TECHNICAL DATA SHEET

ALTERNATOR PRO28L G/4

Three-Phase brushless synchronous alternator with AVR - 4 poles

PRO28L G/4

COMMON DATA

Rated Power at 50Hz	kVA	400	
Rated Power at 60Hz	kVA	480	
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	44,4 at 50Hz	49,6 at 60Hz
R.F.I. Suppression		Standard EN55011	

REGULATION DATA

AVR	HVR30
Sensing	three-phase
Voltage Regulation	±1%
Sustained Short Circuit	> 300% 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		6
Stator Winding Resistance	Ω	0,0061 at 20°C
Rotor Winding Resistance	Ω	3,15 at 20°C
Exciter Stator Resistance	Ω	15 at 20°C
Exciter Rotor Resistance	Ω	0,25 at 20°C
THD at full load		<3%
THD at no load		<3%
Excitation at no load	Adc	0,6
Excitation at full load	Adc	2,2

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

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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	400	400	400	380	430	460	480	480
	kW	320	320	320	304	344	368	384	384
Rated Power in Class F (105°C/40°C)	kVA	360	360	360	340	386	415	430	430
	kW	288	288	288	272	308,8	332	344	344
Rated Power Standby (150°C/40°C)	kVA	410	410	410	390	435	470	490	490
	kW	328	328	328	312	348	376	392	392
Rated Power Standby (163°C/27°C)	kVA	420	420	420	400	445	480	500	500
	kW	336	336	336	320	356	384	400	400

EFFICIENCY IN CL. H

4/4		93,8%						94,2%
3/4		94,0%						94,4%
2/4		93,1%						93,5%
1/4		90,0%						90,1%

REACTANCES AND TIME CONSTANTS

ρcc			0,41						
Xd	- dir. axis synchronous	366%	330%	307%	259%	395%	376%	359%	330%
X'd	- dir. axis transient	19,9%	18,0%	16,7%	14,1%	21,6%	20,5%	19,6%	18,0%
X''d	- dir. axis subtransient	10,0%	9,0%	8,4%	7,1%	10,8%	10,3%	9,8%	9,0%
X_q	- quad. axis reactance	233%	210%	195%	165%	252%	240%	229%	210%
T'_{do}	- O.C. field time constant	1910ms							
T'_d	- Transient time constant	116ms							
T''_d	- Sub-transient time constant	14ms							

MECHANICAL DATA

Bearing non drive end			6314-2RS-C3
Bearing drive end (B3/B14 form)			6316-2RS-C3
Weight of generator	in B2	kg	1034
	in B3/B14	kg	1045
	in B3/B9	kg	\

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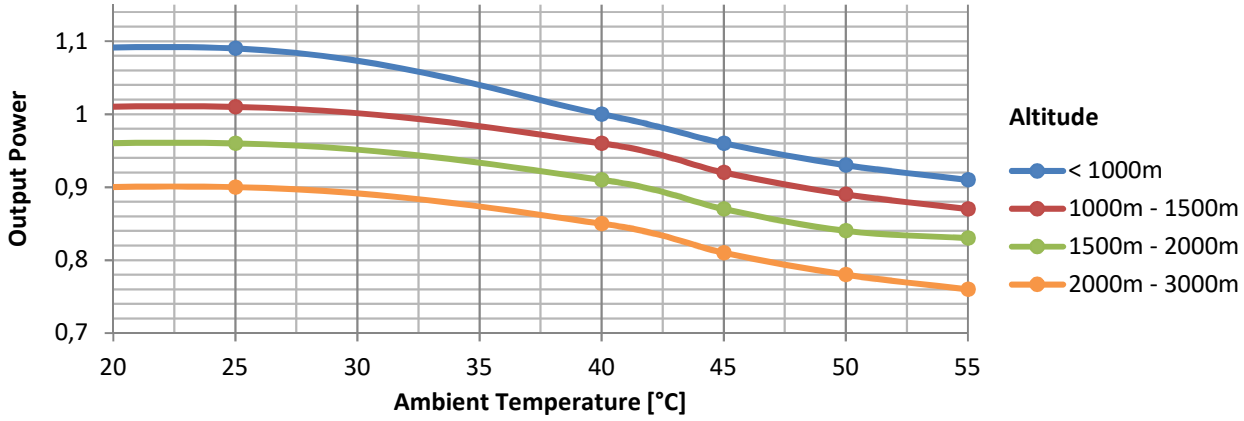
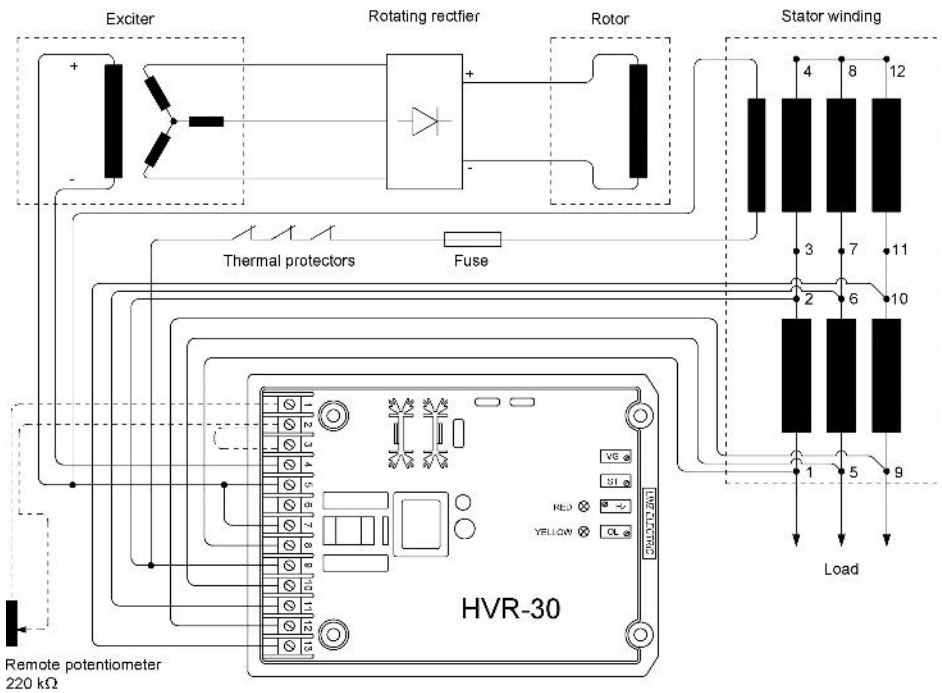
MOMENT OF INERZIA

B3/B9	kg·m²	\
SAE 7½	kg·m²	\
SAE 8	kg·m²	\
SAE 10	kg·m²	\
SAE 11½	kg·m²	4,916
SAE 14	kg·m²	5,032
SAE 18	kg·m²	\
B3/B14	kg·m²	4,737

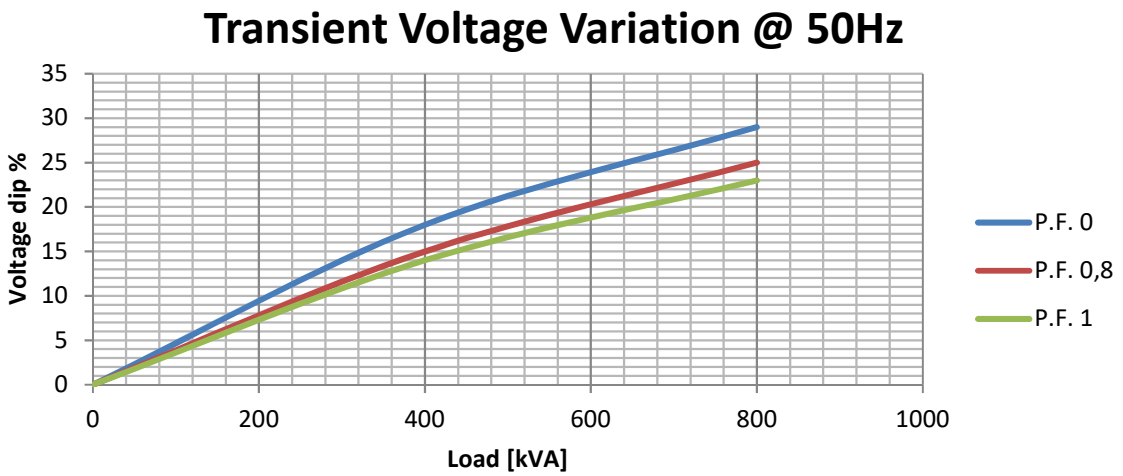
DERATING CURVES



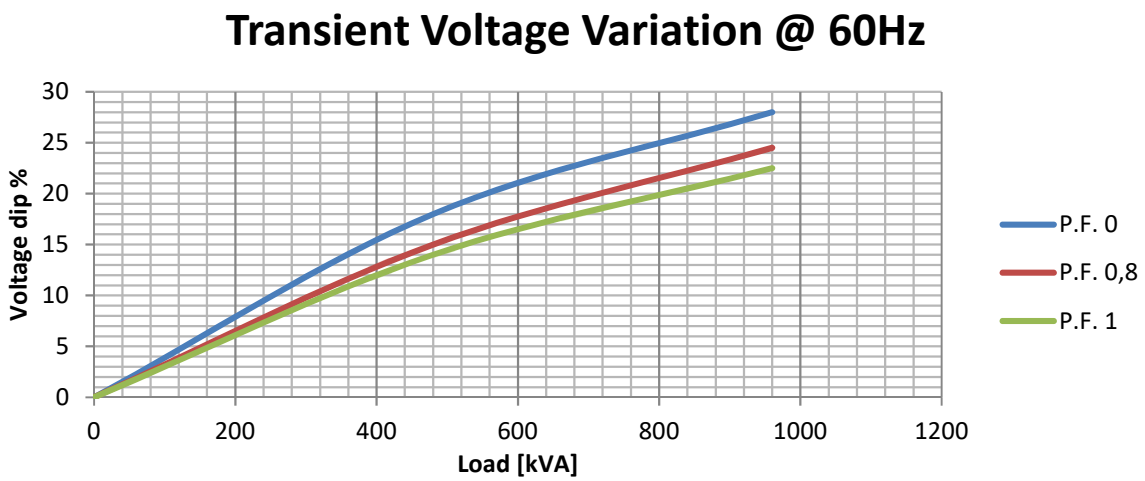
WIRING DIAGRAM



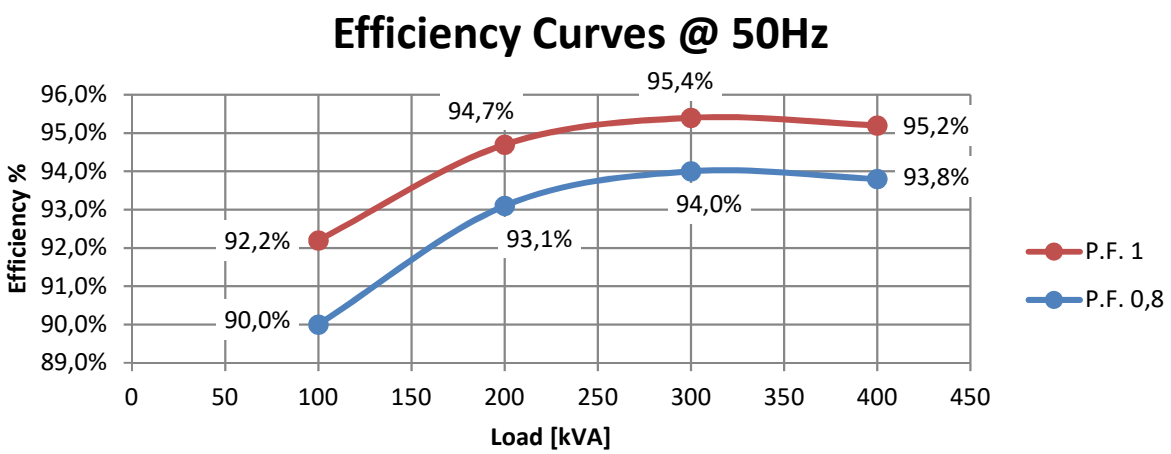
TRANSIENT VOLTAGE VARIATION 50Hz



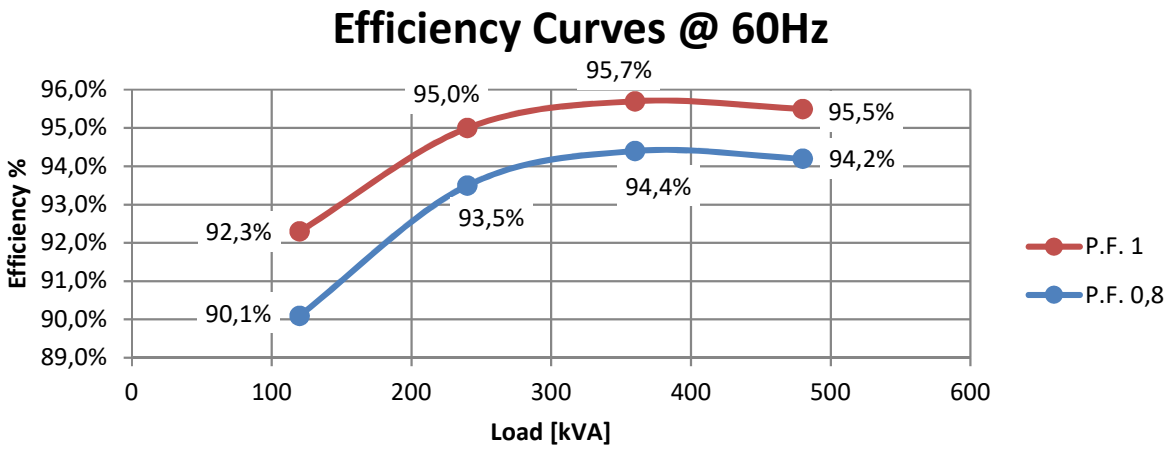
TRANSIENT VOLTAGE VARIATION 60Hz



EFFICIENCY 50Hz



EFFICIENCY 60Hz



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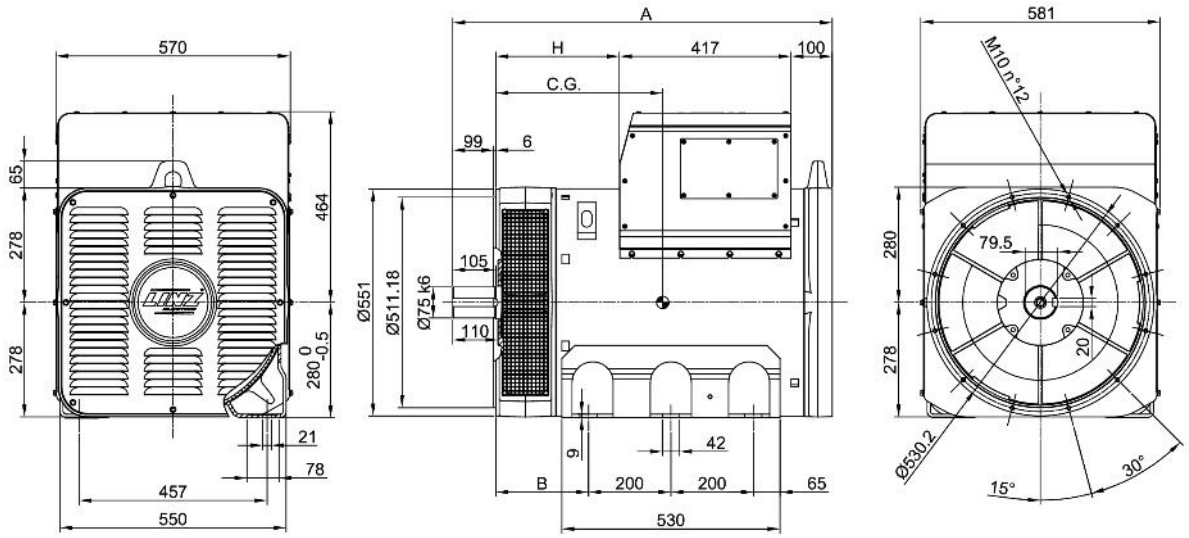
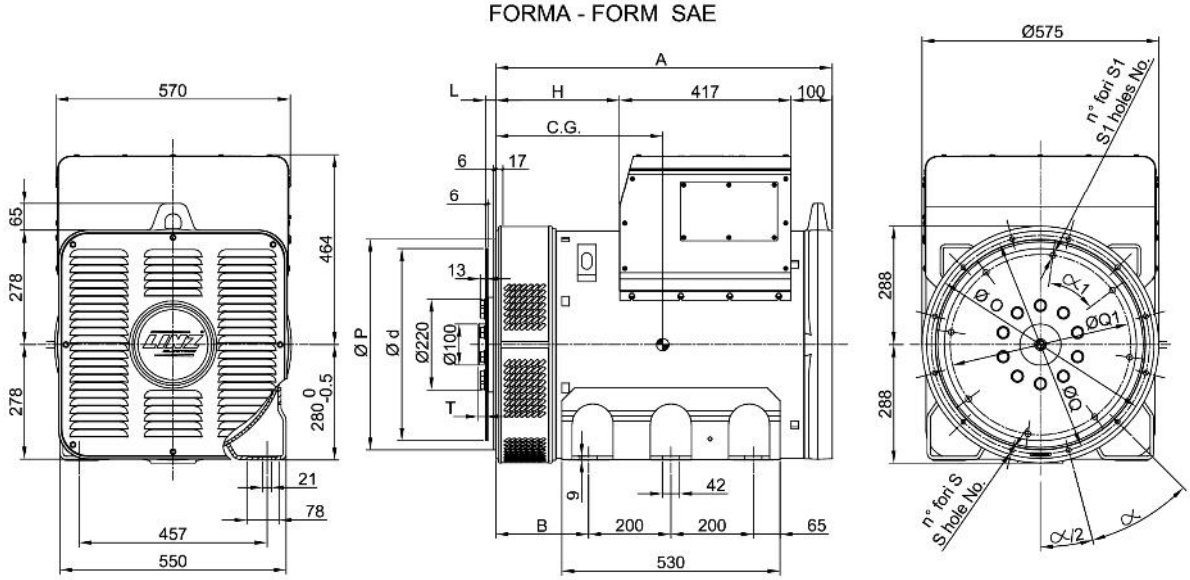
FORMA - FORM B3/B14



FORMA - FORM SAE



FORMA - FORM		A	B	H
B3/B14	PRO 28S	922	225	300
	PRO 28M	1072		450
	PRO 28L	1137	325	515
SAE	PRO 28S	817	225	300
	PRO 28M	967		450
	PRO 28L	1032	325	515

TIPO - TYPE	C.G.
PRO28S A/4	376
PRO28S B/4	380
PRO28S C/4	394
PRO28S D/4	406
PRO28M E/4	452
PRO28M F/4	480
PRO28L G/4	513

SAE N.	FLANGIE - FLANGES - BRIDAS					
	Ø O	Ø P	Ø Q	n. fori holes No.	S	α
3	451	409.6	428.6	12	12	30°
2	490	447.68	466.7			
1	552	511.18	530.2			

SAE N.	GIUNTI A DISCO -COUPLING DISCS- JUNTAS A DISCOS						
	L	Ø d	Ø Q1	n. fori holes No.	S1	α1	T
11 1/2	39.6	352.42	333.37	8	10.5	45°	0
14	25.4	466.72	438.15	8	14	45°	17.3