



ALTERNATOR PRO35M E/4

Three-phase brushless synchronous alternator with AVR - 4 poles

Technical Data Sheet

PRO35M E/4

COMMON DATA

Rated Power at 50Hz	kVA	600	
Rated Power at 60Hz	kVA	720	
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	53 at 50Hz	64.3 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 Winding	6		
Stator Winding Resistance	0.0045Ω at 20°C		
Rotor Winding Resistance	1.42Ω at 20°C		
Exciter Stator Resistance	12.5Ω at 20°C		
Exciter Rotor Resistance	0.095Ω at 20°C		
THD at full load	<3%		
THD at no load	<3%		
Excitation at no load	A _{dc}	0.56	
Excitation at full load	A _{dc}	2.25	

STANDARD

References	EN60034-1, ISO8538, 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
Voltage Parallel Star	V	190/110	200/115	207/120	220/127	207/120	220/127	230/133	240/138
Voltage Series Delta	V	220	230	240	254	240	254	266	277
Rated Power in Class H (125°C/40°C)	kVA	600	600	600	560	640	680	720	720
	kW	480	480	480	448	512	544	576	576
Rated Power in Class F (105°C/40°C)	kVA	550	550	550	515	590	620	660	660
	kW	440	440	440	412	472	496	528	528
Rated Power Standby (150°C/40°C)	kVA	630	630	630	590	680	720	760	760
	kW	504	504	504	472	544	576	608	608
Rated Power Standby (163°C/27°C)	kVA	660	660	660	620	705	740	790	790
	kW	528	528	528	496	564	592	632	632

EFFICIENCY IN CL. H

4/4	95.0%						95.7%
3/4	95.3%						96.2%
2/4	94.0%						94.8%
1/4	92.2%						93.5%

REACTANCES AND TIME CONSTANTS

pcc	0.34							
X _d - dir. axis synchronous	368%	337%	310%	259%	401%	377%	365%	337%
X' _d - dir. axis transient	18.6%	17.0%	15.6%	13.1%	20.2%	19.0%	18.4%	17.0%
X'' _d - dir. axis subtransient	12.0%	11.0%	10.1%	8.4%	13.1%	12.3%	11.9%	11.0%
X _q - quad. axis reactance	225%	206%	189%	158%	245%	230%	223%	206%
T' _{do} - O.C. field time constant	2340 ms							
T' _d - Transient time constant	115 ms							
T'' _d - Sub-transient time constant	10 ms							

MECHANICAL DATA

Bearing non drive end	6316-2RS-C3		
Bearing drive end (B3/B14 form)	6319-C3		
Weight of generator	in B2	kg	1478
	in B3/B14	kg	1488

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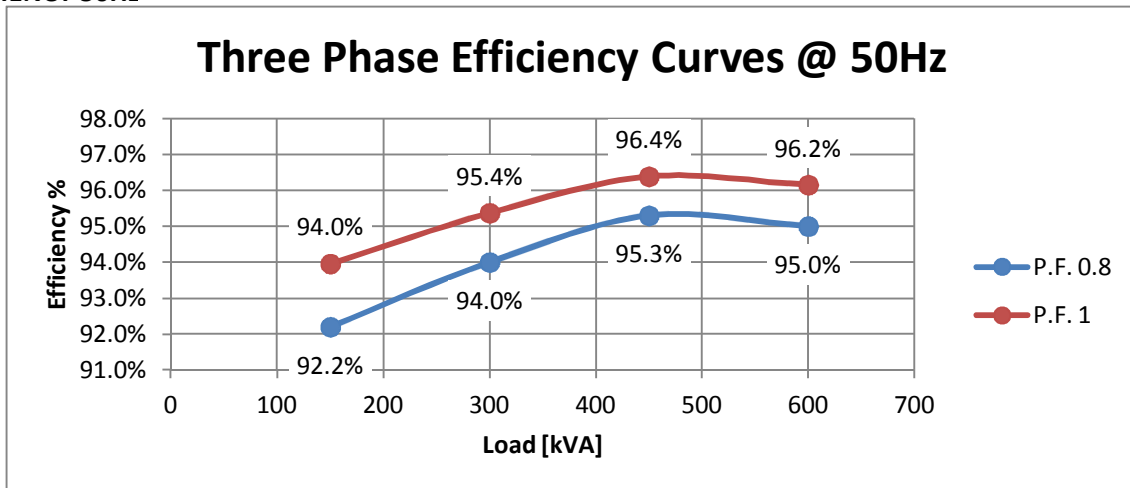
MOMENT OF INERZIA

SAE 14	kg·m ²	11.352
SAE 18	kg·m ²	11.692
B3/B14	kg·m ²	10.838

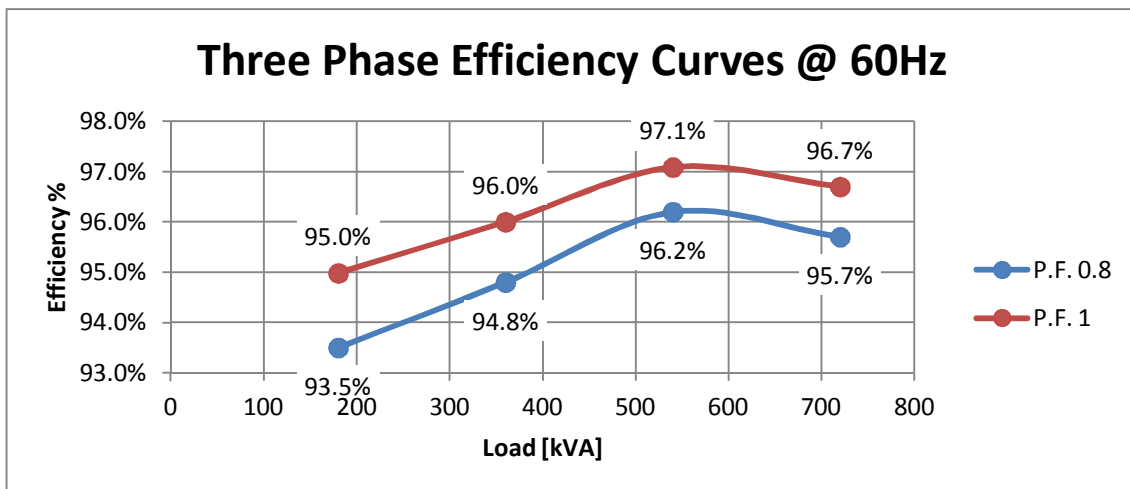
POWER VARIATION ACCORDING TO TEMPERATURE AND ALTITUDE

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

EFFICIENCY 50Hz

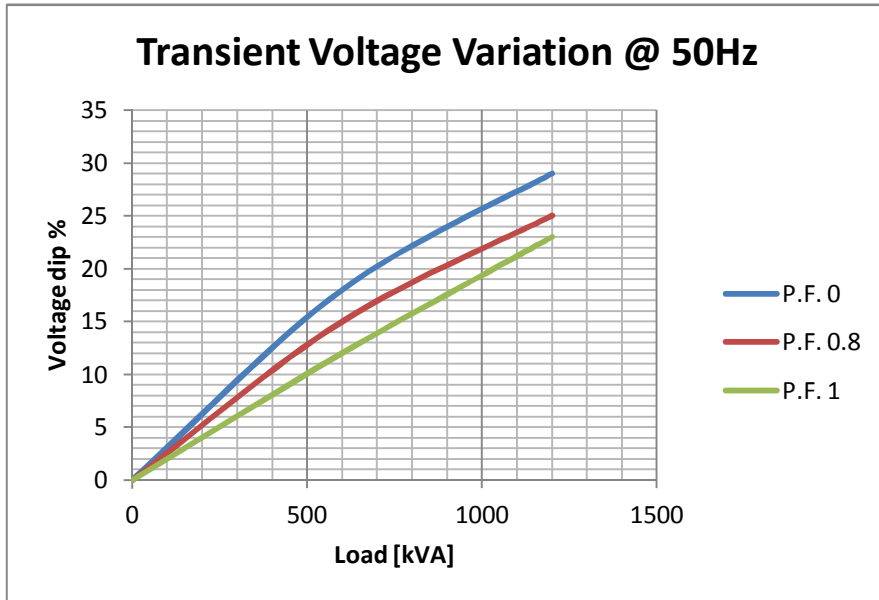


EFFICIENCY 60Hz



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TRANSIENT VOLTAGE VARIATION 50Hz



TRANSIENT VOLTAGE VARIATION 60Hz

