



# ALTERNATOR MA 3014C

Document : **DS274A/1**

issue 002 date 27/01/2014

<b>Electrical Characteristics</b>											
Frequency	Hz	50				60					
Voltage (series star)	V	380	400	415	440	415	440	460	480		
Rated power class H	kVA	135	135	135	114	140	150	162	162		
	kW	108	108	108	91	112	120	130	130		
Rated power class F	kVA	121	121	121	103	125	135	146	146		
	kW	97	97	97	82	100	108	117	117		
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	%	92.8	92.9	92.6	92.4	94	94.5	94.7	94.8	
(see graph. for details)	3/4	%	93.1	83.4	93.2	93	94.5	95	95.2	95.3	
	2/4	%	91.6	91.7	91.7	91.6	93.1	93.3	93.5	93.6	
	1/4	%	88.2	88.2	88.1	88	89.3	89.4	89.5	89.3	
Reactances (f. l.cl. F)	Xd	%	245.0	222	202.0	161.0	257.0	250.0	241.0	222	
	Xd'	%	16.8	15.4	14.4	11.5	19.5	18.0	16.8	15.4	
	Xd''	%	8.1	7.6	6.9	5.4	9.7	8.9	8.1	7.6	
	Xq	%	148.0	136	125.0	112.0	162.0	154.0	148.0	136	
	Xq'	%	148.0	136	125.0	112.0	162.0	154.0	148.0	136	
	Xq''	%	31.2	28.4	27.1	25.2	35.4	33.0	31.2	28.4	
	X <sub>2</sub>	%	18.9	17.2	16.6	15.4	22.1	20.7	18.9	17.2	
	X <sub>0</sub>	%	3.1	2.7	2.9	2.2	3.6	3.4	3.1	2.7	
Short Circuit Ratio	Kcc		0.39	0.45	0.60	0.90	0.30	0.35	0.39	0.45	
Time Constants	Td'	sec.	0.039								
	Td''	sec.	0.0085								
	Tdo'	sec.	1.85								
	Tα	sec.	0.0168								
Short Circuit Current Capacity		%	>300				>350				
Excitation at no load	Amp.		0.5	0.6	0.67	0.8	0.3	0.35	0.4	0.5	
Excitation at full load	Amp.		2.1	2.1	2.2	2.4	2.3	2.1	2	2	
Overload (long-term)	%	1 hour in a 6 hours period 110% rated load									
Overload per 20 sec.	%	300									
Stator Winding Resistance (20°C)	Ω	0.018									
Rotor Winding Resistance (20°C)	Ω	4,142									
Exciter Resistance (20 °C)	Ω	Rotor : 0,410					Stator : 15,28				
Heat dissipation at f.l.cl.H	W	8379	8254	8631	7501	7149	6984	7253	7109		
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 %	1,7 / 1,9									
Waveform Distors.(THD) at no load	LL/LN %	2,3 / 2,5									
<b>Mechanical characteristics</b>											
Protection		IP 23 ( other protection on request )									
DE bearing		6314.2RS									
NDE bearing		6311.2RS									
Weight of wound stator assembly	kg	152									
Weight of wound rotor assembly	kg	101.3									
Weight of complete generator	kg	467									
Maximun overspeed	rpm	2250									
Unbalanced magnetic pull at f.l.cl.F	kN/mm	5.7									
Cooling air requirement	m³/min	19.3				23					
Inertia Constant (H)	sec.	0.098				0.118					
Noise level at 1m/7m	dB(A)	79 / 65				83 / 69					

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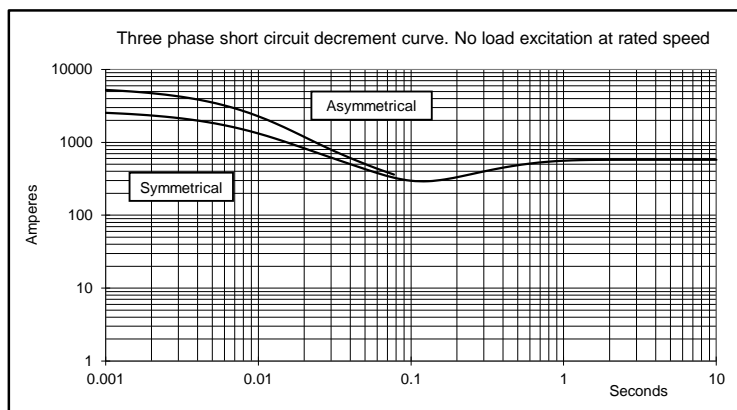
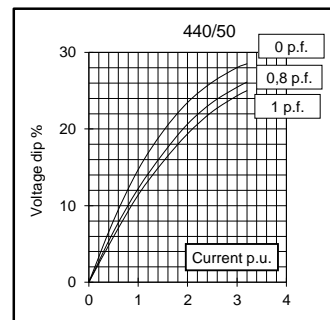
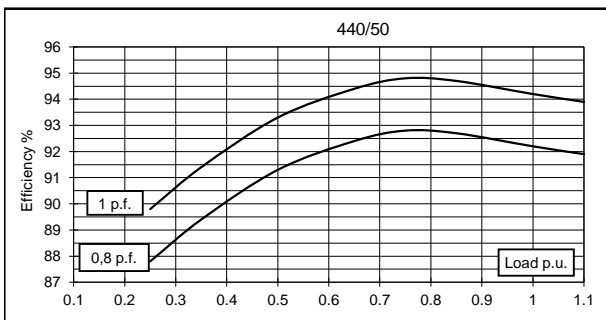
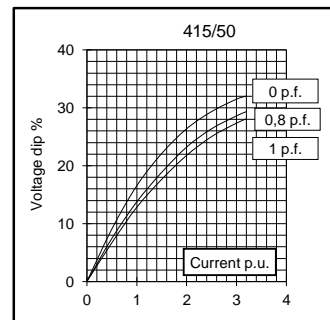
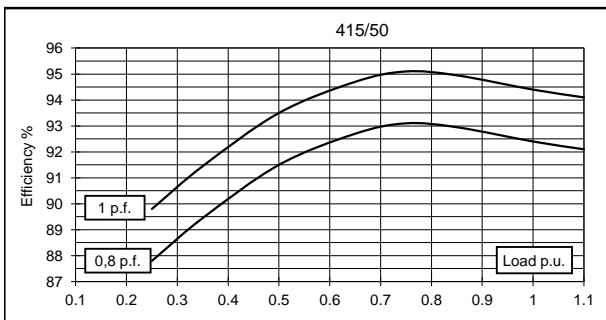
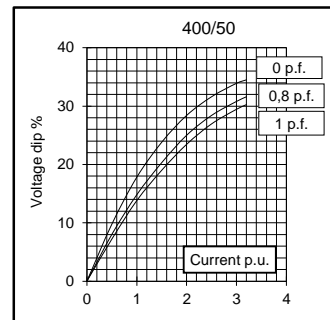
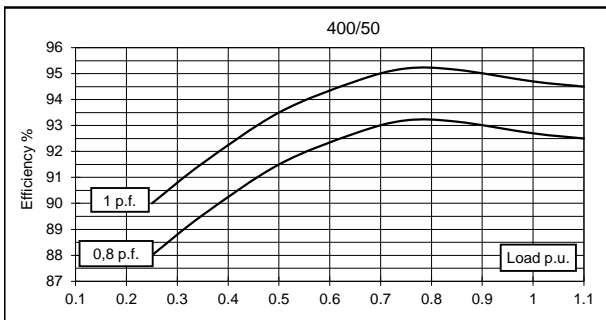
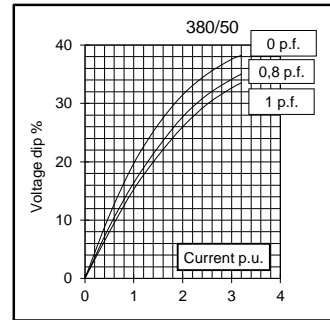
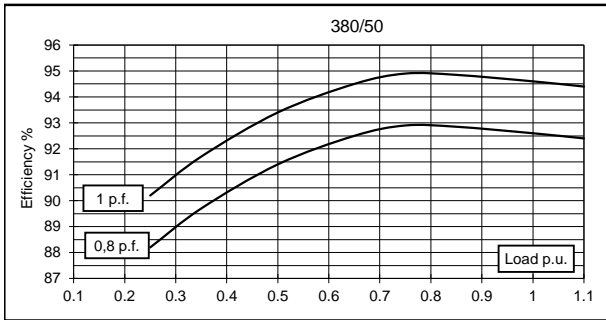
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## 50 Hz



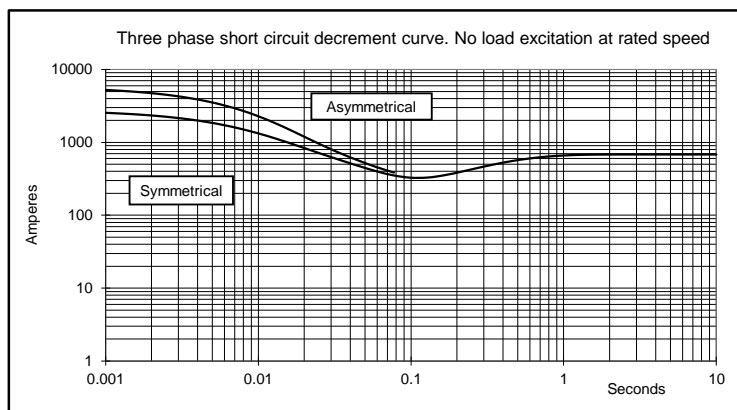
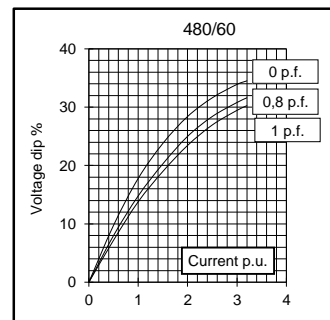
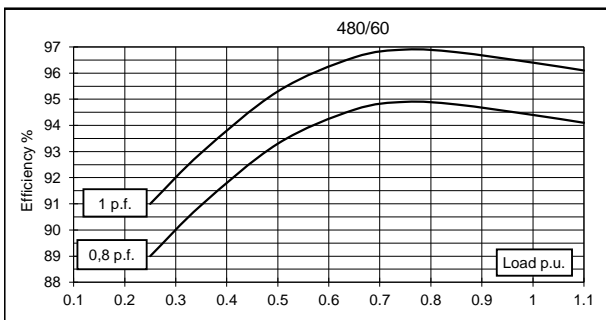
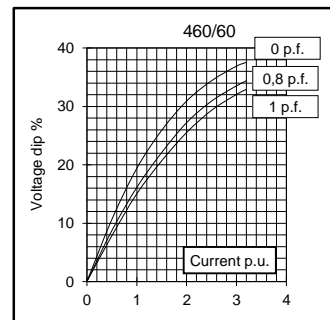
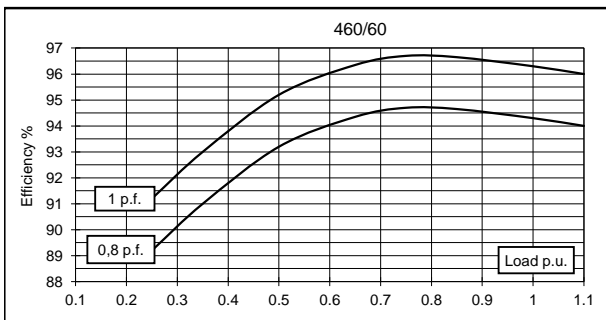
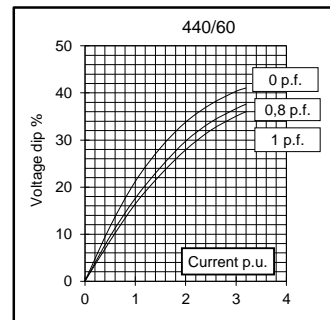
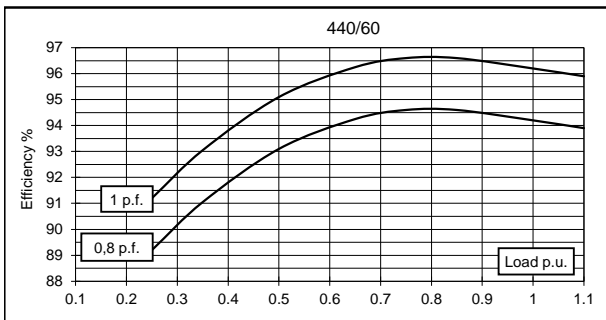
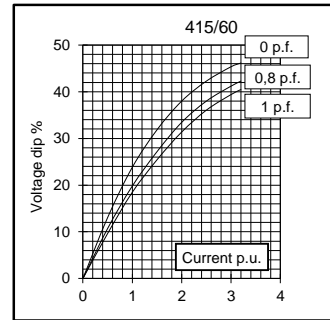
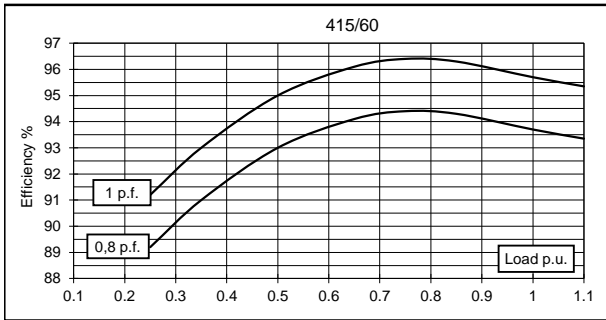
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## 60 Hz



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