



ALTERNATOR MA4014F

Document : DS075A/1

issue 004

date 28/10/2013

Electrical Characteristics										
Frequency	Hz	50				60				
Voltage (series star)	V	380	400	415	440	415	440	460	480	
Rated power class H	kVA	350	350	350	340	380	420	420	420	
	kW	280	280	280	272	304	336	336	336	
Rated power class F	kVA	320	320	320	310	350	385	385	385	
	kW	256	256	256	248	280	308	308	308	
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	%	93.4	93.5	93.2	93	93.6	94.1	94.2	94.3
(see graph. for details)	3/4	%	93.4	93.7	93.6	93.3	93.9	94.1	94.3	94.5
	2/4	%	92.5	92.6	92.6	92.4	93	93.1	93.2	93.3
	1/4	%	90.1	89.9	89.7	89.5	90.6	90.6	90.6	90.4
Reactances (f. l.cl. F)	Xd	%	238.2	215	199.7	172.6	260.2	255.9	234.1	215
	Xd'	%	19.1	17.2	16.0	13.8	20.8	20.5	18.7	17.2
	Xd''	%	10.4	9.4	8.7	7.5	11.4	11.2	10.2	9.4
	Xq	%	139.6	126	117.1	101.2	152.5	150.0	137.2	126
	Xq'	%	139.6	126	117.1	101.2	152.5	150.0	137.2	126
	Xq''	%	22.3	20.1	18.7	16.1	24.3	23.9	21.9	20.1
	X ₂	%	17.4	15.7	14.6	12.6	19.0	18.7	17.1	15.7
	X ₀	%	2.4	2.2	2.0	1.8	2.7	2.6	2.4	2.2
Short Circuit Ratio	Kcc		0.37	0.42	0.57	0.92	0.24	0.32	0.37	0.42
Time Constants	Td'	sec.	0.099							
	Td''	sec.	0.0127							
	Tdo'	sec.	1.50							
	Tα	sec.	0.013							
Short Circuit Current Capacity		%	>300				>350			
Excitation at no load	Amp.		0.55	0.72	0.95	1.2	0.35	0.35	0.6	0.7
Excitation at full load	Amp.		3.5	3.9	4.1	4.3	3.3	3.5	3.7	3.9
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load								
Overload per 20 sec.	%	300								
Stator Winding Resistance (20°C)	Ω	0.0042								
Rotor Winding Resistance (20°C)	Ω	6.780								
Exciter Resistance (20 °C)	Ω	Rotor : 0,685				Stator : 15,28				
Heat dissipation at f.l.cl.H	W	19786	19465	20429	20473	20786	21067	20688	20310	
Telephone Interference		THF < 2%				TIF < 40				
Radio interference		EN61000-6-3, EN61000-6-1. For others standards apply to factory								
Waveform Distsors.(THD) at f. load	LL/LN %	3,1 / 2,9								
Waveform Distsors.(THD) at no load	LL/LN %	2,7 / 2,7								
Mechanical characteristics										
Protection		IP 23 (other protection on request)								
DE bearing		6318.2RS								
NDE bearing		6314.2RS								
Weight of wound stator assembly	kg	347								
Weight of wound rotor assembly	kg	230								
Weight of complete generator	kg	905								
Maximun overspeed	rpm	2250								
Unbalanced magnetic pull at f.l.cl.F	kN/mm	6.2								
Cooling air requirement	m³/min	32				39				
Inertia Constant (H)	sec.	0.123				0.147				
Noise level at 1m/7m	dB(A)	82 / 69				86 / 73				

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This range of alternators is supplied by AJ Power Limited.

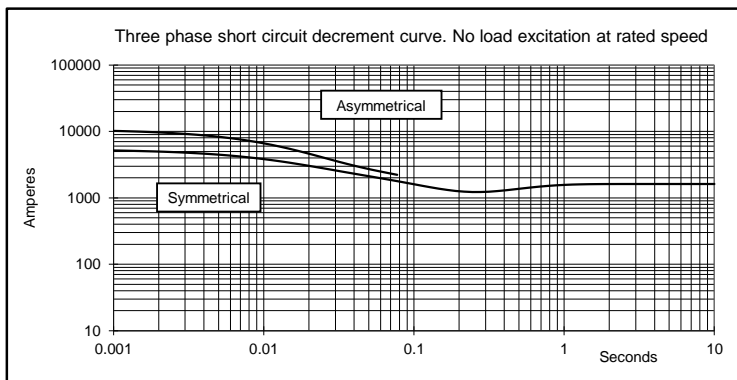
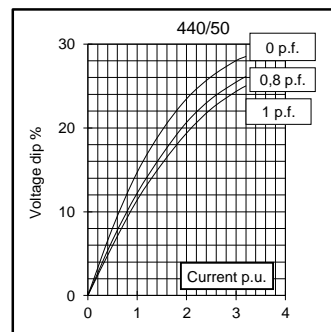
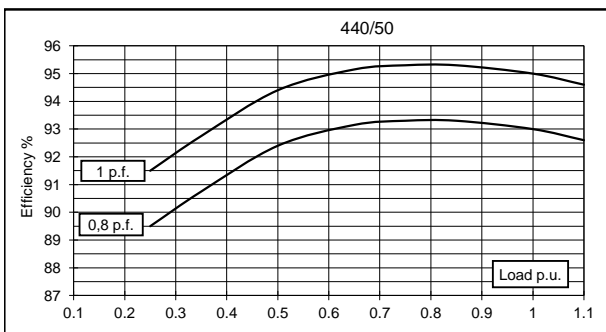
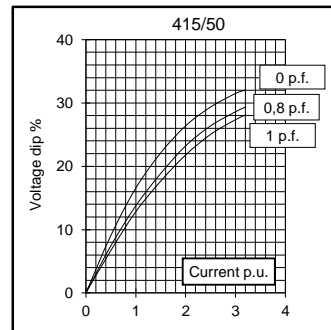
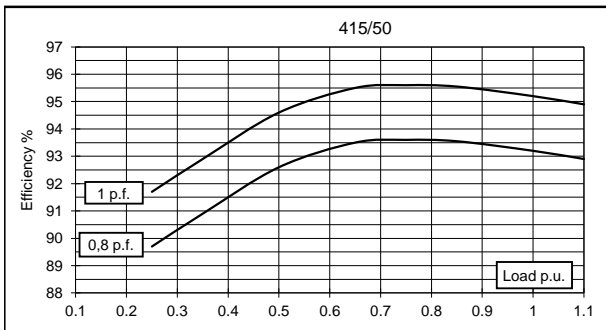
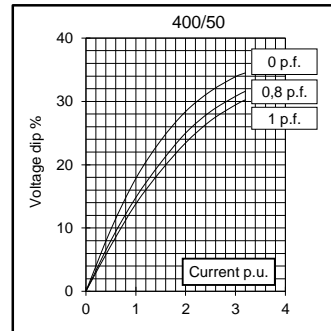
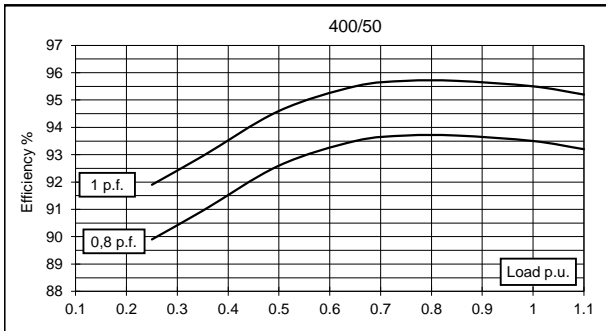
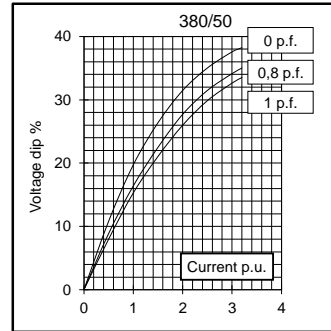
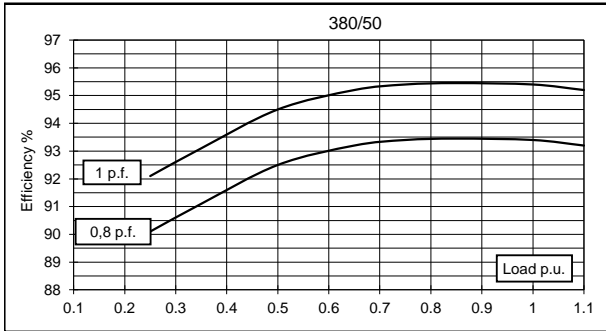


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50 Hz



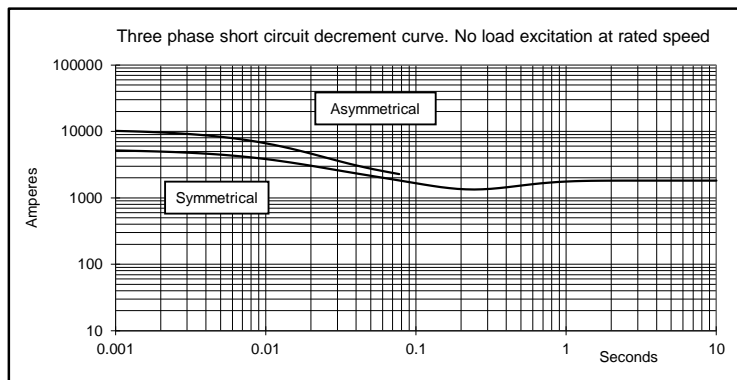
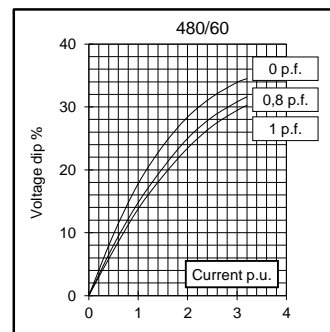
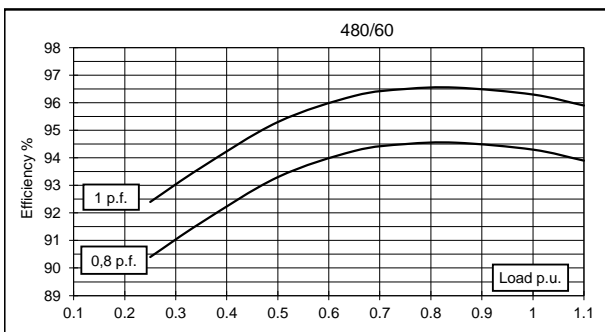
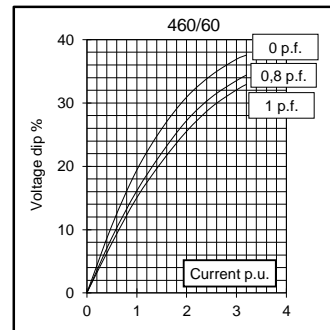
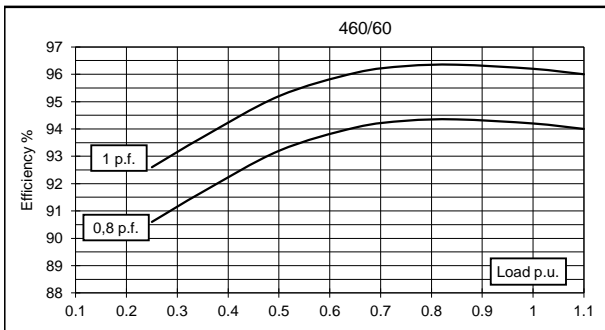
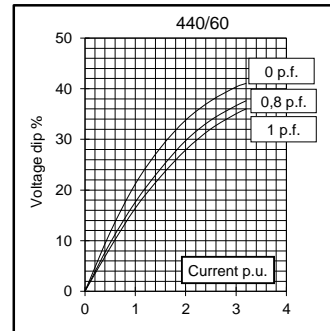
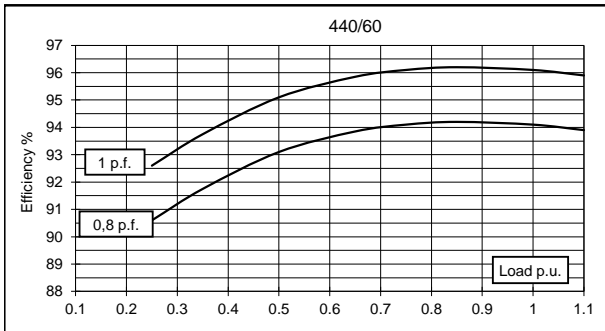
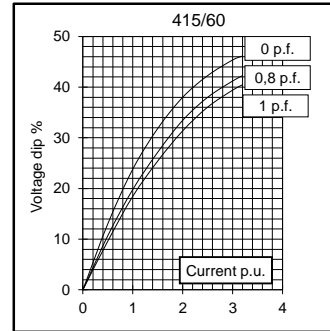
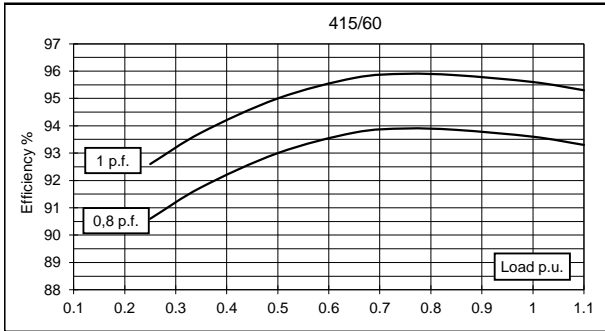
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60 Hz



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