



ALTERNATOR SLT18 MD

three-phase brushless synchronous alternator with AVR - 4 poles

Technical Data Sheet

SLT18 MD

COMMON DATA

Rated Power at 50Hz	kVA	20	
Rated Power at 60Hz	kVA	24	
Rated Power Factor		0.8	
Nominal Temperature	°C	40	
Control System		self excited	
Execution		brushless	
Regulation Type		AVR	
Insulation Class		H	
Protection		IP23	
Maximum Overspeed	rpm	2250	
Overload		110% of rated power for one hour in a cycle of 6 hours	
Air Flow Requirement	m ³ /min	5.5 at 50Hz	5.7 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		0.224 at 20°C	
Rotor Winding Resistance		2.43 at 20°C	
Exciter Stator Resistance		15 at 20°C	
Exciter Rotor Resistance		0.72 at 20°C	
THD at full load		<3%	
THD at no load		<3%	
Excitation at no load	A _{dc}	0.92	
Excitation at full load	A _{dc}	2.4	

STANDARD

References		EN60034-1 ISO8528-3 EN55011	
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ELECTRICAL DATA

Frequency		50Hz - 1500rpm				60Hz - 1800rpm			
Voltage Series Star	V	380/220	400/230	415/240	440/254	415/240	440/254	460/266	480/277
Rated Power in Class H (125°C/40°C)	kVA	20	20	20	18	21	23	24	24
	kW	16	16	16	14.4	16.8	18.4	19.2	19.2
Rated Power in Class F (105°C/40°C)	kVA	18.5	18.5	18.5	17	20	21	22	22
	kW	14.8	14.8	14.8	13.6	16	16.8	17.6	17.6
Rated Power Standby (150°C/40°C)	kVA	22	22	21.5	20	24	25	26	26
	kW	17.6	17.6	17.2	16	19.2	20	20.8	20.8
Rated Power Standby (163°C/27°C)	kVA	23	23	22.5	21	25	26	27	27
	kW	18.4	18.4	18	16.8	20	20.8	21.6	21.6

EFFICIENCY IN CL. H

4/4		86.1%						87.8%
3/4		86.3%						88.1%
2/4		84.5%						86.3%
1/4		82.0%						83.8%

REACTANCES AND TIME CONSTANTS

pcc		0.57							
X _d - dir. axis synchronous		268%	242%	225%	180%	283%	276%	264%	242%
X' _d - dir. axis transient		21.1%	19.0%	17.7%	14.1%	22.2%	21.7%	20.7%	19.0%
X'' _d - dir. axis subtransient		10.0%	9.0%	8.4%	6.7%	10.5%	10.3%	9.8%	9.0%
X _q - quad. axis reactance		147%	133%	124%	99%	156%	152%	145%	133%
T' _{do} - O.C. field time constant		103ms							
T' _d - Transient time constant		7ms							
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		122
	in B3/B14	kg		\
	in B3/B9	kg		\

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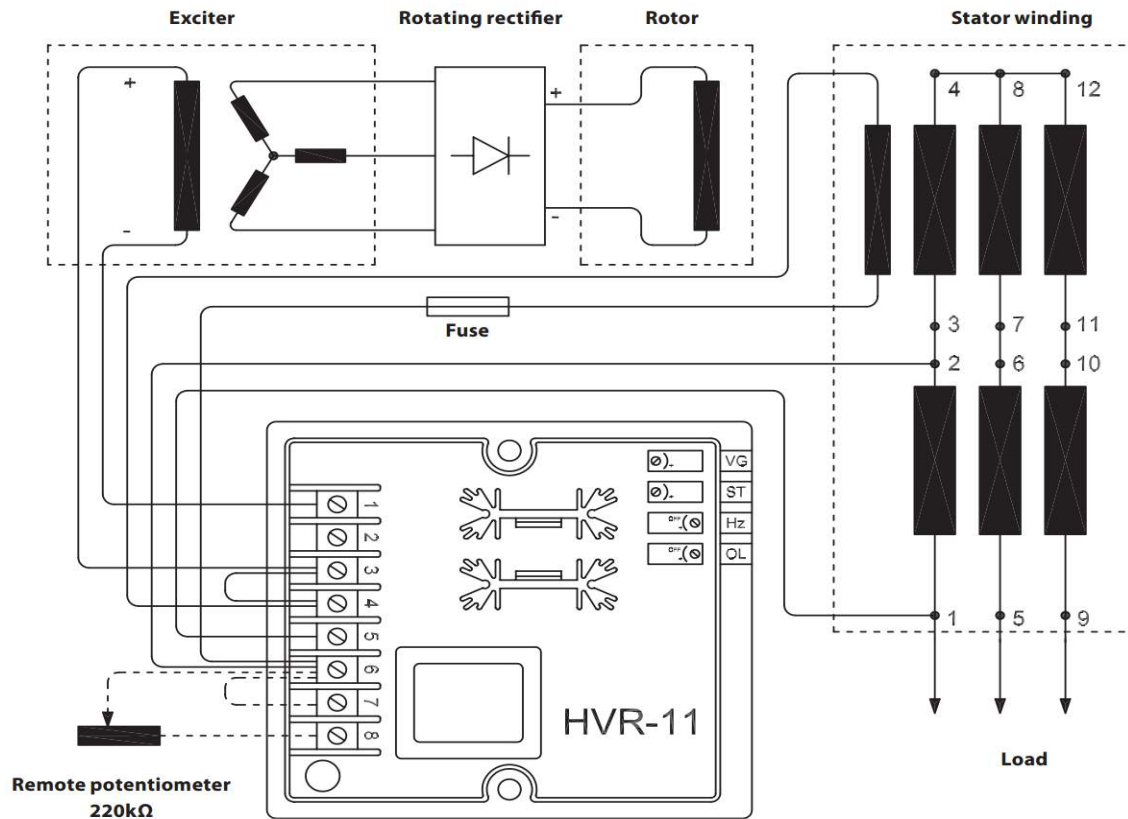
MOMENT OF INERZIA

B3/B9	kg·m ²	\
SAE 7½	kg·m ²	0.211
SAE 8	kg·m ²	0.22
SAE 10	kg·m ²	0.236
SAE 11½	kg·m ²	0.256
SAE 14	kg·m ²	\
SAE 18	kg·m ²	\
B3/B14	kg·m ²	\

POWER VARIATION ACCORDING TO TEMPERATURE AND ALTITUDE

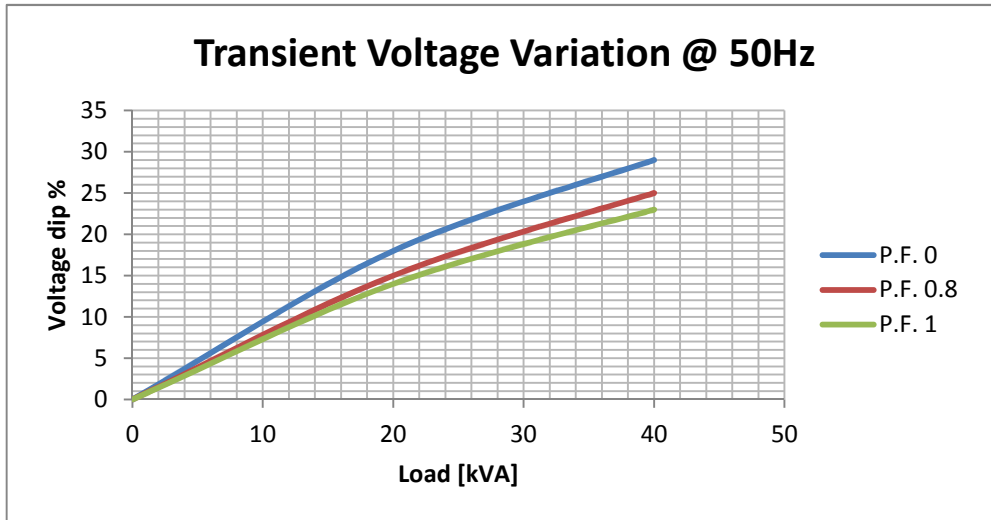
Altitude	Ambient temperature				
	25°C	40°C	45°C	50°C	55°C
< 1000m	1.09	1	0.96	0.93	0.91
1000m - 1500m	1.01	0.96	0.92	0.89	0.87
1500m - 2000m	0.96	0.91	0.87	0.84	0.83
2000m - 3000m	0.9	0.85	0.81	0.78	0.76

WIRING DIAGRAM

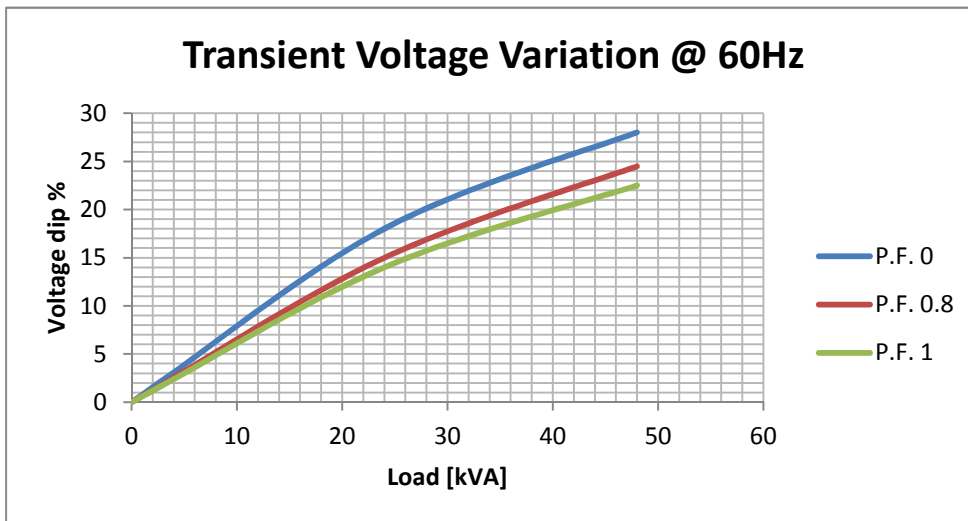


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TRANSIENT VOLTAGE VARIATION 50Hz

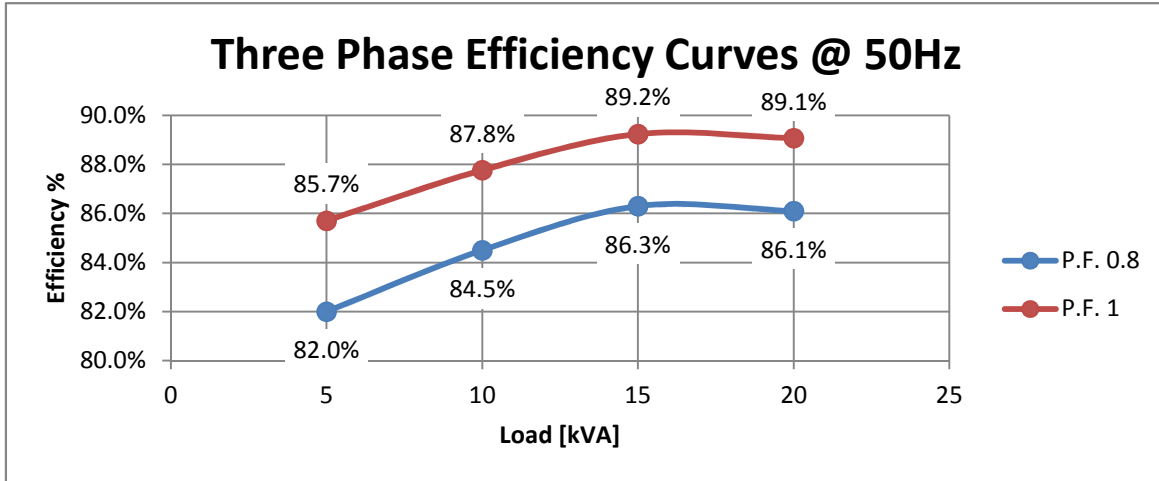


TRANSIENT VOLTAGE VARIATION 60Hz

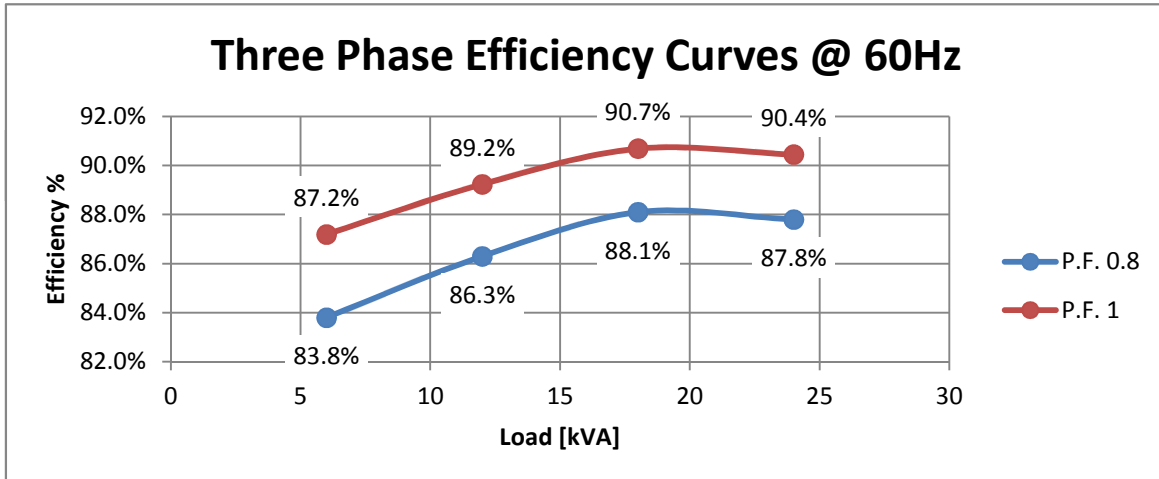


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EFFICIENCY 50Hz

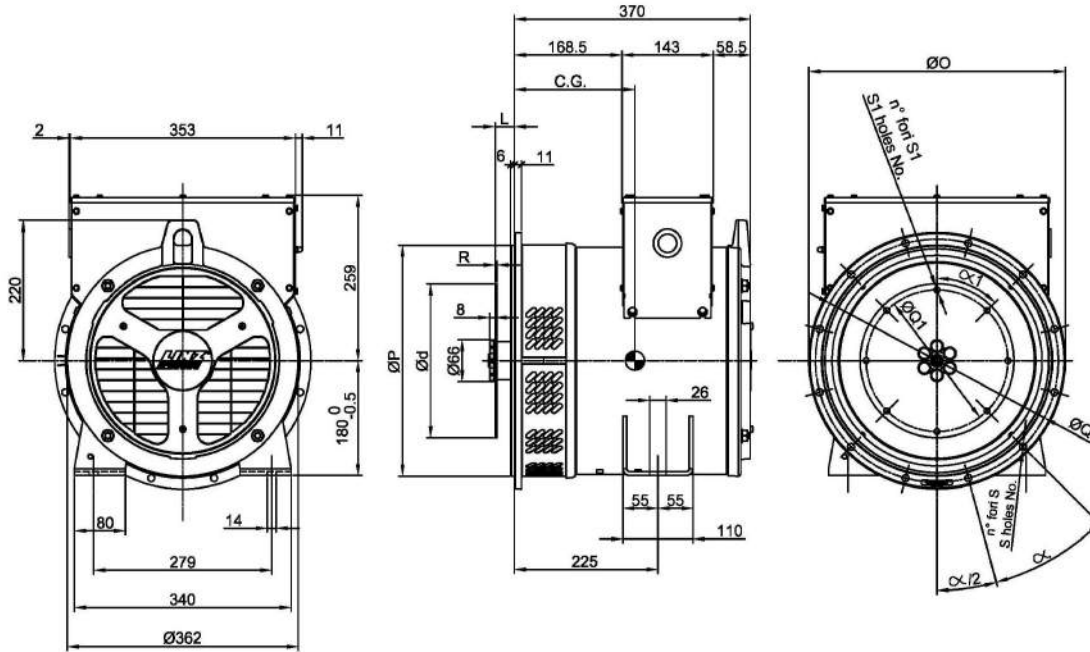


EFFICIENCY 60Hz



SLT18 MD

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		45°
4	402	362	381	12	11	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°	