maranello alternator

M3750

CONT 3250 kVA

maranello alternator

THREE-PHA

Datasheet For 50Hz @ 1500rpm / 60Hz @ 1800rpm

Frequency	Hz	50				60					
Rated capacity (kVA)	S	3088	3250	3371	3575	3242	3413	3549	3754	3924	4095
Rated power (kW)	P	2470	2600	2697	2860	2594	2730	2839	3003	3140	3276
Voltage (V)	U	380	400	415	440	380	400	416	440	460	480
Short-circuit ratio	Kcc	0.389	0.44	0.498	0.636	0.281	0.299	0.315	0.343	0.375	0.414
Reactance											
Direct axis synchronous reactance	Xd	3.102	2.947	2.84	2.679	3.909	3.713	3.57	3.376	3.229	3.094
Direct axis transient reactance saturated	X'd	0.159	0.151	0.146	0.137	0.201	0.191	0.183	0.173	0.166	0.159
Direct axis subtransient reactance saturated	X"d	0.121	0.115	0.111	0.105	0.153	0.145	0.14	0.132	0.126	0.121
Quadrature axis synchronous reactance	Xq	1.358	1.29	1.244	1.173	1.711	1.626	1.563	1.478	1.414	1.355
Quadrature axis subtransient reactance	X"q	0.15	0.143	0.137	0.13	0.189	0.18	0.173	0.163	0.156	0.15
Negative sequence reactance saturated	X2	0.14	0.13	0.12	0.12	0.17	0.16	0.16	0.15	0.14	0.14
Zero sequence reactance unsaturated	X0	0.007	0.007	0.007	0.006	0.009	0.009	0.008	0.008	0.008	0.007
Time constant											
Open circuit time constant	T'd0	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483
Short-circuit transient time constant	T'd	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Subtransient time constant	T"d	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Armature time constant	Ta	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
No load losses	W	28092	29355	30346	32075	38709	39829	40767	42242	43536	44885
Heat dissipation at full load at Class H	W	92411	96383	100410	110525	105556	108015	110096	113450	116821	120665
Efficiency											
PF=0.8 Efficiency of 25% load	%	94.40	94.38	94.32	94.10	93.27	93.39	93.47	93.57	93.62	93.65
50% load	%	96.19	96.19	96.16	96.00	95.61	95.70	95.76	95.84	95.87	95.90
75% load	%	96.52	96.54	96.51	96.38	96.13	96.22	96.28	96.36	96.40	96.43
100% load	%	96.39	96.43	96.41	96.28	96.09	96.19	96.27	96.36	96.41	96.45
110% load	%	96.25	96.29	96.28	96.15	95.97	96.09	96.16	96.27	96.32	96.36
PF=1 Efficiency of 25% load	%	94.42	94.42	94.38	94.24	93.51	93.59	93.67	93.77	93.82	93.82
50% load	%	96.36	96.38	96.36	96.30	96.01	96.05	96.10	96.17	96.21	96.19
75% load	%	96.85	96.88	96.88	96.85	96.69	96.72	96.77	96.84	96.88	96.87
100% load	%	96.92	96.96	96.98	96.97	96.85	96.88	96.94	97.01	97.06	97.08
110% load	%	96.87	96.92	96.94	96.94	96.83	96.86	96.92	97.00	97.06	97.08
No load excitation current	io(A)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Full load excitation current	ic(A)	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Full load excitation voltage	uc(V)	84	84	84	84	84	84	84	84	84	84
Short circuit current capacity	%	>300I_N 10s(with PMG or Auxiliary winding!									
Recovery time	Tr	1 s									
Waveform : TIF		<50									
Waveform : THD		<3%									
Waveform : THF		<2%									
Winding pitch		2/3									
Steady state voltage regulation		+/- 1%									
A.V.R. model		EVC600									
Duty		Continuous									
Number of poles		4									
Class of insulation		H									
Altitude		≤1000m									
Rated power factor		0.8									
Excitation		Brushless									
Stator winding		6ends									
Rotor		With damping cage									
Overload	%	110% rated load for 2 hour per 24 hour									
Stator winding resistance (20)	ohm	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Rotor winding resistance (20)	ohm	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Exciter resistance (20)	ohm	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Cooling air requirement	m^3/min	188	188	188	188	226	226	226	226	226	226
Energy storage constant (H)	sec.	0.440	0.418	0.403	0.380	0.604	0.574	0.552	0.522	0.499	0.478
Method of cooling		IC 01									
Ambient temperature		40									
Sense of rotation		Clockwise-DE									
Type of construction		Single / Double bearing									
Degree of protection / enclosure		IP21 or IP23									
Maximum overspeed		2250 rpm 2minutes									

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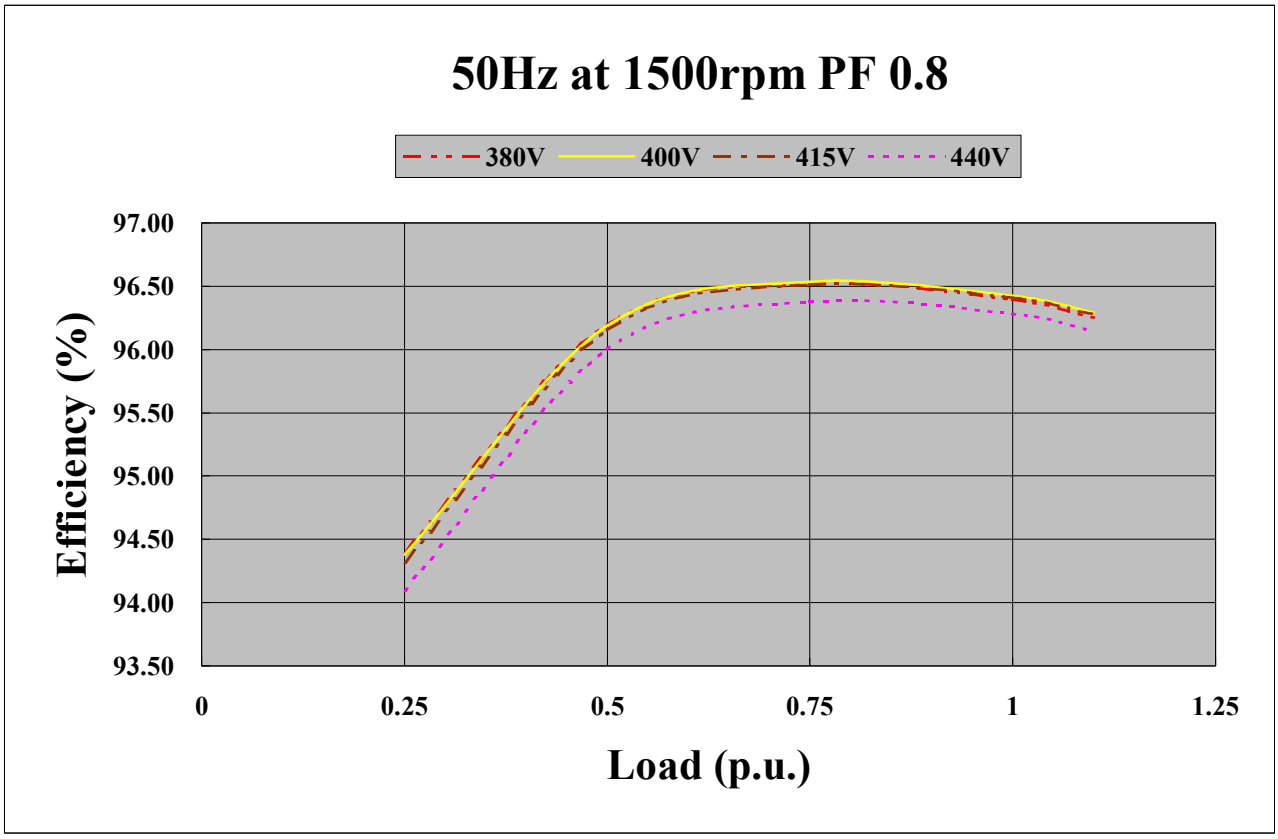
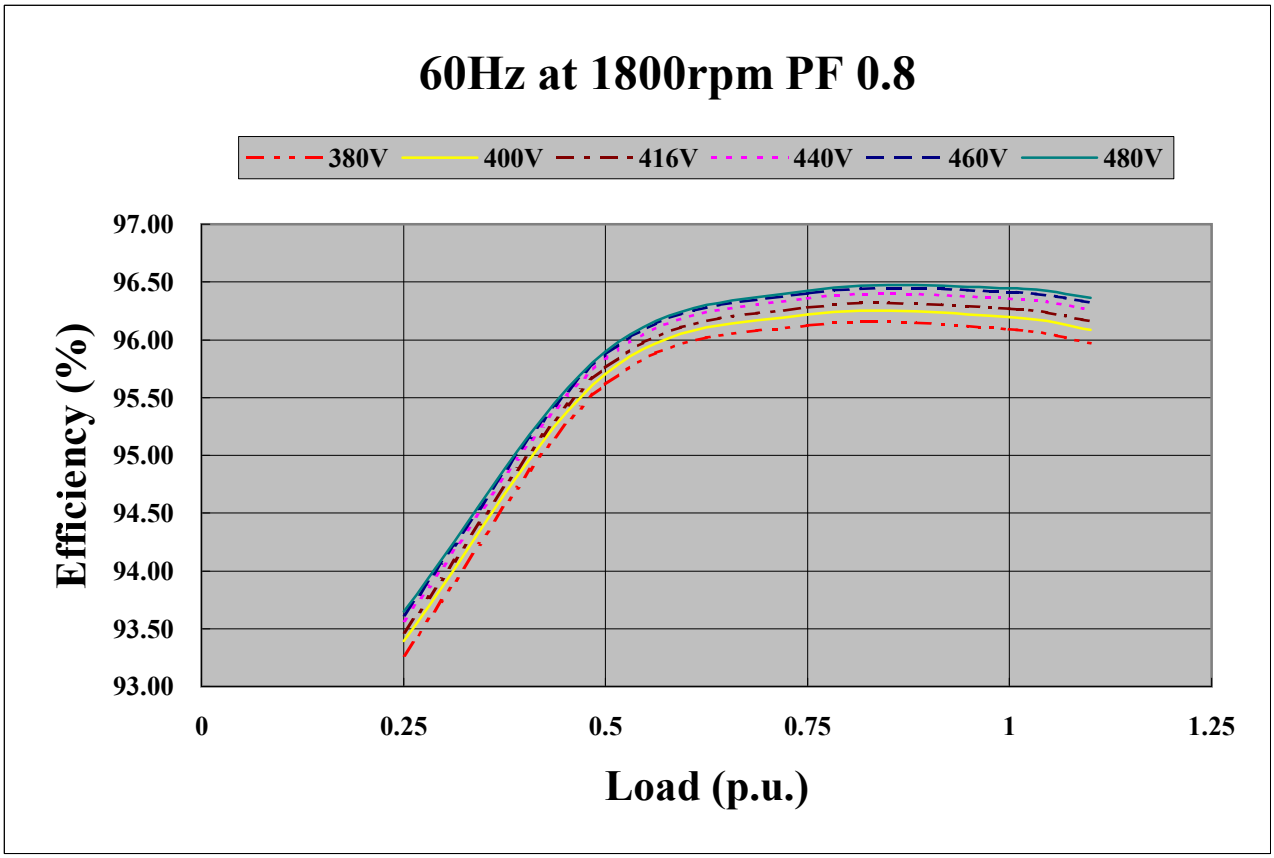
THREE-PHASE SYNCHRONOUS

THREE PHASE EFFICIENCY CRUVES 20121201





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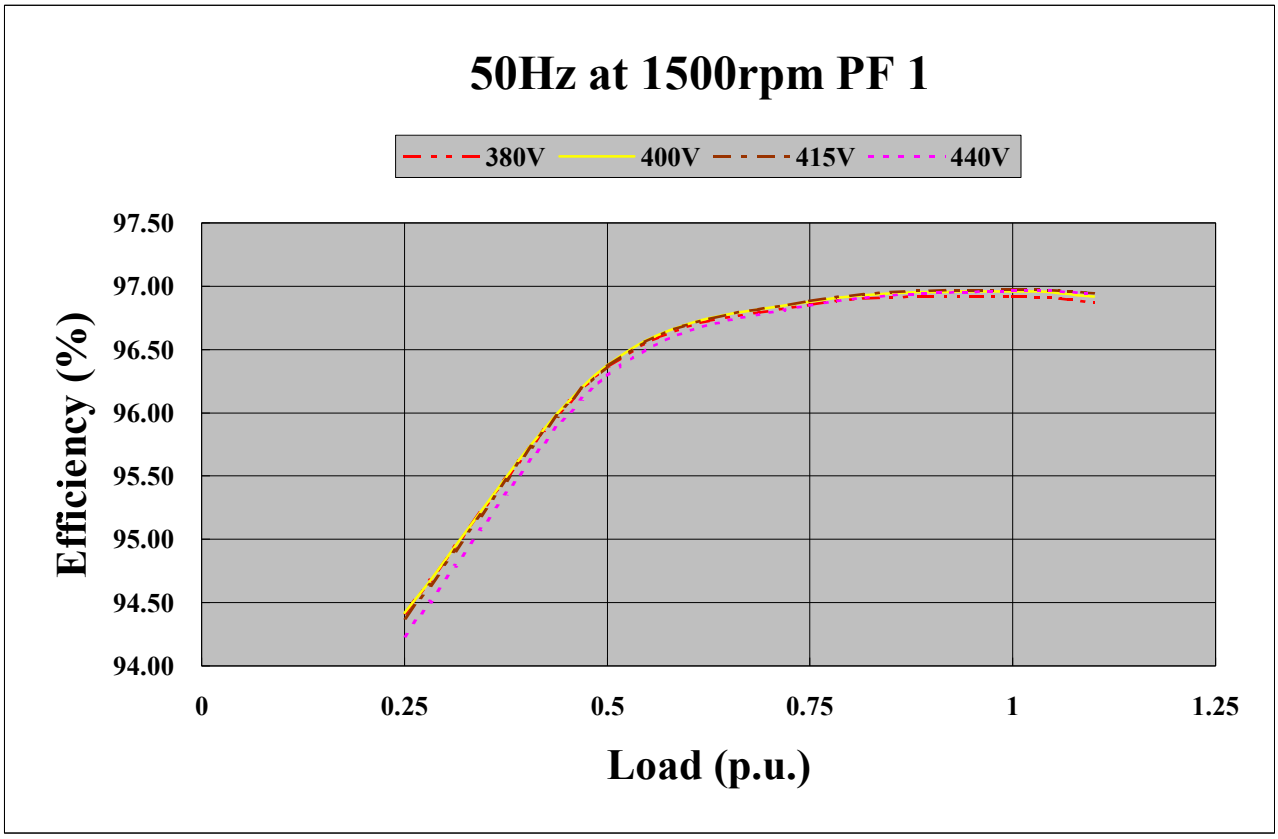
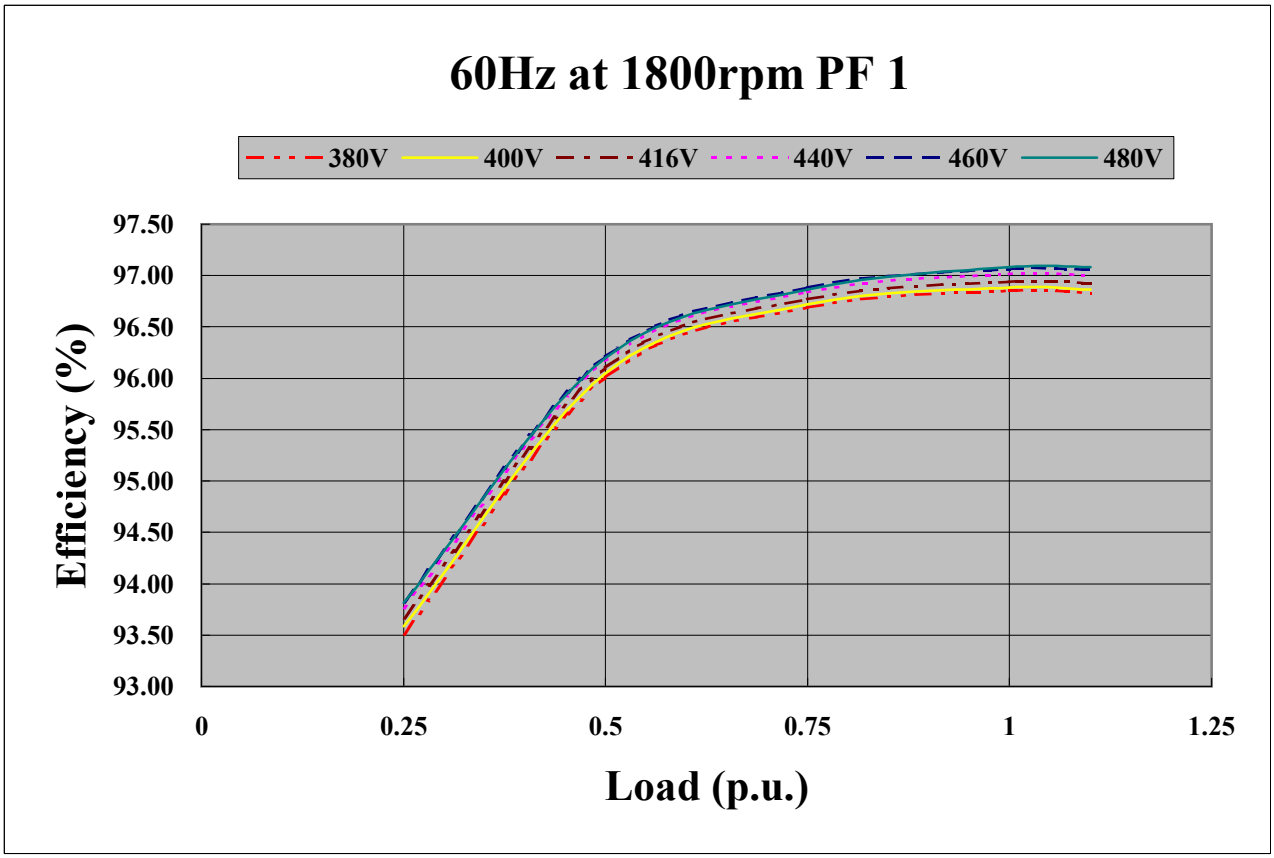
THREE-PHASE SYNCHRONOUS

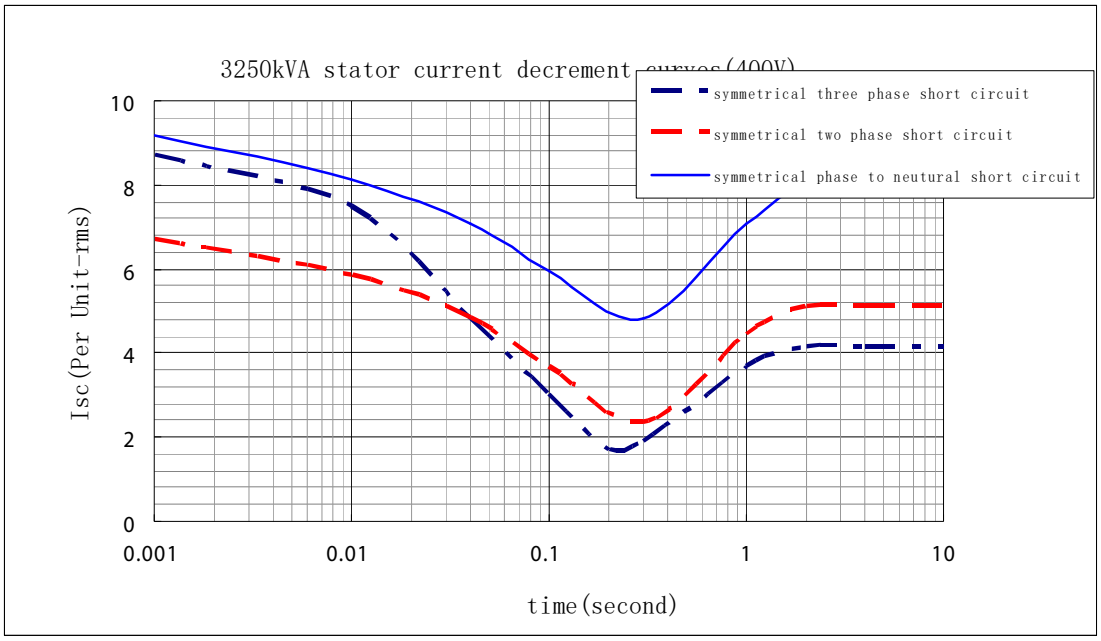
THREE PHASE EFFICIENCY CRUVES 20121201





THREE-PHASE SYNCHRONOUS GENERATOR
STATOR CURRENT DECREMENT CURVES

20140601



with PMG or Auxiliary winding

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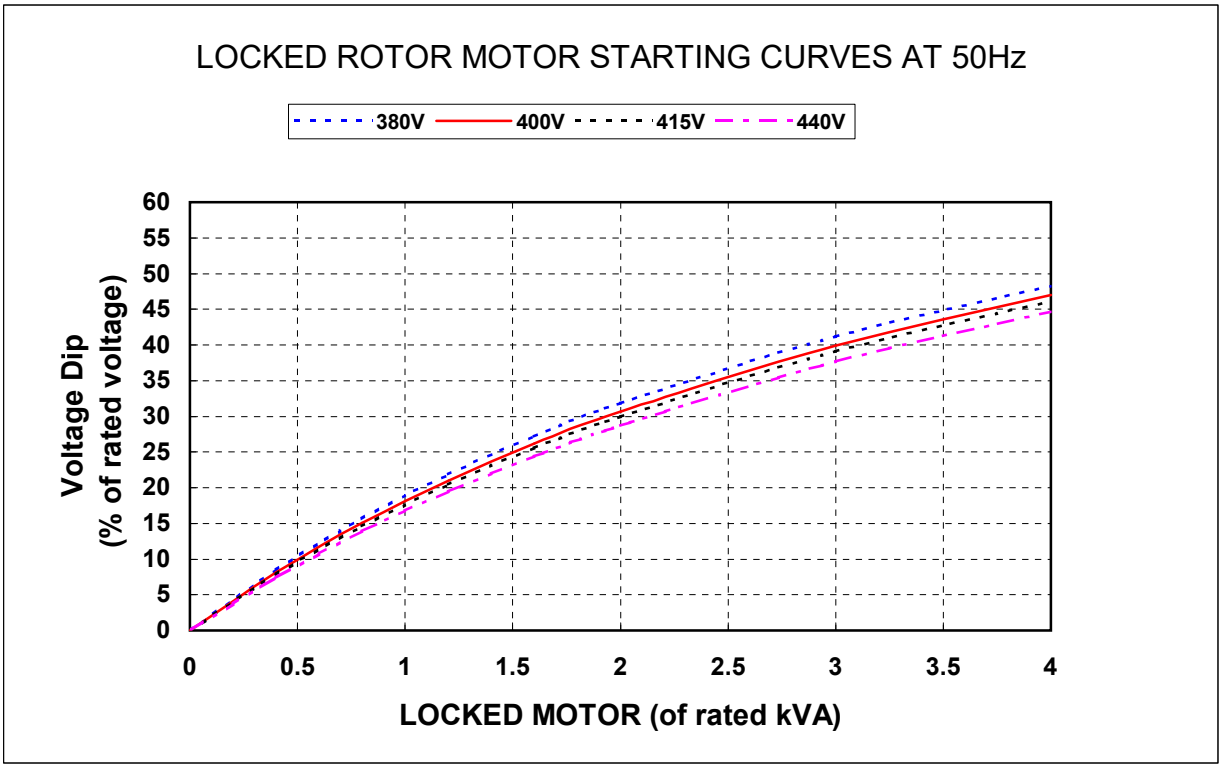
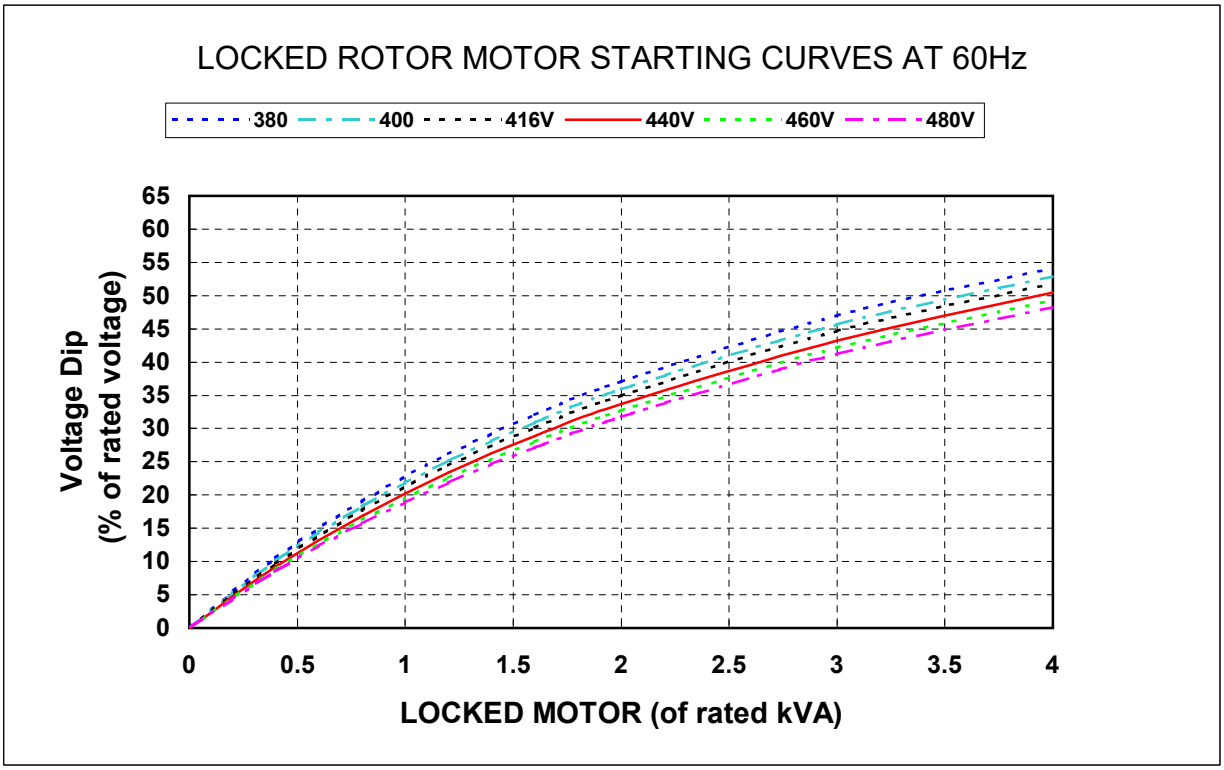
THREE PHASE SYNCHRONROUS GENERATOR

20130527





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