

TECHNICAL DATA SHEET



ALTERNATOR SLT18 MC

Three-Phase brushless synchronous alternator with AVR - 4 poles

SLT18 MC

COMMON DATA

Rated Power at 50Hz	kVA	15	
Rated Power at 60Hz	kVA	18	
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	5,2 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	0,325 at 20°C	
Rotor Winding Resistance	Ω	2,22 at 20°C	
Exciter Stator Resistance	Ω	15 at 20°C	
Exciter Rotor Resistance	Ω	0,72 at 20°C	
THD at full load		<3%	
THD at no load		<3%	
Excitation at no load	Adc	0,86	
Excitation at full load	Adc	2,2	

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

CAN/CSA - C22.2 No. 100-14 (R2009) Motors and Generators, UL1004-1 2nd ed. Rotating Electrical Machines - General Requirements, UL1004-4 2nd ed. Electric Generators

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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	10	15	15	15	12	12	16	17	18	18
	kW	8	12	12	12	9,6	9,6	12,8	13,6	14,4	14,4
Rated Power in Class F (105°C/40°C)	kVA	9,3	14	14	14	11	11	15	15,6	17	17
	kW	7,4	11,2	11,2	11,2	8,8	8,8	12	12,48	13,6	13,6
Rated Power Standby (150°C/40°C)	kVA	11	16	16	16	13	13	16,5	17,5	19	19
	kW	8,8	12,8	12,8	12,8	10,4	10,4	13,2	14	15,2	15,2
Rated Power Standby (163°C/27°C)	kVA	11,4	16,5	16,5	16,5	13,5	13,6	16,5	18,5	20	20
	kW	9,1	13,2	13,2	13,2	10,8	10,9	13,2	14,8	16	16

EFFICIENCY IN CL. H

4/4			85,6%						87,4%
3/4			86,0%						87,4%
2/4			84,8%						85,6%
1/4			81,2%						81,8%

REACTANCES AND TIME CONSTANTS

pcc		0,63								
X _d	- dir. axis synchronous	263%	237%	220%	157%	282%	266%	258%	237%	
X' _d	- dir. axis transient	19,9%	18,0%	16,7%	11,9%	21,4%	20,2%	19,6%	18,0%	
X'' _d	- dir. axis subtransient	8,9%	8,0%	7,4%	5,3%	9,5%	9,0%	8,7%	8,0%	
X _q	- quad. axis reactance	145%	131%	122%	87%	156%	147%	143%	131%	
T' _{do}	- O.C. field time constant	99ms								
T' _d	- Transient time constant	6ms								
T'' _d	- Sub-transient time constant	5ms								

MECHANICAL DATA

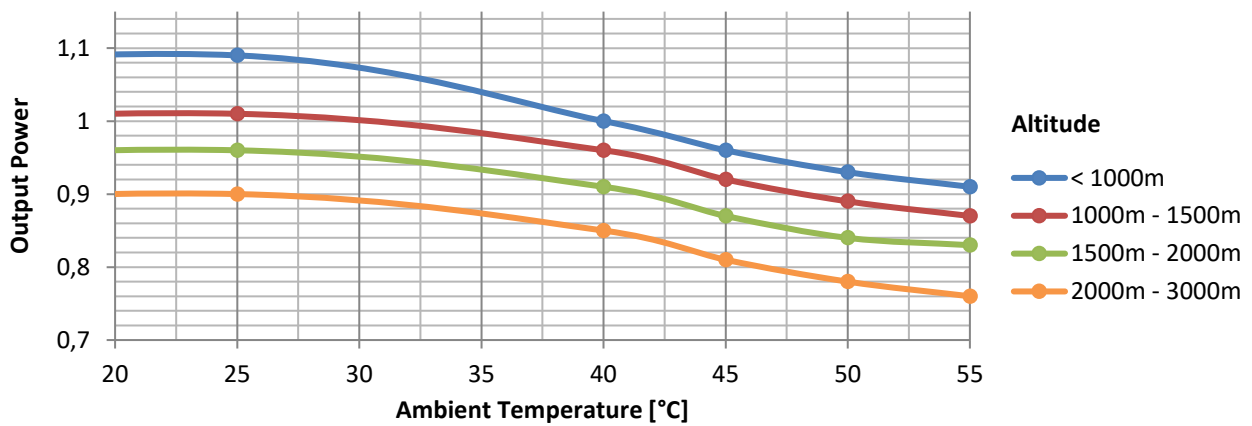
Bearing non drive end	6306-2RS-C3		
Bearing drive end (B3/B14 form)	\		
Weight of generator	in B2	kg	114
	in B3/B14	kg	\
	in B3/B9	kg	\

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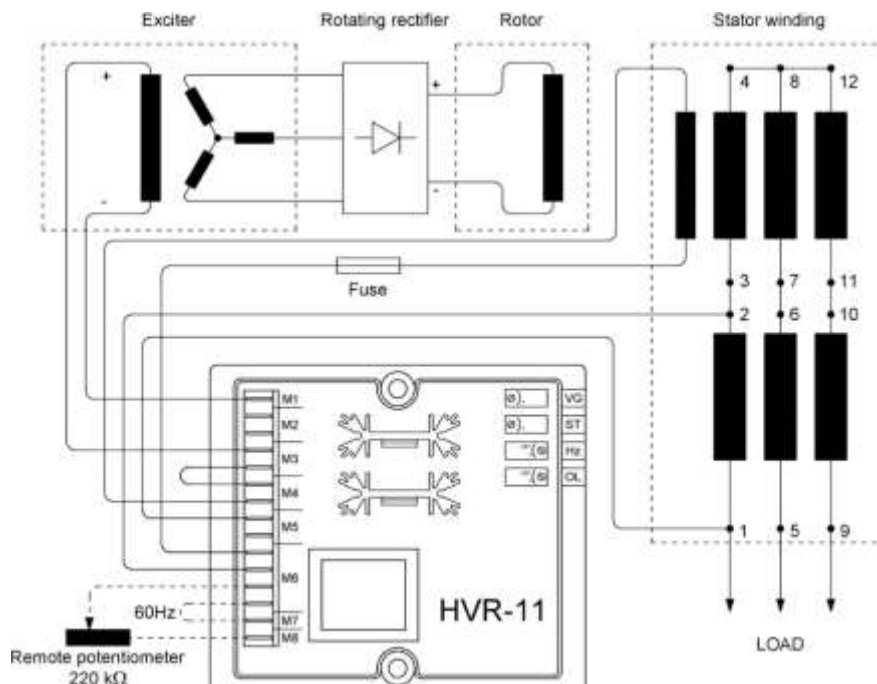
MOMENT OF INERZIA

B3/B9	kg·m ²	\
SAE 7½	kg·m ²	0,192
SAE 8	kg·m ²	0,201
SAE 10	kg·m ²	0,218
SAE 11½	kg·m ²	0,237
SAE 14	kg·m ²	\
SAE 18	kg·m ²	\
B3/B14	kg·m ²	\

DERATING CURVES



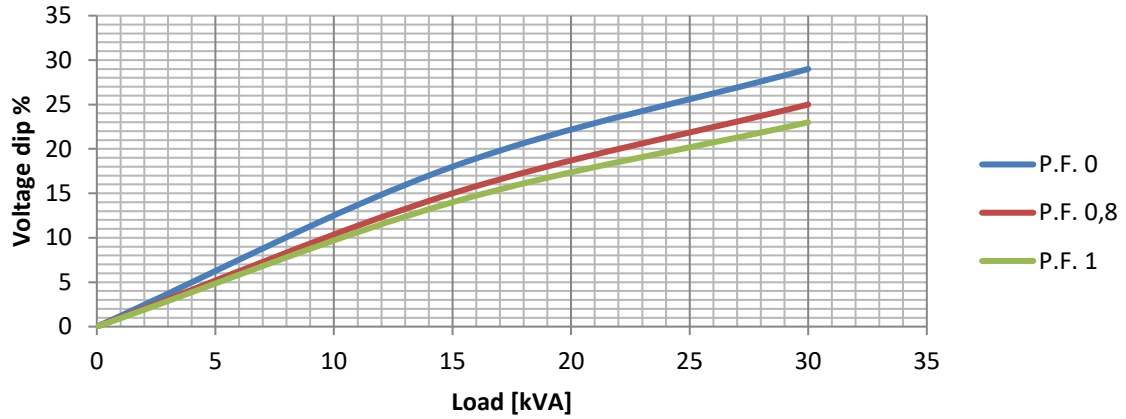
WIRING DIAGRAM



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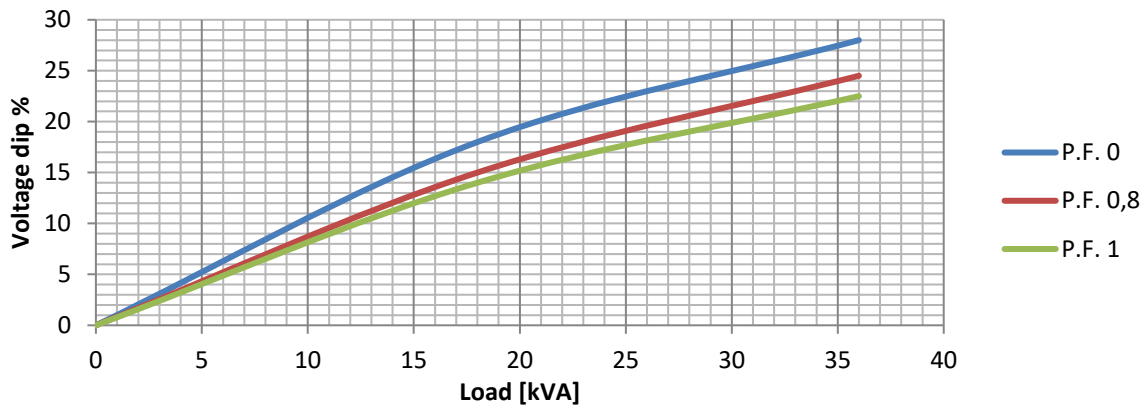
TRANSIENT VOLTAGE VARIATION 50Hz

Transient Voltage Variation @ 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

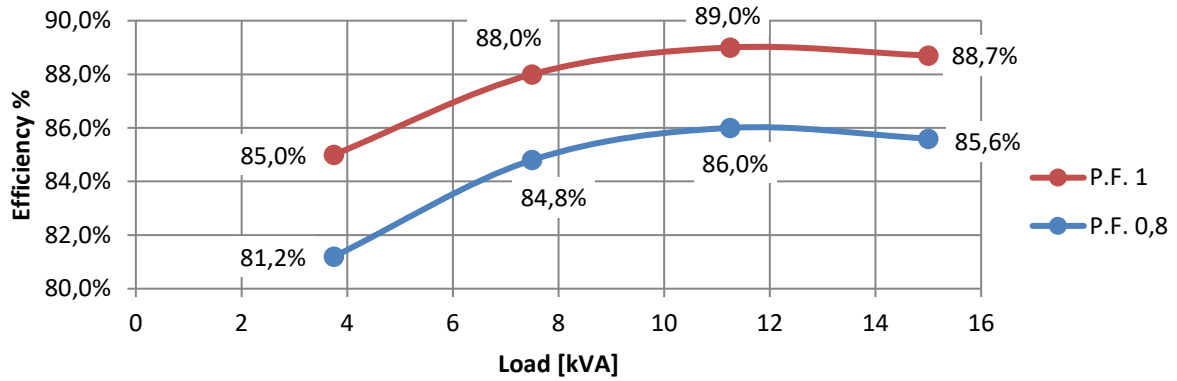
Transient Voltage Variation @ 60Hz



SLT18 MC

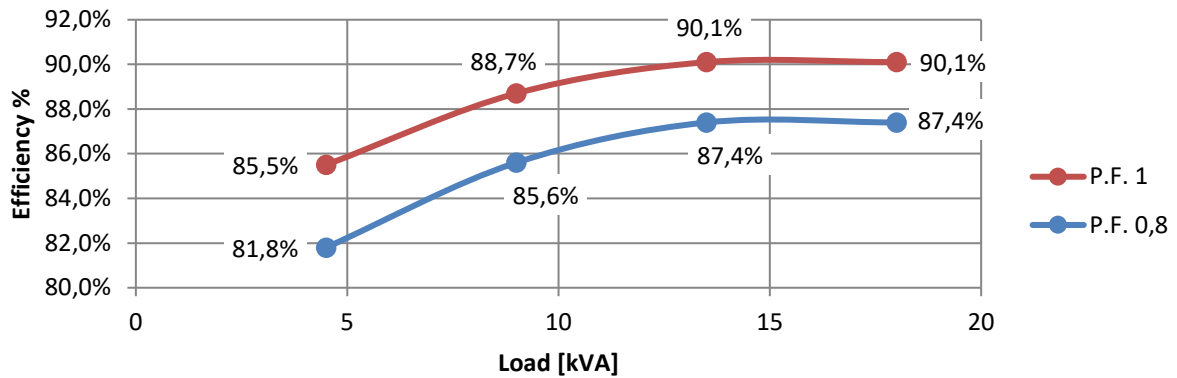
EFFICIENCY 50Hz

Efficiency Curves @ 50Hz



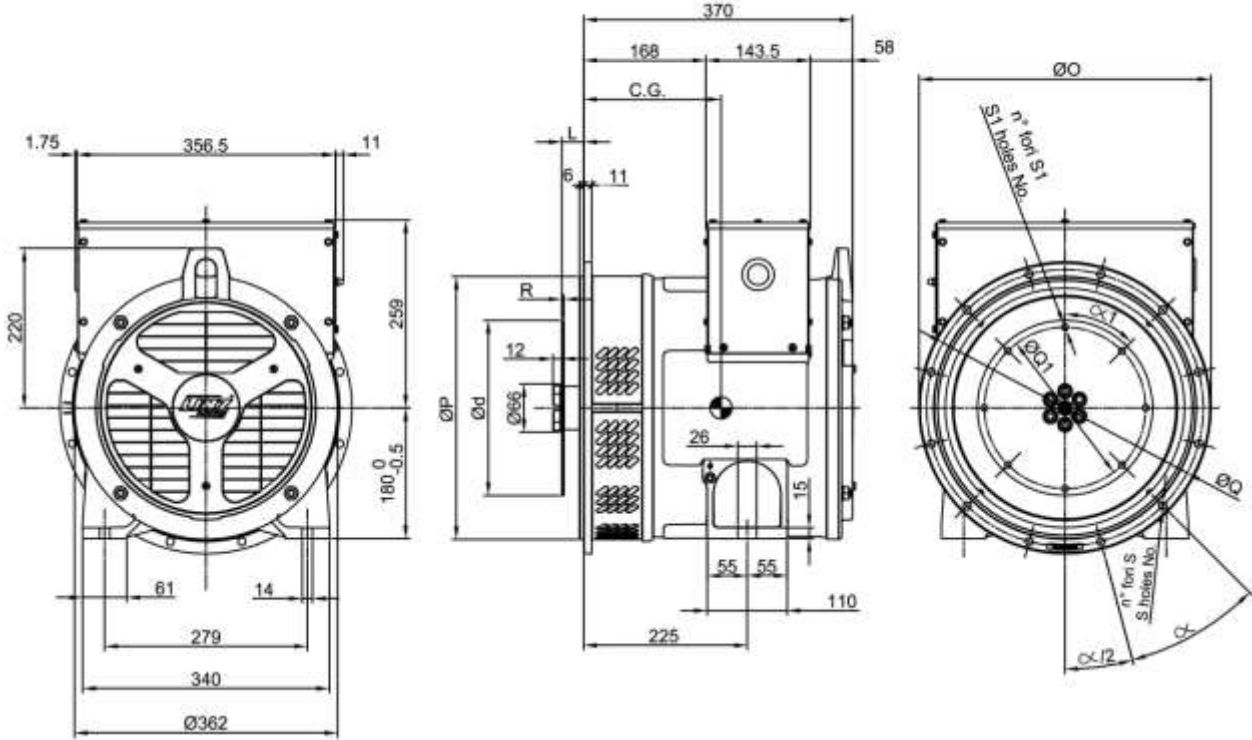
EFFICIENCY 60Hz

Efficiency Curves @ 60Hz



SLT18 MC

FORMA - FORM SAE



TIPO - TYPE	C.G.
SLS/SLT18 MC MD35	190
SLS/SLT18 MD MD35	192

SAE N.	FLANGIE - FLANGES - BRIDAS					
	Ø O	Ø P	Ø Q	n. fori holes No.	S	α
5	356	314.3	333.4	8	11	45°
4	402	362	381	12		30°
3	451	409.6	428.6	12		30°

SAE N.	GIUNTI A DISCO - COUPLING DISCS - JUNTAS A DISCOS						
	L	Ø d	Ø Q1	n. fori holes No.	S1	α1	R
6 1/2	30.2	215.9	200	6	9	60°	3
7 1/2	30.2	241.3	222.25	8	9	45°	
8	62	263.52	244.47	6	10.5	60	4.5
10	53.8	314.32	295.27	8	10.5	45°	
11 1/2	39.6	352.42	333.37	8	10.5	45°	