

TECHNICAL DATA SHEET



ALTERNATOR CPT18 SC

Three-Phase brushless synchronous alternator with AVR - 4 poles

CPT18 SC

COMMON DATA

Rated Power at 50Hz	kVA	12	
Rated Power at 60Hz	kVA	14,5	
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	5,1 at 50Hz	5,5 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	1,15 at 20°C	
Rotor Winding Resistance	Ω	2,1 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	0,85	
Excitation at full load	Adc	2,92	

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	7,5	11,5	12	12	11,5	9	12,5	13	14	14,5
	kW	6	9,2	9,6	9,6	9,2	7,2	10	10,4	11,2	11,6
Rated Power in Class F (105°C/40°C)	kVA	7	10,5	11	11	10,5	8,2	11,4	12	12,8	13,3
	kW	5,6	8,4	8,8	8,8	8,4	6,6	9,2	9,6	12,3	10,7
Rated Power Standby (150°C/40°C)	kVA	8	12,3	13	13	12,5	9,5	13,5	14	15	15,5
	kW	6,4	9,8	10,4	10,4	10	7,6	10,8	11,2	12	12,4
Rated Power Standby (163°C/27°C)	kVA	8,5	12,7	13,5	13,5	13	10	14	14,5	15,5	16
	kW	6,8	10,2	10,8	10,8	10,4	8	11,2	11,6	12,4	12,8

EFFICIENCY IN CL. H @ 0.8P.F

4/4			78,3%							80,7%
3/4			79,1%							82,3%
2/4			75,4%							78,7%
1/4			67,2%							71,2%

REACTANCES AND TIME CONSTANTS

pcc		0,45								
X _d - dir. axis synchronous		256%	241%	224%	191%		278%	257%	253%	241%
X' _d - dir. axis transient		26,0%	24,5%	23,0%	19,4%		28,3%	26,2%	25,8%	24,5%
X'' _d - dir. axis subtransient		14,3%	13,5%	12,6%	10,7%		15,6%	14,4%	14,2%	13,5%
X _q - quad. axis reactance		144%	135%	126%	107%		156%	144%	142%	135%
T' _{do} - O.C. field time constant							301ms			
T' _d - Transient time constant							31ms			
T'' _d - Sub-transient time constant							7ms			

MECHANICAL DATA

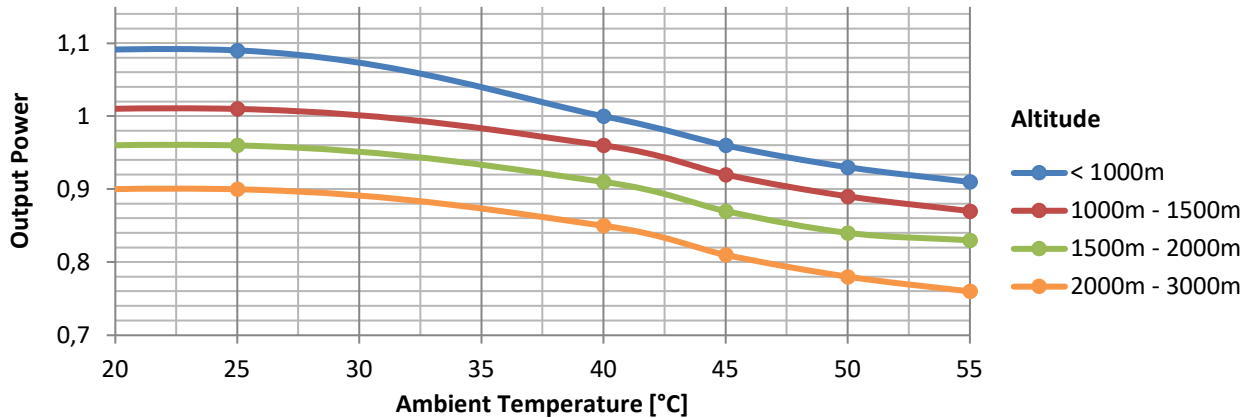
Bearing non drive end			6306-2RS-C3
Bearing drive end (B3/B14 form)			\
Weight of generator	in B2	kg	71,4
	in B3/B14	kg	\
	in B3/B9	kg	\

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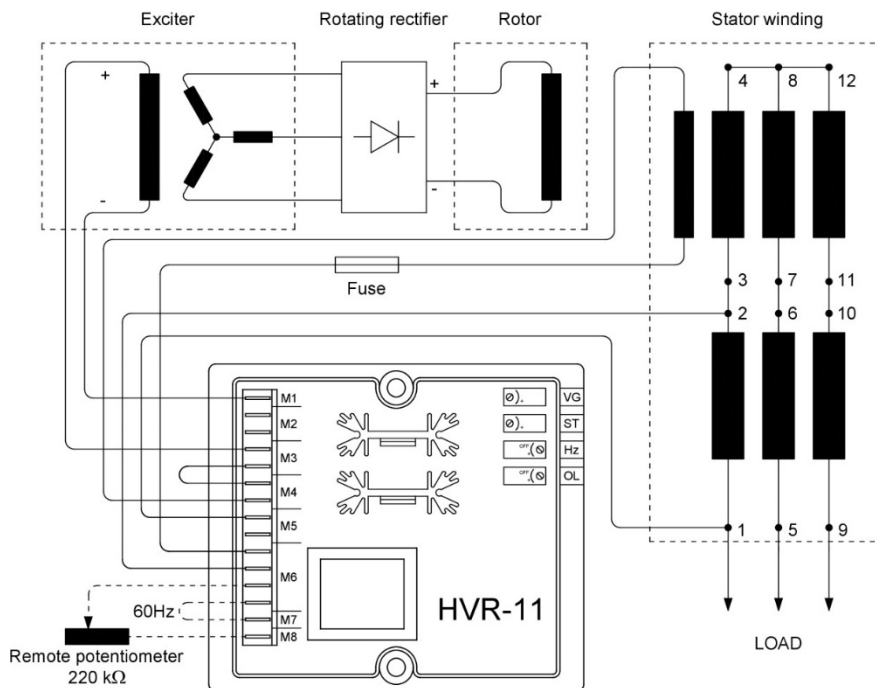
MOMENT OF INERZIA

SAE 6½	kg·m ²	0,121
SAE 7½	kg·m ²	0,124

DERATING CURVES



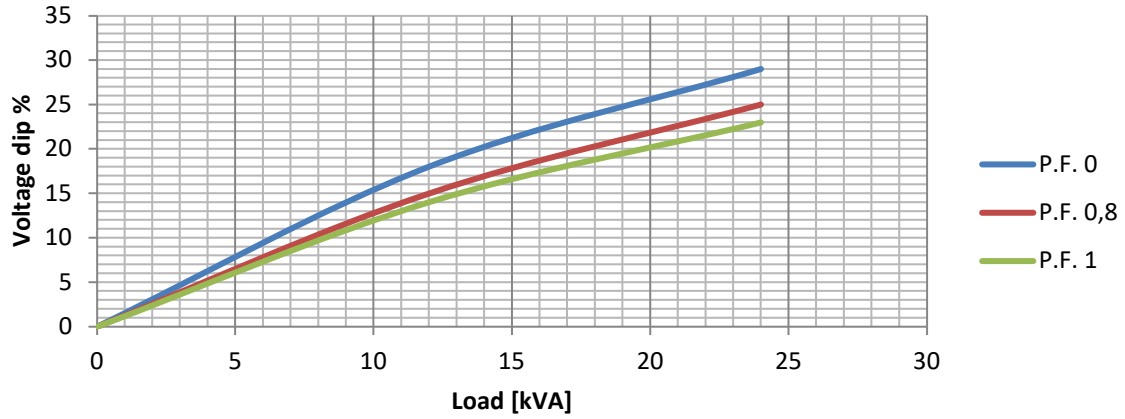
WIRING DIAGRAM



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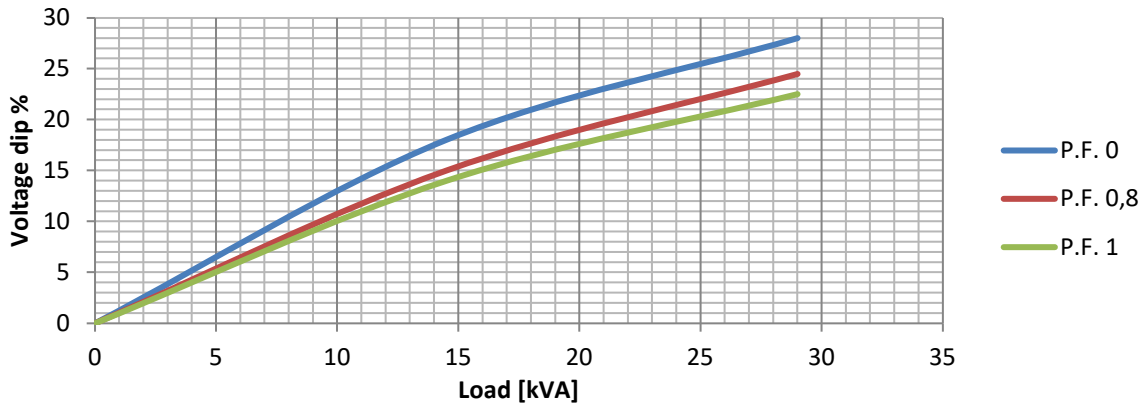
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

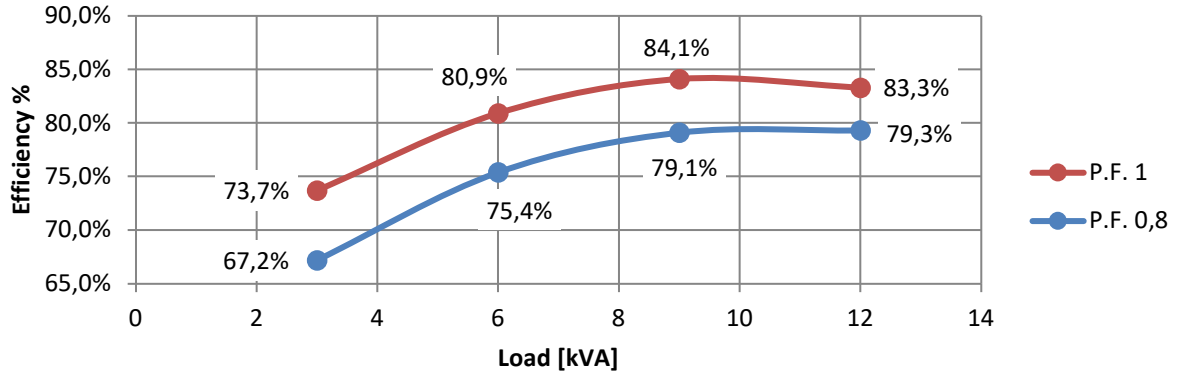
Transient Voltage Variation @ 60Hz



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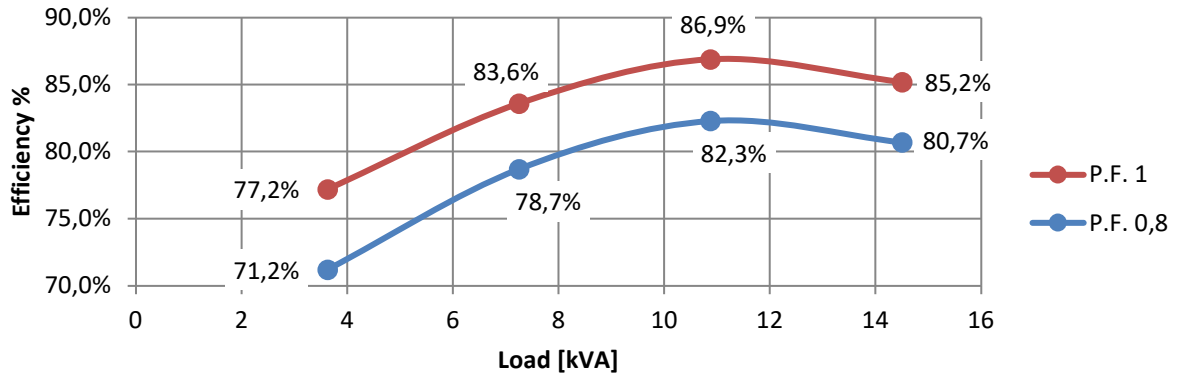
EFFICIENCY 50Hz

Efficiency Curves @ 50Hz

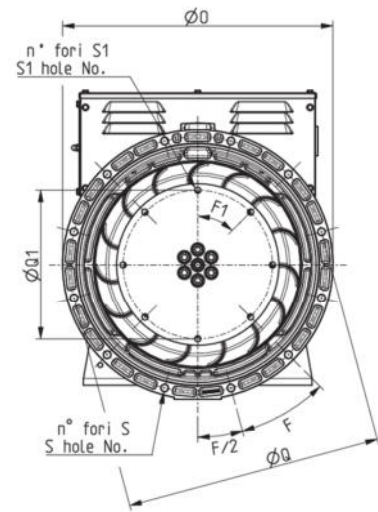
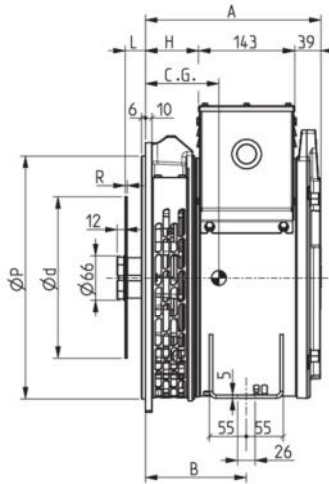
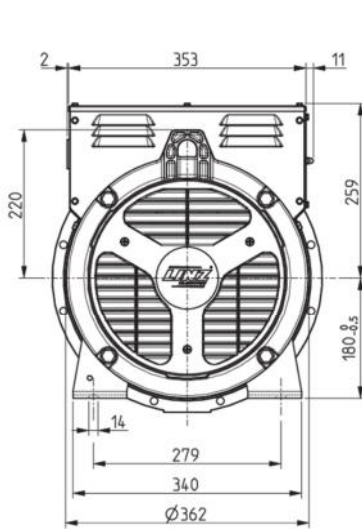


EFFICIENCY 60Hz

Efficiency Curves @ 60Hz



CPT18 SC



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					
	$\varnothing 0$	$\varnothing P$	$\varnothing Q$	n. fori holes No.	S	F
5	356	314.3	333.4	8	11	45°
4	402	362	381	12		30°

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

SAE N.	GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS						
	L	$\varnothing d$	$\varnothing Q1$	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°	