

TECHNICAL DATA SHEET



ALTERNATOR CPS18 SC - 50Hz

Single-Phase brushless synchronous alternator with AVR - 4 poles

CPS18 SC - 50Hz

COMMON DATA

Rated Power at 50Hz	kVA	8,5
Rated Power Factor		1
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
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		Single layer with auxiliary winding
Rotor Winding		with damping cage
Winding Pitch		2/3
Number of Leads of Stator		4
Stator Winding Resistance	(1-2) Ω	0,28 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		< 5,5%
THD at no load		< 3,5%
Excitation at no load	Adc	0,83
Excitation at full load	Adc	1,90

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		
Voltage	V	110/220	115/230	120/240
Rated Power in Class H (125°C/40°C)	kW	8,2	8,5	8,5
Rated Power in Class F (105°C/40°C)	kW	7,7	8	8
Rated Power Standby (150°C/40°C)	kW	8,7	9,0	9,0
Rated Power Standby (163°C/27°C)	kW	9,2	9,5	9,5

EFFICIENCY IN CL. H @ 1P.F

4/4		80,2%	
3/4		81,7%	
2/4		76,5%	
1/4		66,4%	

REACTANCES AND TIME CONSTANTS

pcc			0,45	
X _d	- dir. axis synchronous	153%	245%	226%
X' _d	- dir. axis transient	27,4%	26,0%	24,0%
X'' _d	- dir. axis subtransient	15,6%	14,8%	13,6%
X _q	- quad. axis reactance	146%	138%	127%
T' _{do}	- O.C. field time constant		299ms	
T' _d	- Transient time constant		32ms	
T'' _d	- Sub-transient time constant		7ms	

MECHANICAL DATA

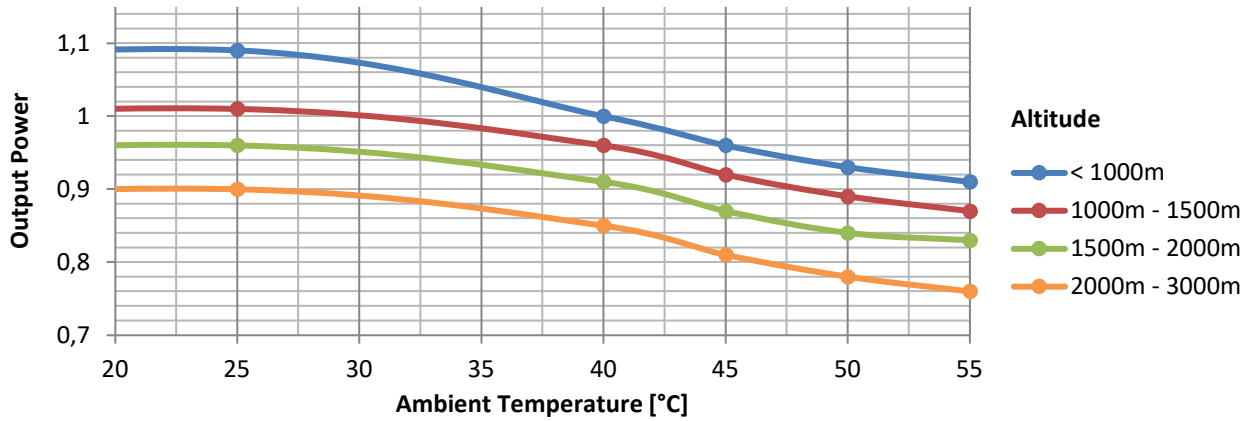
Bearing non drive end		6306-2RS-C3	
Bearing drive end (B3/B14 form)		\	
Weight of generator	in B2	kg	***
	in B3/B14	kg	\
	in B3/B9	kg	\

CPS18 SC - 50Hz

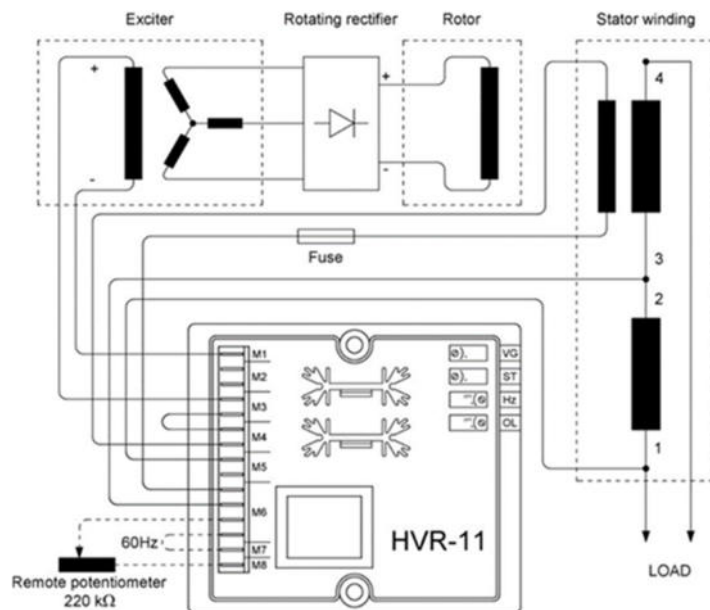
MOMENT OF INERZIA

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

DERATING CURVES



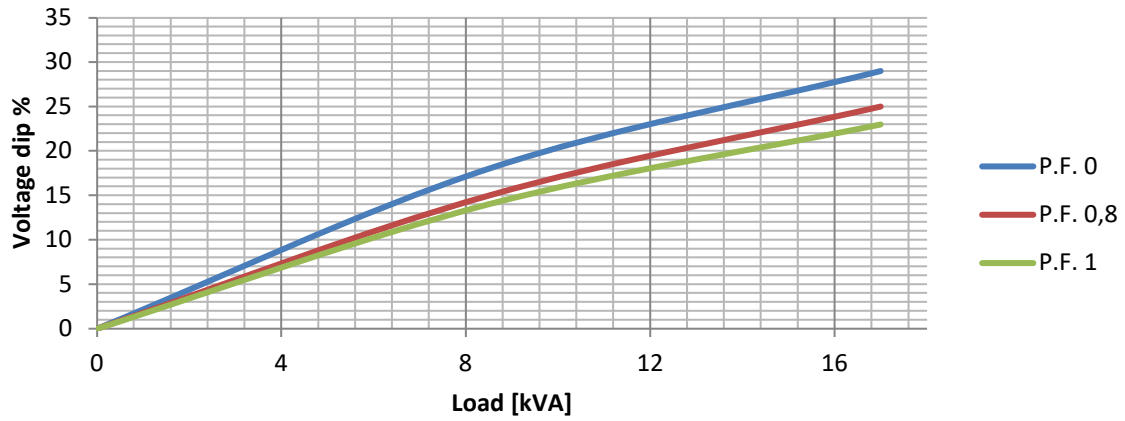
WIRING DIAGRAM



CPS18 SC - 50Hz

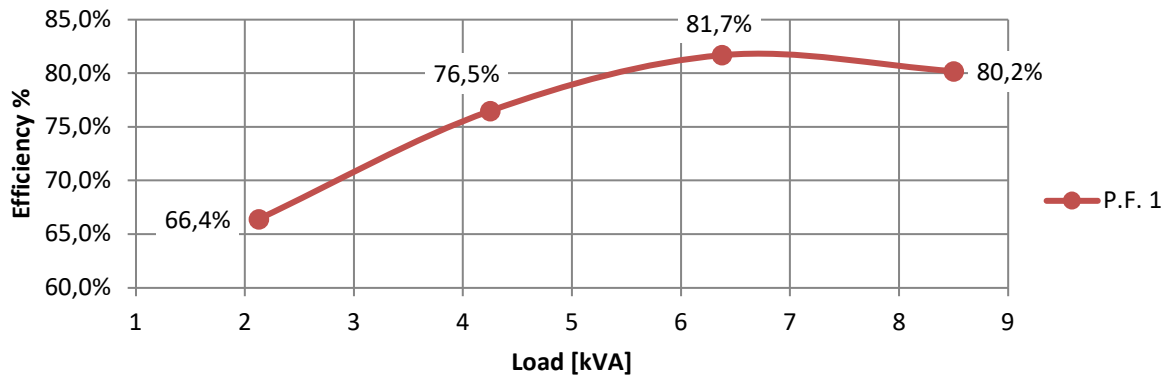
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz

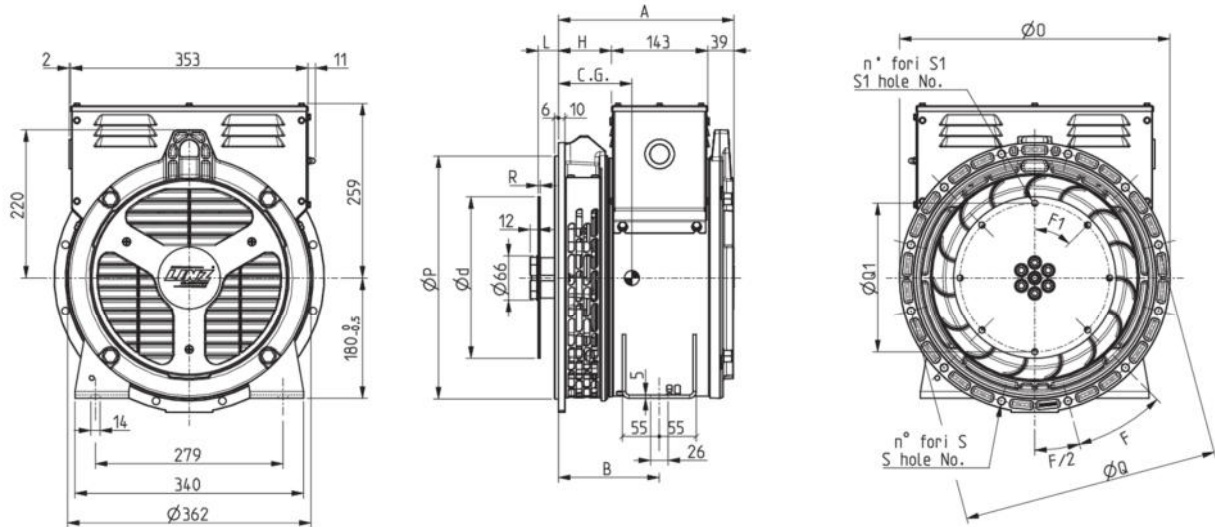


EFFICIENCY 50Hz

Efficiency Curves @ 50Hz



CPS18 SC - 50Hz



FORMA - FORM	A	B	H
CP 18XS	261	150	79
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°

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	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°	