



ALTERNATOR MA4014A

Document : **DS070A/1**
 issue 004 date 28/10/2013

Electrical Characteristics										
		50				60				
Frequency	Hz									
Voltage (series star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	180	180	180	165	210	220	220	220	
	kW	144	144	144	132	168	176	176	176	
Rated power class F	kVA	170	170	170	155	195	205	205	205	
	kW	136	136	136	124	156	164	164	164	
Regulation with DSR		±1 % with any power factor and speed variations between -5% +30%								
Insulation class		H								
Execution		Brushless								
Stator winding		12 ends								
Rotor		with damping cage								
Efficiencies class H	4/4	%	92.3	92.4	92.1	91.9	92.7	93.2	93.3	93.4
(see graph. for details)	3/4	%	92.3	92.6	92.5	92.2	93	93.2	93.4	93.6
	2/4	%	91.2	91.3	91.3	91.1	92	92.1	92.2	92.3
	1/4	%	89.1	88.9	88.7	88.5	90.1	90.1	90.1	89.9
Reactances (f. l.cl. F)	Xd	%	218.3	197	183.0	149.2	251.6	234.4	214.5	197
	Xd'	%	10.7	9.7	9.0	7.3	12.4	11.5	10.6	9.7
	Xd''	%	6.1	5.5	5.1	4.2	7.0	6.5	6.0	5.5
	Xq	%	107.4	96.9	90.0	73.4	123.7	115.3	105.5	96.9
	Xq'	%	107.4	96.9	90.0	73.4	123.7	115.3	105.5	96.9
	Xq''	%	21.8	19.7	18.3	14.9	25.2	23.4	21.5	19.7
	X ₂	%	14.2	12.8	11.9	9.7	16.3	15.2	13.9	12.8
	X ₀	%	3.0	2.7	2.5	2.0	3.4	3.2	2.9	2.7
Short Circuit Ratio	Kcc		0.39	0.44	0.60	0.97	0.28	0.35	0.39	0.44
Time Constants	Td'	sec.	0.073							
	Td''	sec.	0.011							
	Tdo'	sec.	0.70							
	Tα	sec.	0.015							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0.65	0.7	0.8	1.1	0.35	0.5	0.6	0.65
Excitation at full load	Amp.		2.9	3.1	3.4	3.5	2.5	2.7	2.8	3
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20°C)	Ω	0.013								
Rotor Winding Resistance (20°C)	Ω	3.905								
Exciter Resistance (20 °C)	Ω	Rotor : 0,685				Stator : 15,28				
Heat dissipation at f.l.cl.H	W	12013	11844	12352	11634	13230	12841	12639	12437	
Telephone Interference		THF < 2%				TIF < 40				
Radio interference		EN61000-6-3, EN61000-6-1. For others standards apply to factory								
Waveform Distors.(THD) at f. load	LL/LN %	2,8 / 2,7								
Waveform Distors.(THD) at no load	LL/LN %	3,1 / 3								
Mechanical characteristics										
Protection		IP 23 (other protection on request)								
DE bearing		6318.2RS								
NDE bearing		6314.2RS								
Weight of wound stator assembly	kg	168								
Weight of wound rotor assembly	kg	103								
Weight of complete generator	kg	510								
Maximun overspeed	rpm	2250								
Unbalanced magnetic pull at f.l.cl.F	kN/mm	4.4								
Cooling air requirement	m ³ /min	32				39				
Inertia Constant (H)	sec.	0.118				0.140				
Noise level at 1m/7m	dB(A)	82 / 69				86 / 73				

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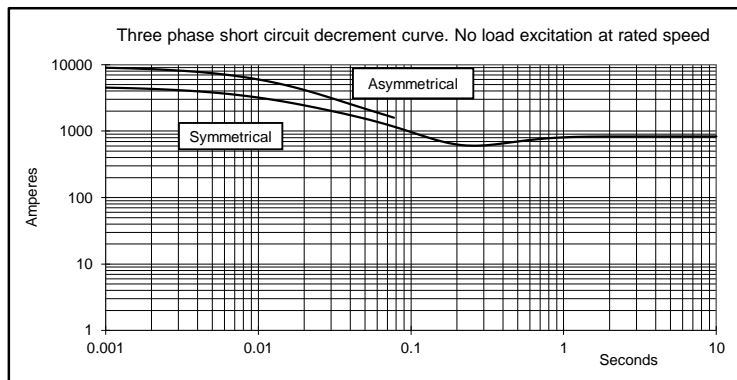
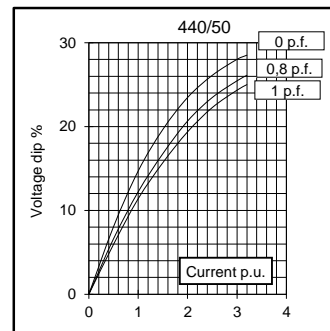
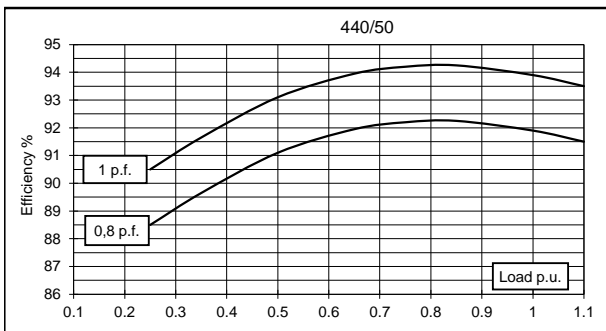
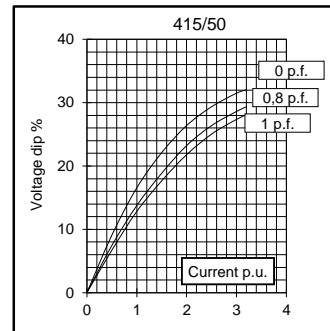
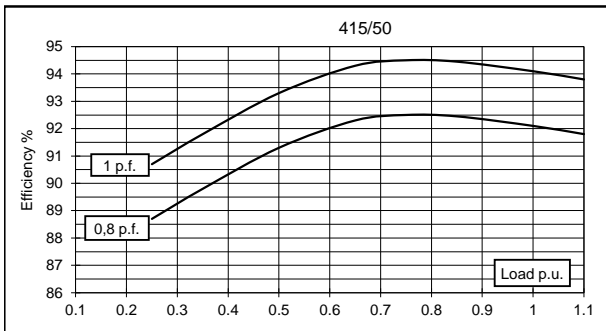
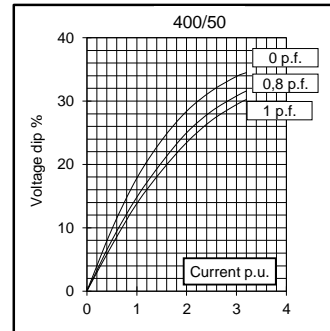
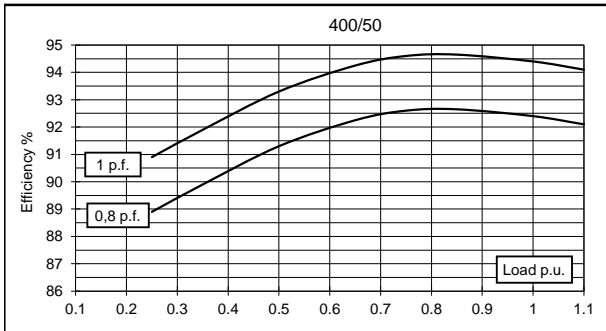
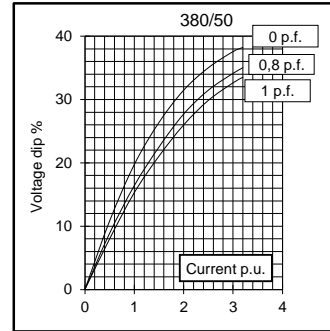
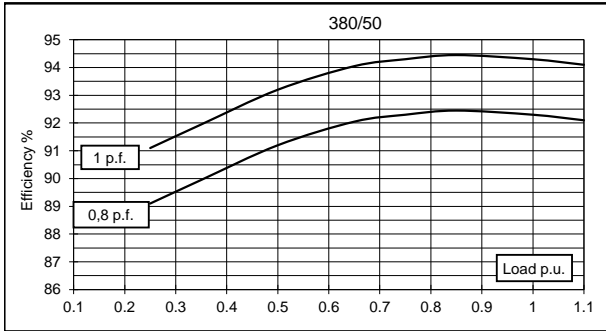
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50 Hz



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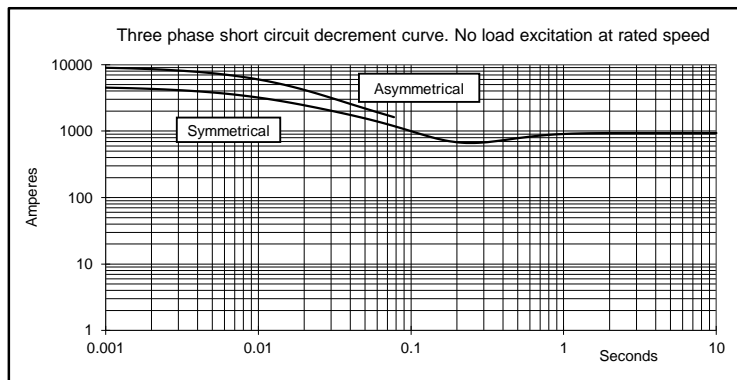
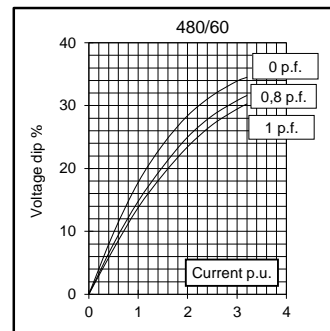
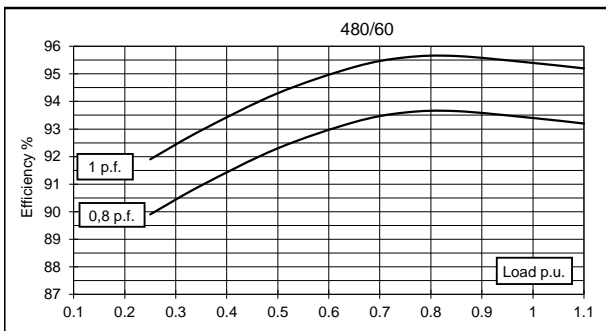
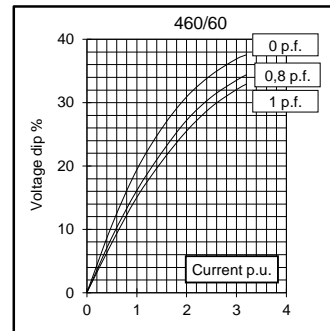
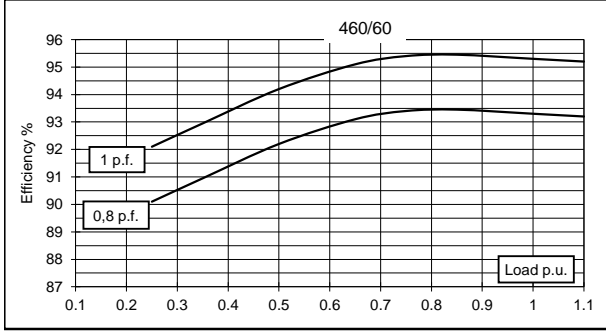
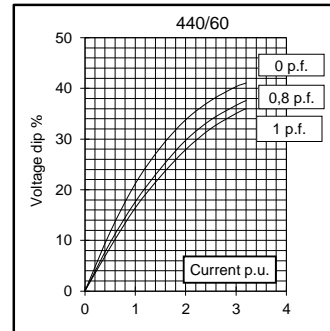
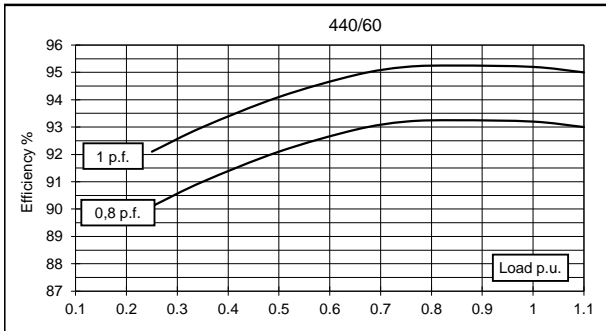
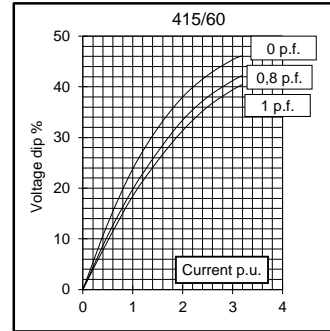
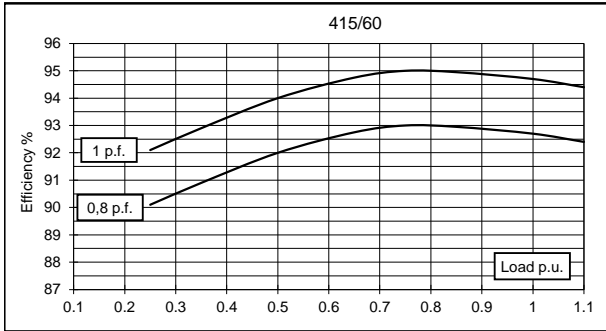


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