	
Regulation Type		AVR and 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

AVR and compound		HVR10 and compound
Voltage Regulation		±1%
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	23,0 at 20°C	
THD at full load		<4% (L-L)	
THD at no load		<3% (L-L)	
Excitation at no Load	Adc	1,5	
Excitation at full Load	Adc	5,3	

### 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 KE

### 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	9,0	11,0
	kW	7,2	8,8
Rated Power in Class F (105°C/40°C)	kVA	8,2	10,0
	kW	6,56	8,0

### EFFICIENCY IN CL. H

4/4	82,7%	82,8%
3/4	83,1%	83,4%

### REACTANCES AND TIME CONSTANTS

Pcc	0,74
X <sub>d</sub> - dir. axis synchronous	261%
X' <sub>d</sub> - dir. axis transient	18,0%
X'' <sub>d</sub> - dir. axis subtransient	5,9%
X <sub>q</sub> - quad. axis reactance	153%
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

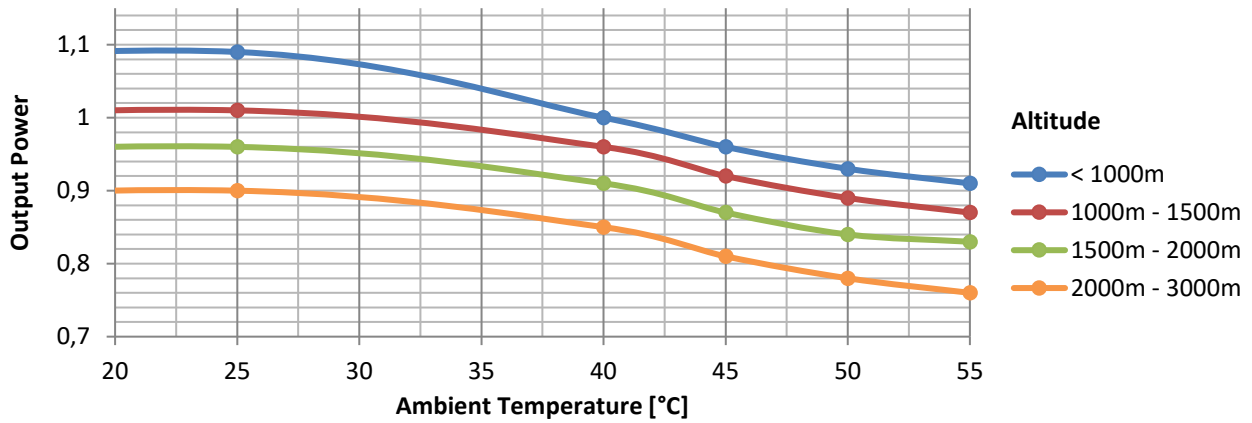
Bearing non drive end	6204-2Z-C3	
Bearing drive end (B3/B14 form)	6305-2Z-C3	
Weight of generator	in B2 kg	\
	in B3/B14 kg	41,4
	in B3/B9 kg	42,1

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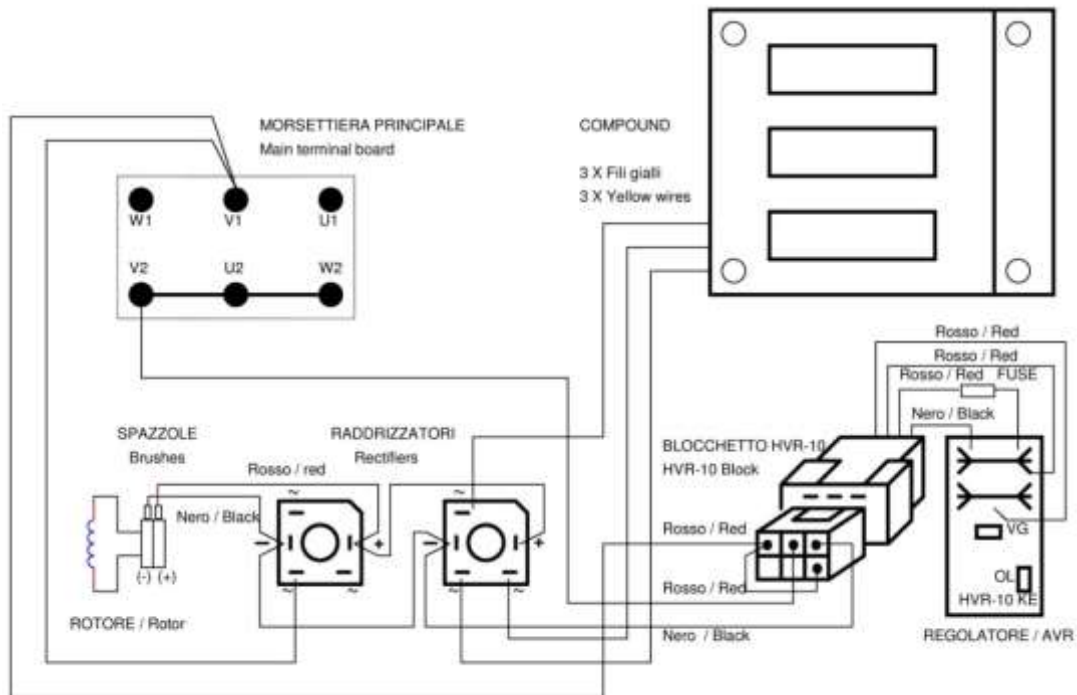
## MOMENT OF INERZIA

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

## DERATING CURVES



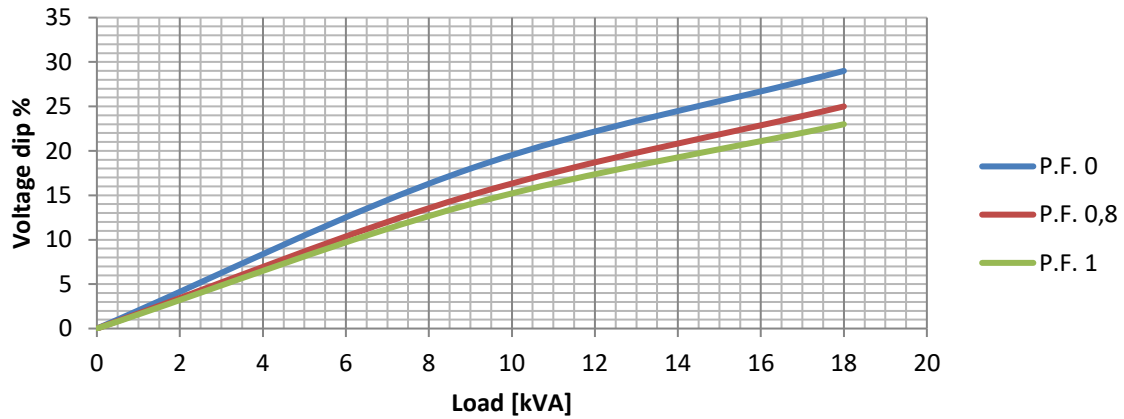
## WIRING DIAGRAM



# E1S10L L KE

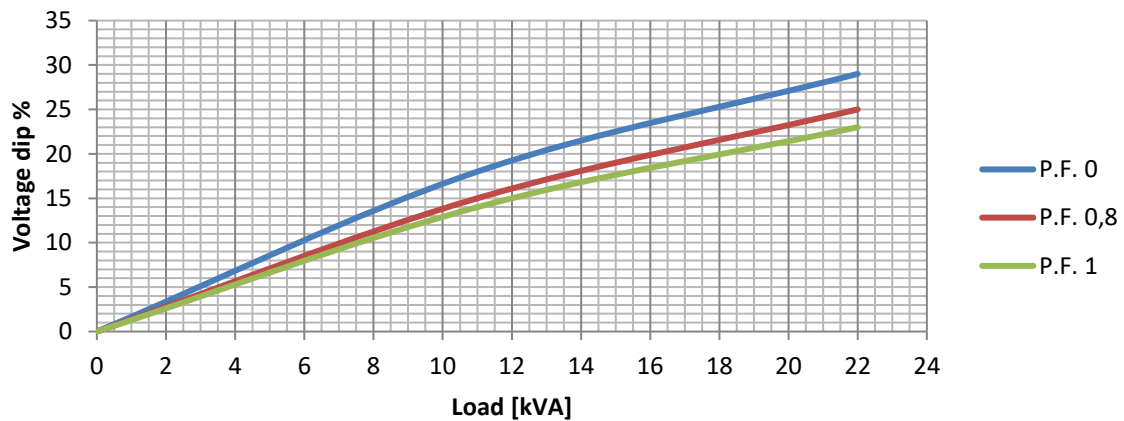
## TRANSIENT VOLTAGE VARIATION 50Hz

### Transient Voltage Variation @ 50Hz



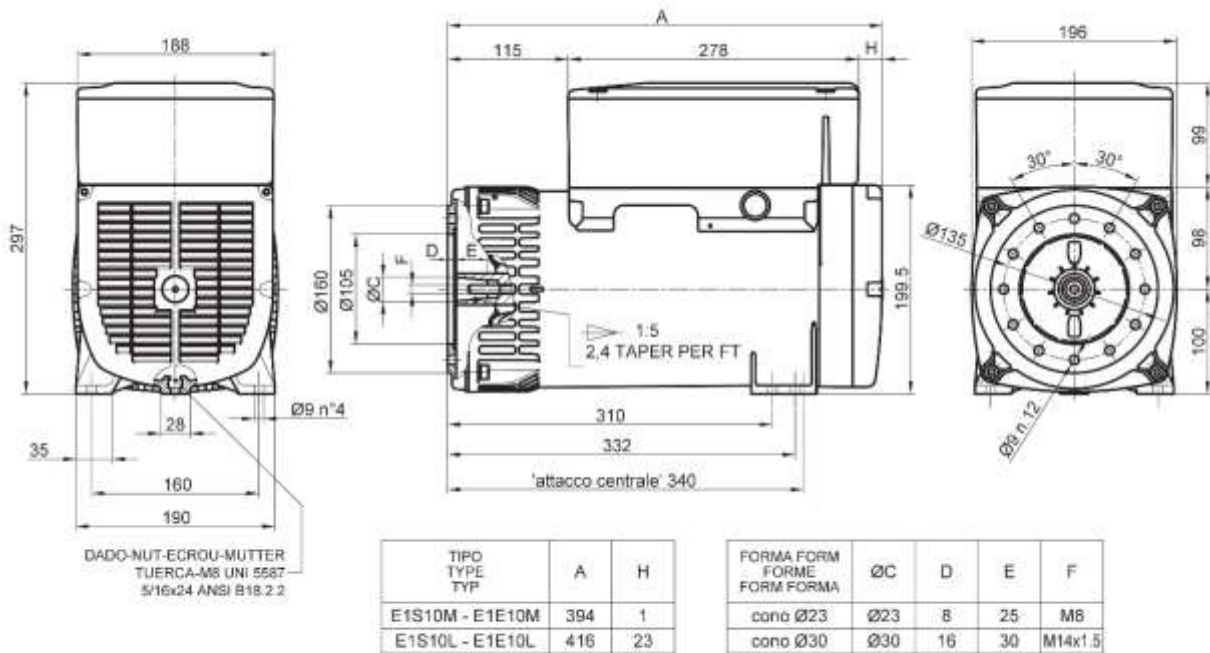
## TRANSIENT VOLTAGE VARIATION 60Hz

### Transient Voltage Variation @ 60Hz



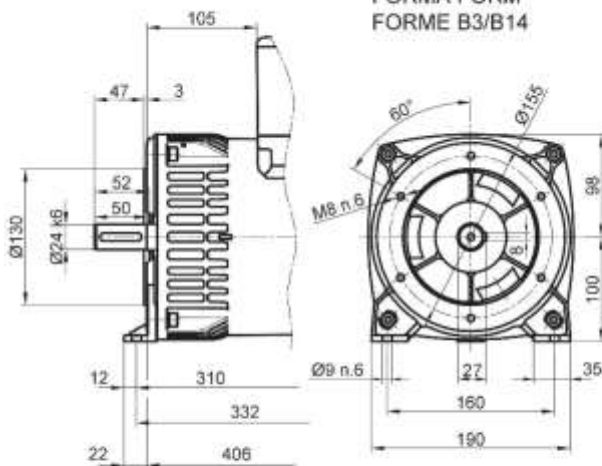
# E1S10L L KE

## FORMA FORM FORME B3/B9

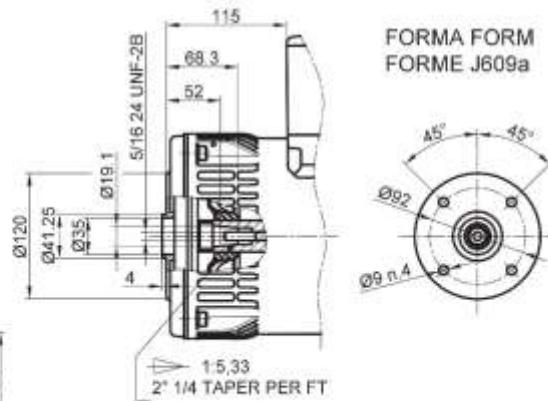


DADO-NUT-ECROU-MUTTER  
TUERCA-M8 UNI 5587  
5/16x24 ANSI B18.2.2

## FORMA FORM FORME B3/B14



## FORMA FORM FORME J609a



## FORMA FORM FORME J609b

