

TECHNICAL DATA SHEET



ALTERNATOR CPT18 ME

Three-Phase brushless synchronous alternator with AVR - 4 poles

CPT18 ME

COMMON DATA

Rated Power at 50Hz	kVA	17
Rated Power at 60Hz	kVA	20
Rated Power Factor		0,8
Nominal Temperature	°C	40
Control System		self-excited
Execution		brushless
Regulation Type		AVR
Insulation Class		H
Protection		IP23
Maximum Over speed	rpm	2250
Overload		110% of rated power for one hour in a cycle of 6 hours
Air Flow Requirement	m ³ /min	5,3 at 50Hz 5,6 at 60Hz
R.F.I. Suppression		Standard EN55011

REGULATION DATA

AVR	HVR11
Sensing	single-phase
Voltage Regulation	±1%
Sustained Short Circuit	> 250% of rated current

WINDING DATA

Stator Winding	Double layer with auxiliary winding	
Rotor Winding	with damping cage	
Winding Pitch	2/3	
Number of Leads of Stator	12	
Stator Winding Resistance	Ω	0,65 at 20°C
Rotor Winding Resistance	Ω	2,40 at 20°C
Exciter Stator Resistance	Ω	12 at 20°C
Exciter Rotor Resistance	Ω	0,82 at 20°C
THD at full load	<3%	
THD at no load	<3,5%	
Excitation at no load	Adc	0,87
Excitation at full load	Adc	2,80

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

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ELECTRICAL DATA

Frequency		50Hz - 1500rpm					60Hz - 1800rpm				
Voltage	V	Double Delta	Series Star			Double Delta	Series Star				
		115/230	380/220	400/230	415/240	440/254	138/277	415/240	440/254	460/266	480/277
Rated Power in Class H (125°C/40°C)	kVA	11	16	17	17	15,5	13	17,3	18,5	19	20
	kW	8,8	12,8	13,6	13,6	12,4	10,4	13,8	14,8	15,2	16
Rated Power in Class F (105°C/40°C)	kVA	10	15	16	16	14,5	12	16	17	17,5	18,5
	kW	8	12	12,8	12,8	11,6	9,6	12,8	13,6	14	14,8
Rated Power Standby (150°C/40°C)	kVA	12	17	18	18	16,5	14	19	19,5	20,5	21,5
	kW	9,6	13,6	14,4	14,4	13,3	11,2	15,2	15,6	16,4	17,2
Rated Power Standby (163°C/27°C)	kVA	13	17,5	18,5	18,5	17	14,5	19,5	21	21,5	22
	kW	10,4	14	14,8	14,8	13,6	11,6	15,6	16,8	17,2	17,6

EFFICIENCY IN CL. H @ 0.8P.F

4/4			85,6%							87,4%
3/4			86,2%							88,2%
2/4			84,8%							86,8%
1/4			82,0%							84,5%

REACTANCES AND TIME CONSTANTS

pcc		0,48								
X _d - dir. axis synchronous		240%	230%	214%	173%		267%	253%	238%	230%
X' _d - dir. axis transient		24,2%	23,2%	21,6%	17,5%		26,9%	26,4%	24,0%	23,2%
X'' _d - dir. axis subtransient		13,0%	12,5%	11,6%	9,4%		14,5%	13,8%	12,9%	12,5%
X _q - quad. axis reactance		136%	130%	121%	98%		151%	143%	135%	130%
T' _{do} - O.C. field time constant							393ms			
T' _d - Transient time constant							40ms			
T'' _d - Sub-transient time constant							9ms			

MECHANICAL DATA

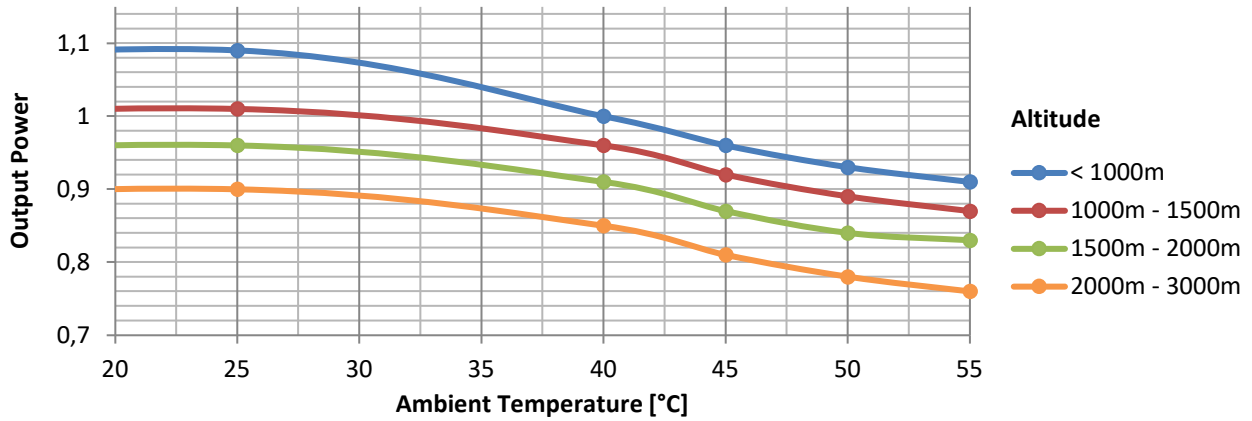
Bearing non drive end			6306-2RS-C3
Bearing drive end (B3/B14 form)			\
Weight of generator	in B2	kg	87,1
	in B3/B14	kg	\
	in B3/B9	kg	\

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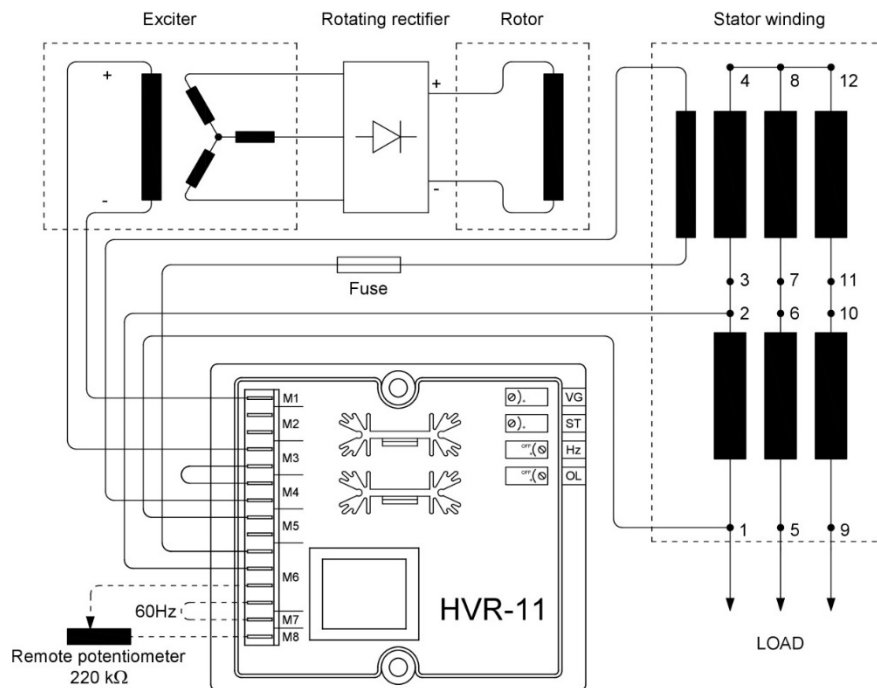
MOMENT OF INERZIA

SAE 6½	kg·m ²	0,150
SAE 7½	kg·m ²	0,153

DERATING CURVES



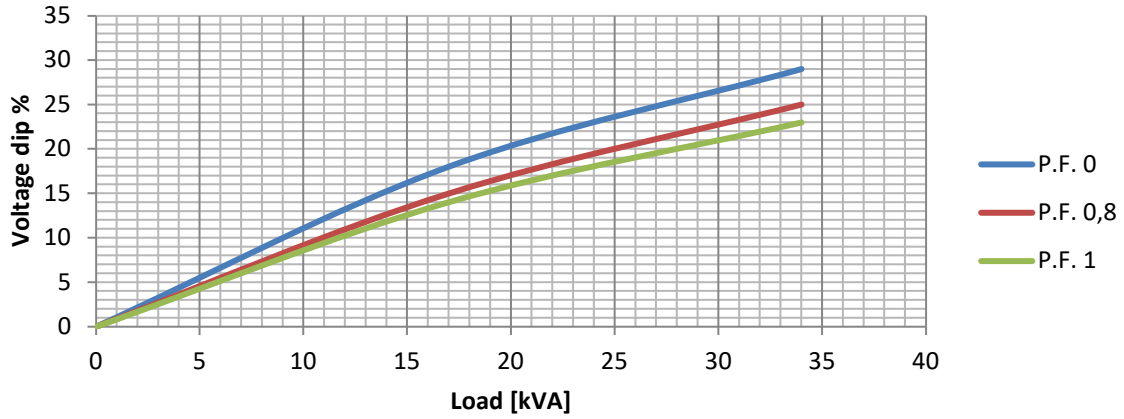
WIRING DIAGRAM



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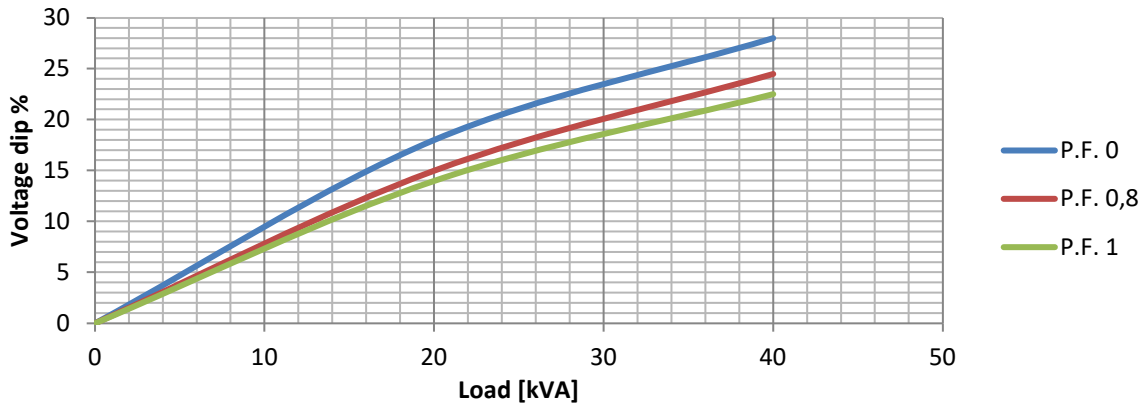
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

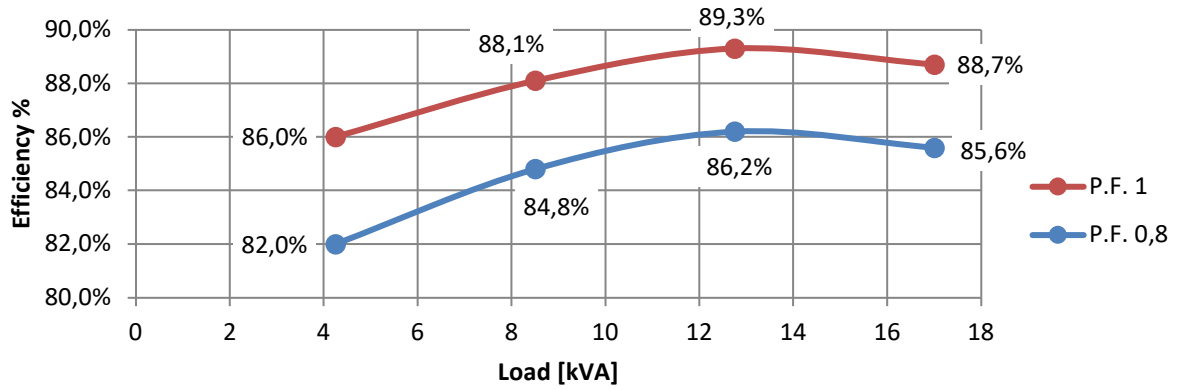
Transient Voltage Variation @ 60Hz



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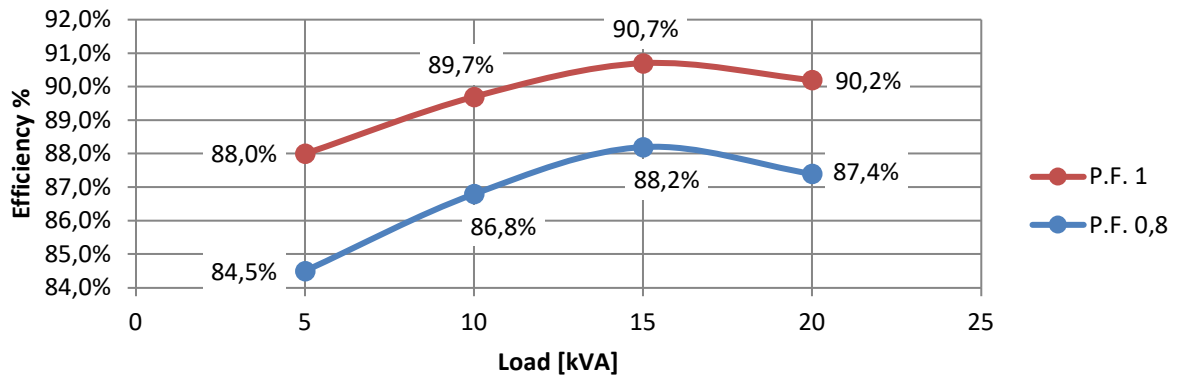
EFFICIENCY 50Hz

Efficiency Curves @ 50Hz

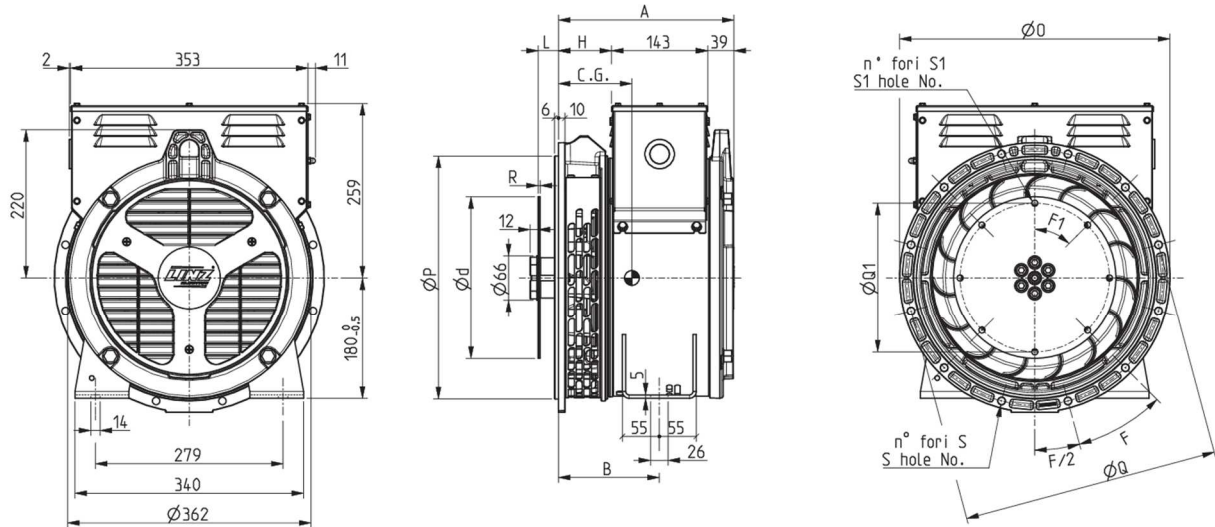


EFFICIENCY 60Hz

Efficiency Curves @ 60Hz



CPT18 ME



FORMA - FORM	A	B	H
CP 18XS	261	150	79
SAE CP 18S	276	165	94
CP 18M	316	205	134

SAE N.	FLANGIE - FLANGES - BRIDAS					
	Ø0	ØP	ØQ	n. fori holes No.	S	F
5	356	314,3	333,4	8	11	45°
4	402	362	381	12		30°

SAE N.	GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS						
	L	Ød	ØQ1	n. fori holes No.	S1	F1	R
6 1/2	30,2	215,9	200	6	9	60°	3
7 1/2		241,3	222,25	8		45°	

TYPE	C.G.
CP 18XSA	125
CP 18SB	131
CP 18SC	132
CP 18MD	146
CP 18ME	147
CP 18MF	150