

TECHNICAL DATA SHEET



ALTERNATOR CPT18 SB

Three-Phase brushless synchronous alternator with AVR - 4 poles

CPT18 SB

COMMON DATA

Rated Power at 50Hz	kVA	10
Rated Power at 60Hz	kVA	12
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	4,5 at 50Hz 5,0 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	1,60 at 20°C
Rotor Winding Resistance	Ω	2,00 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	0,76
Excitation at full load	Adc	2,70

STANDARD

References	EN60034-1 ISO8528-3 EN55011
------------	-----------------------------

ON REQUEST

UL 1446, Systems of Insulating Materials - General CSA-C22.2 No. 0, Appendix B, General Requirements - Canadian Electrical Code, Part I

CPT18 SB

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	6,5	9,5	10	10	9	8	10,5	11	11,5	12
	kW	5,2	7,6	8	8	7,2	6,4	8,4	8,8	9,2	9,6
Rated Power in Class F (105°C/40°C)	kVA	6	8,8	9,2	9,2	8,2	7,5	9,6	10	10,5	11
	kW	4,8	7	7,4	7,4	6,6	6	7,7	8	8,4	8,8
Rated Power Standby (150°C/40°C)	kVA	7	10,4	11	11	10	8,8	11,5	12	12,6	13
	kW	5,6	8,3	8,8	8,8	8	7,1	9,2	9,6	10	10,4
Rated Power Standby (163°C/27°C)	kVA	7,4	10,8	11,4	11,4	10,3	9	12	12,5	13	13,7
	kW	5,9	8,6	9,1	9,1	8,2	7,2	9,6	10	10,4	11

EFFICIENCY IN CL. H @ 0.8P.F

4/4			76,0%							78,6%
3/4			77,2%							80,0%
2/4			73,9%							77,3%
1/4			64,2%							72,9%

REACTANCES AND TIME CONSTANTS

pcc		0,38								
X _d - dir. axis synchronous		258%	245%	228%	182%		287%	267%	256%	245%
X' _d - dir. axis transient		27,5%	26,1%	24,3%	19,4%		30,6%	28,5%	27,2%	26,1%
X'' _d - dir. axis subtransient		15,7%	14,9%	13,9%	11,1%		17,5%	16,3%	15,5%	14,9%
X _q - quad. axis reactance		145%	138%	128%	103%		162%	151%	144%	138%
T' _{do} - O.C. field time constant							274ms			
T' _d - Transient time constant							29ms			
T'' _d - Sub-transient time constant							7ms			

MECHANICAL DATA

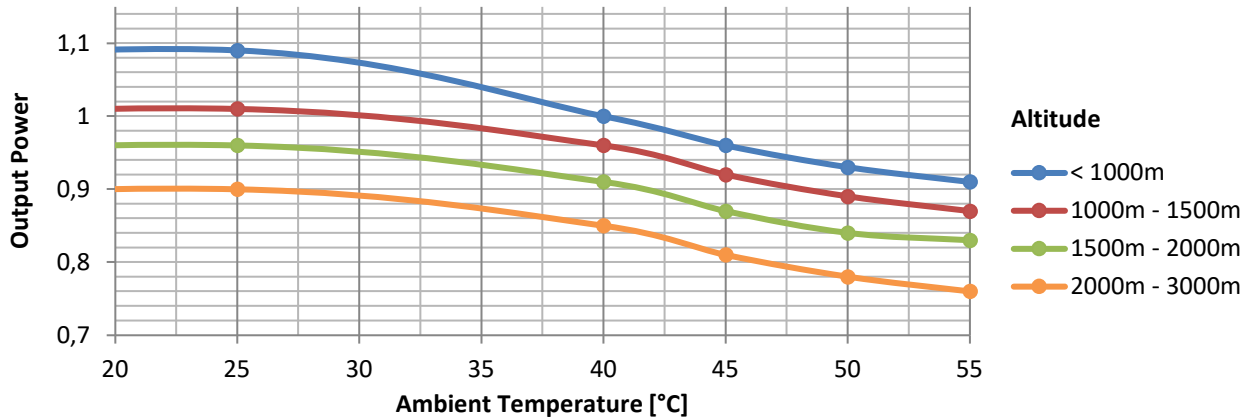
Bearing non drive end			6306-2RS-C3
Bearing drive end (B3/B14 form)			\
Weight of generator	in B2	kg	67,7
	in B3/B14	kg	\
	in B3/B9	kg	\

CPT18 SB

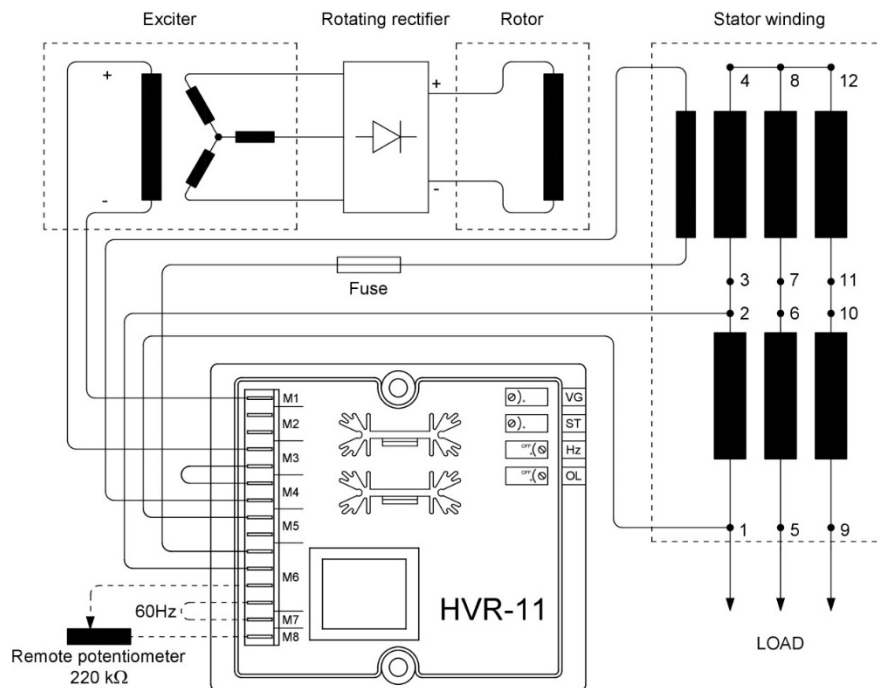
MOMENT OF INERZIA

SAE 6½	kg·m ²	0,112
SAE 7½	kg·m ²	0,115

DERATING CURVES



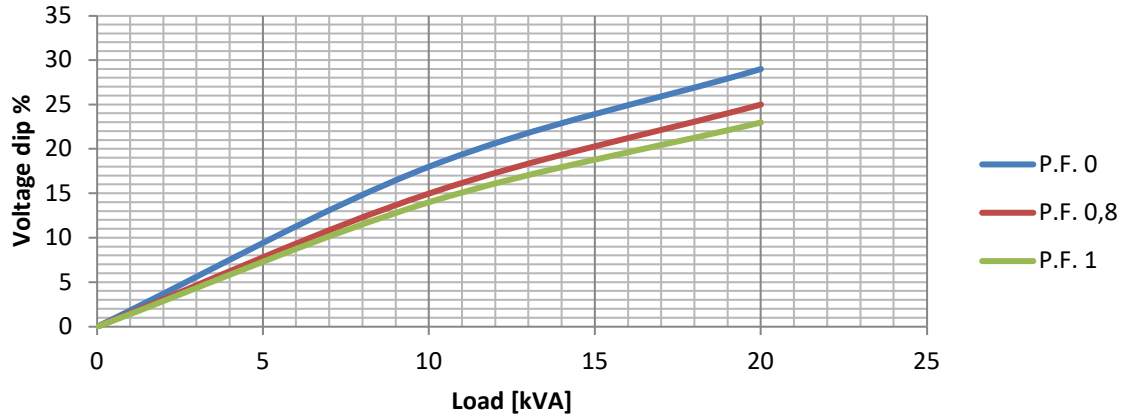
WIRING DIAGRAM



CPT18 SB

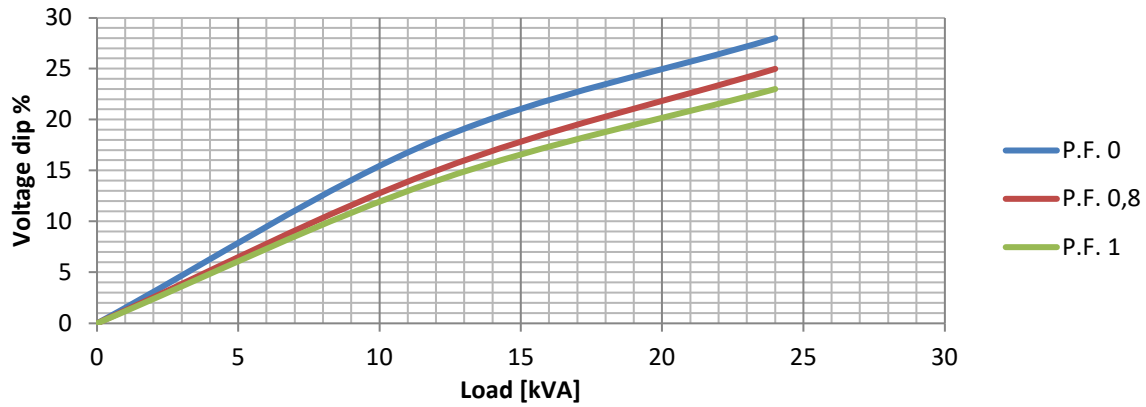
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

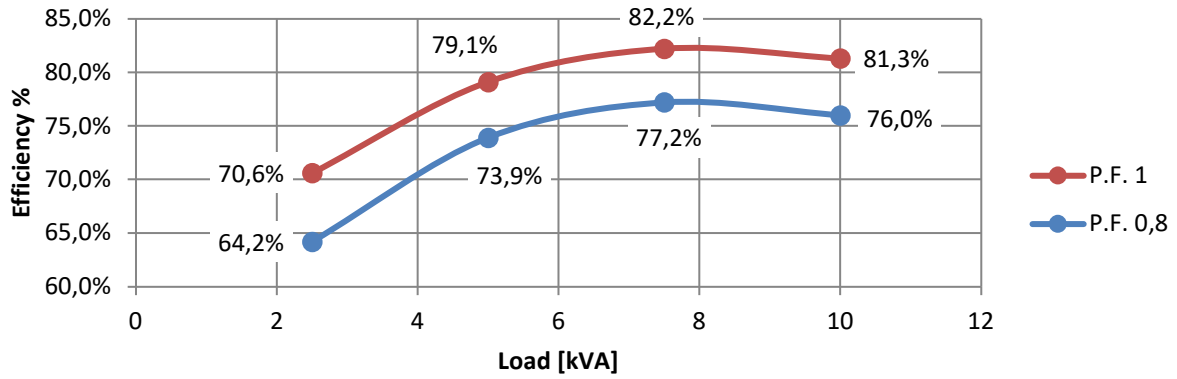
Transient Voltage Variation @ 60Hz



CPT18 SB

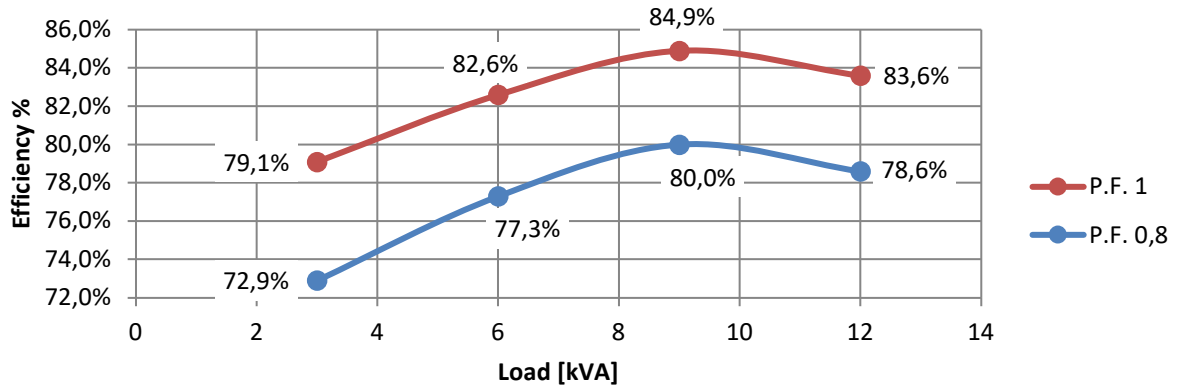
EFFICIENCY 50Hz

Efficiency Curves @ 50Hz

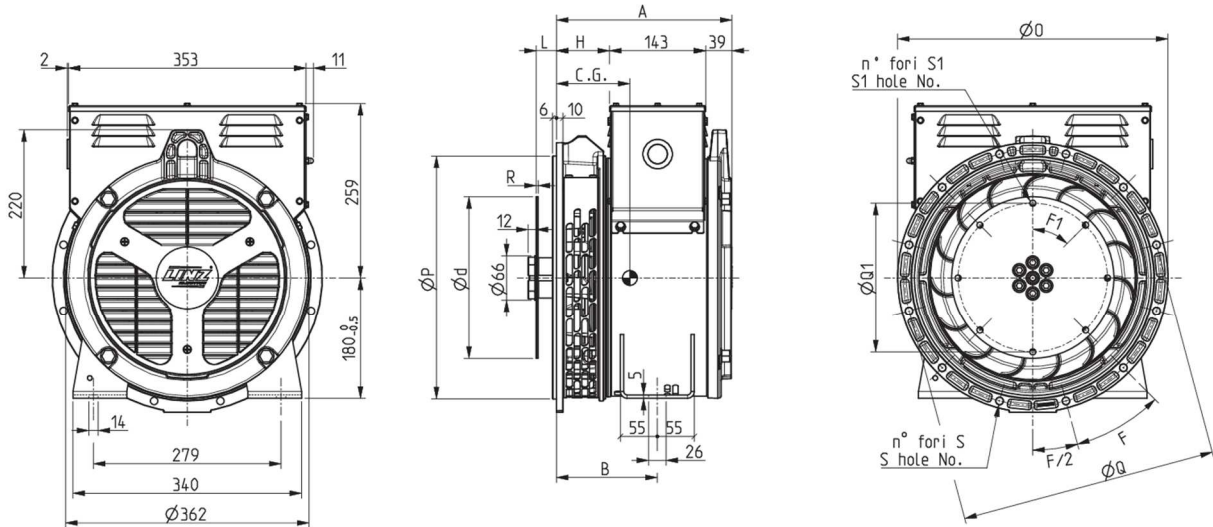


EFFICIENCY 60Hz

Efficiency Curves @ 60Hz



CPT18 SB



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