THREE-PHASE SYNCHRONOUS GENERATOR 20141201

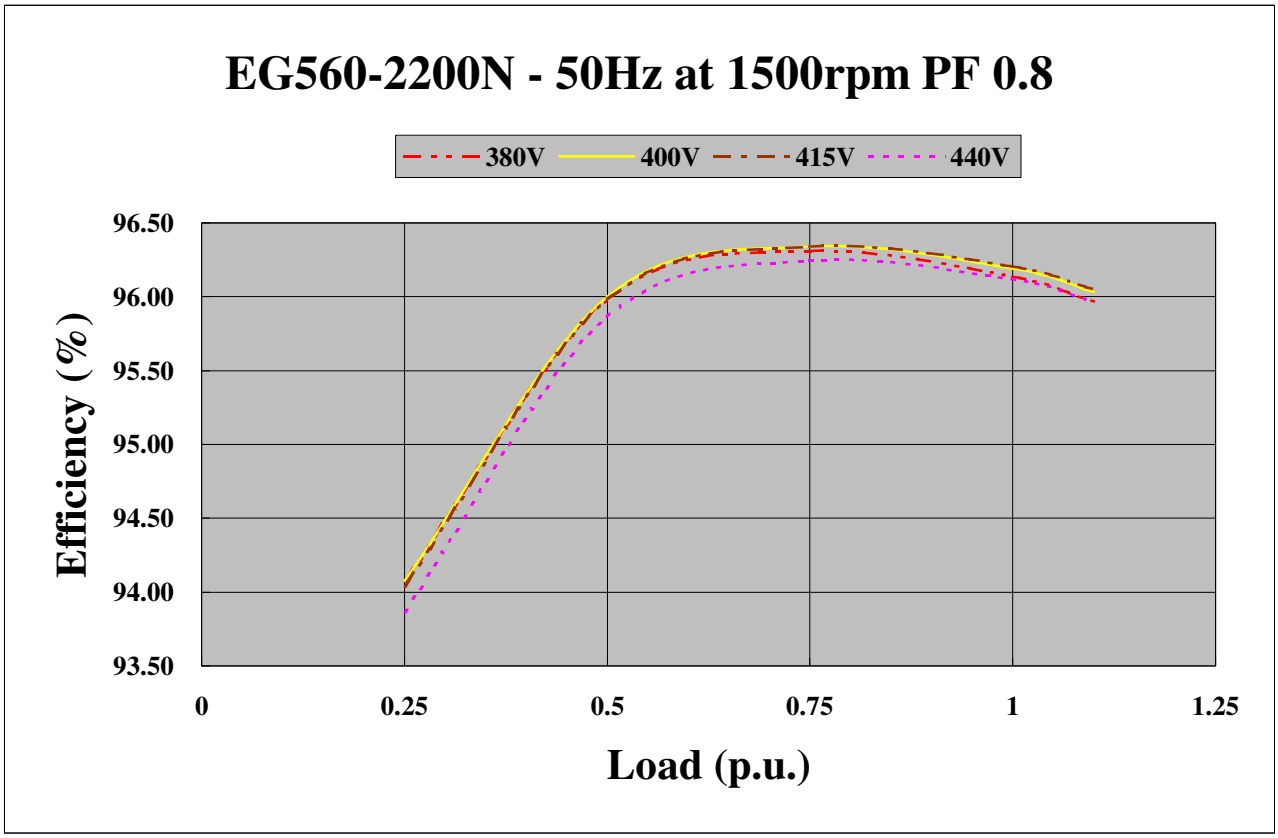
Datasheet For 50Hz @ 1500rpm / 60Hz @ 1800rpm

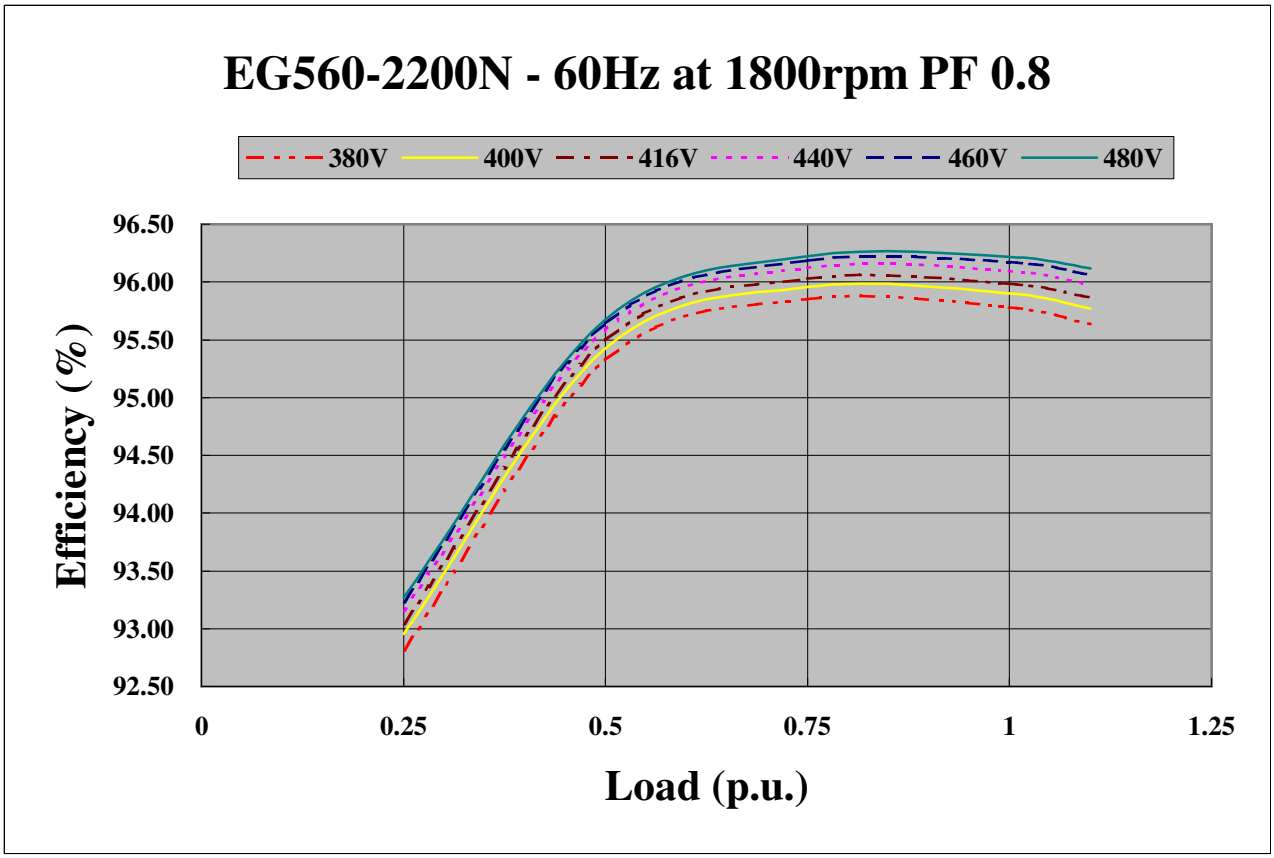
EG560-2200N

Frequency	Hz	50				60					
Rated capacity (kVA)	S	2613	2750	2853	3025	2743	2888	3003	3176	3321	3465
Rated power (kW)	P	2090	2200	2282	2420	2195	2310	2402	2541	2657	2772
Voltage (V)	U	380	400	415	440	380	400	416	440	460	480
Short-circuit ratio	Kcc	0.37	0.413	0.454	0.575	0.274	0.291	0.306	0.331	0.358	0.392
Reactance											
Direct axis synchronous reactance	Xd	3.159	3.001	2.893	2.728	3.981	3.782	3.636	3.438	3.288	3.151
Direct axis transient reactance saturated	X'd	0.171	0.163	0.157	0.148	0.216	0.205	0.197	0.186	0.178	0.171
Direct axis subtransient reactance saturated	X"d	0.132	0.125	0.121	0.114	0.166	0.158	0.152	0.143	0.137	0.131
Quadrature axis synchronous reactance	Xq	1.392	1.322	1.275	1.202	1.754	1.666	1.602	1.515	1.449	1.388
Quadrature axis subtransient reactance	X"q	0.162	0.154	0.148	0.14	0.204	0.194	0.186	0.176	0.168	0.161
Negative sequence reactance saturated	X2	0.15	0.14	0.13	0.13	0.18	0.18	0.17	0.16	0.15	0.15
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	4.431	4.431	4.431	4.431	4.431	4.431	4.431	4.431	4.431	4.431
Short-circuit transient time constant	T'd	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
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	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
No load losses	W	25810	26948	27840	29400	35745	36756	37600	38931	40096	41313
Heat dissipation at full load at Class H	W	83993	87106	90053	97742	96696	98712	100440	103209	105753	108905
Efficiency											
PF=0.8 Efficiency of 25% load	%	94.08	94.08	94.04	93.87	92.82	92.95	93.04	93.16	93.23	93.27
50% load	%	95.98	96.00	95.99	95.87	95.32	95.43	95.50	95.58	95.64	95.67
75% load	%	96.31	96.34	96.34	96.25	95.85	95.96	96.03	96.12	96.19	96.22
100% load	%	96.14	96.19	96.20	96.12	95.78	95.90	95.99	96.10	96.17	96.22
110% load	%	95.97	96.03	96.05	95.97	95.64	95.77	95.86	95.98	96.06	96.12
PF=1 Efficiency of 25% load	%	94.13	94.14	94.12	94.01	93.09	93.22	93.31	93.42	93.50	93.54
50% load	%	96.20	96.22	96.23	96.18	95.78	95.87	95.93	96.01	96.06	96.10
75% load	%	96.71	96.75	96.76	96.75	96.50	96.58	96.64	96.72	96.77	96.81
100% load	%	96.76	96.81	96.84	96.85	96.64	96.74	96.80	96.89	96.95	97.00
110% load	%	96.70	96.76	96.79	96.81	96.61	96.71	96.78	96.87	96.94	96.99
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)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Full load excitation voltage	uc(V)	66	66	66	66	66	66	66	66	66	66
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	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
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.	0.459	0.436	0.420	0.396	0.629	0.598	0.575	0.544	0.520	0.498
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									

THREE-PHASE SYNCHRONOUS

THREE PHASE EFFICIENCY CRUVES 20121201

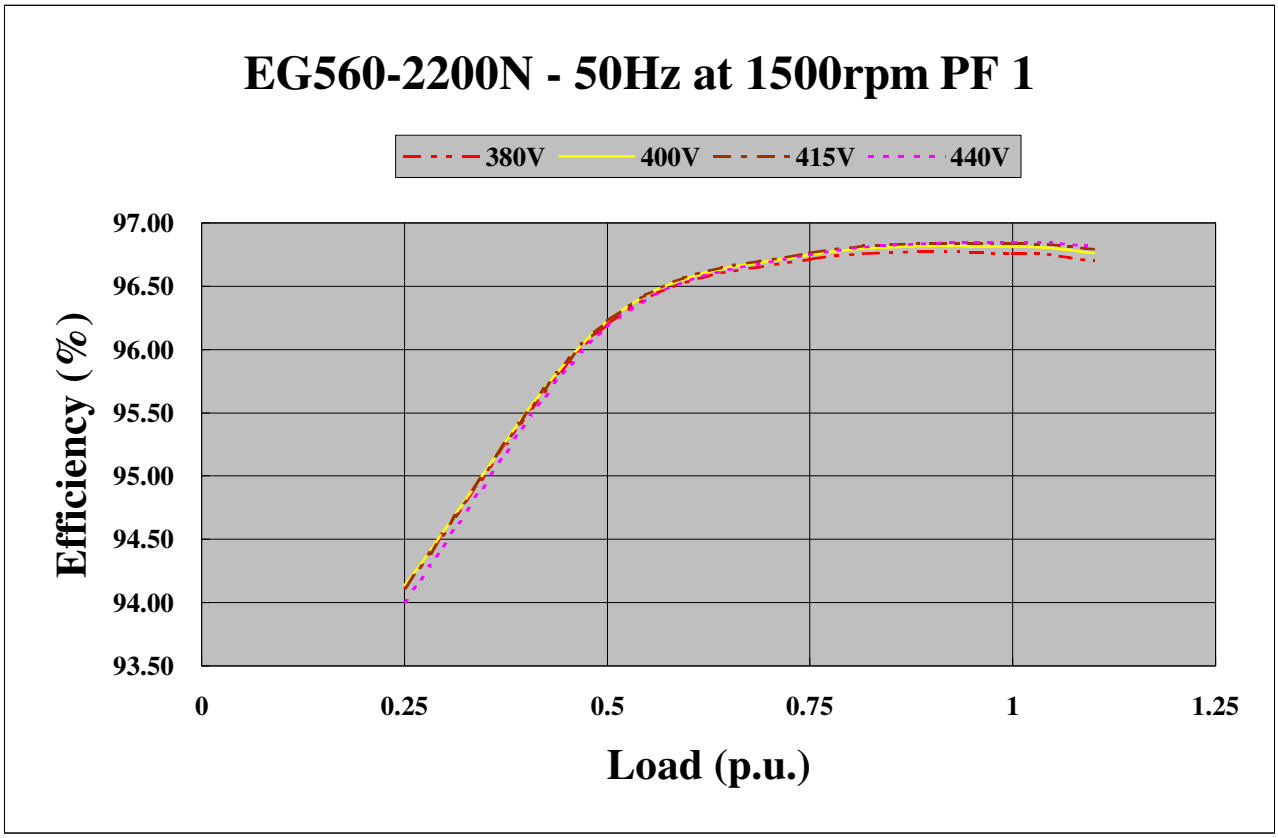


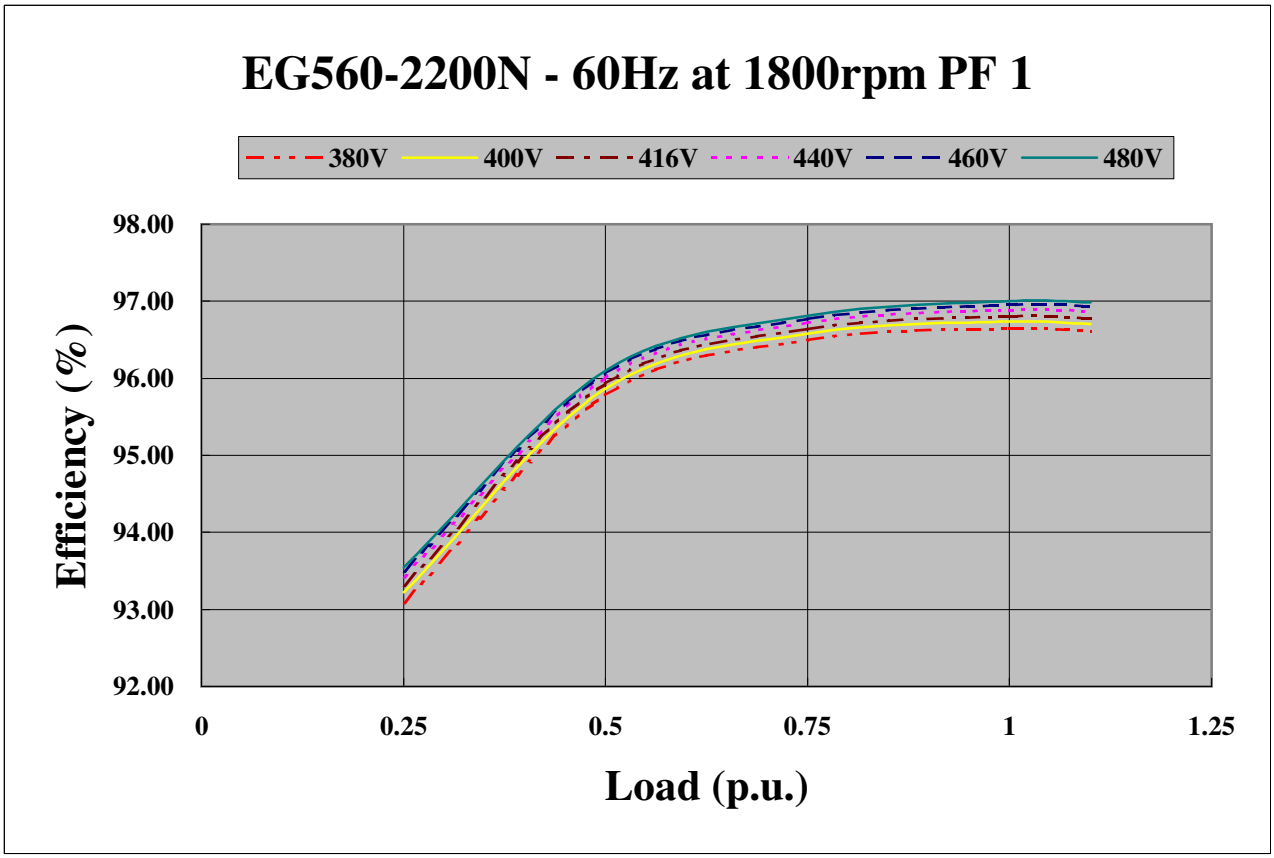


Data and Technical Specification are subject to change in order to update or improve the products, without prior notice

THREE-PHASE SYNCHRONOUS

THREE PHASE EFFICIENCY CRUVES 20121201



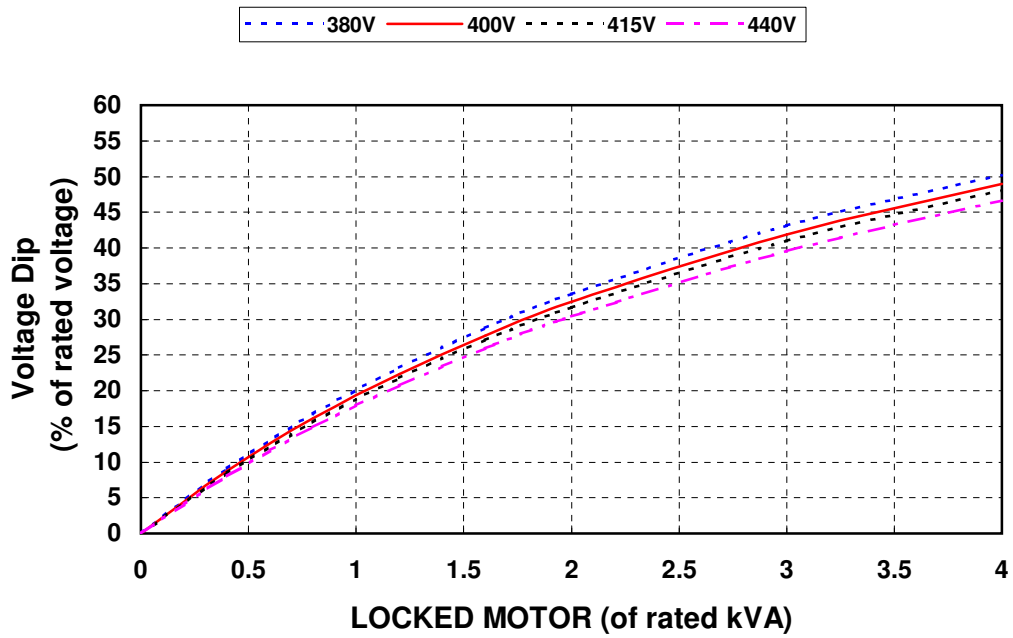


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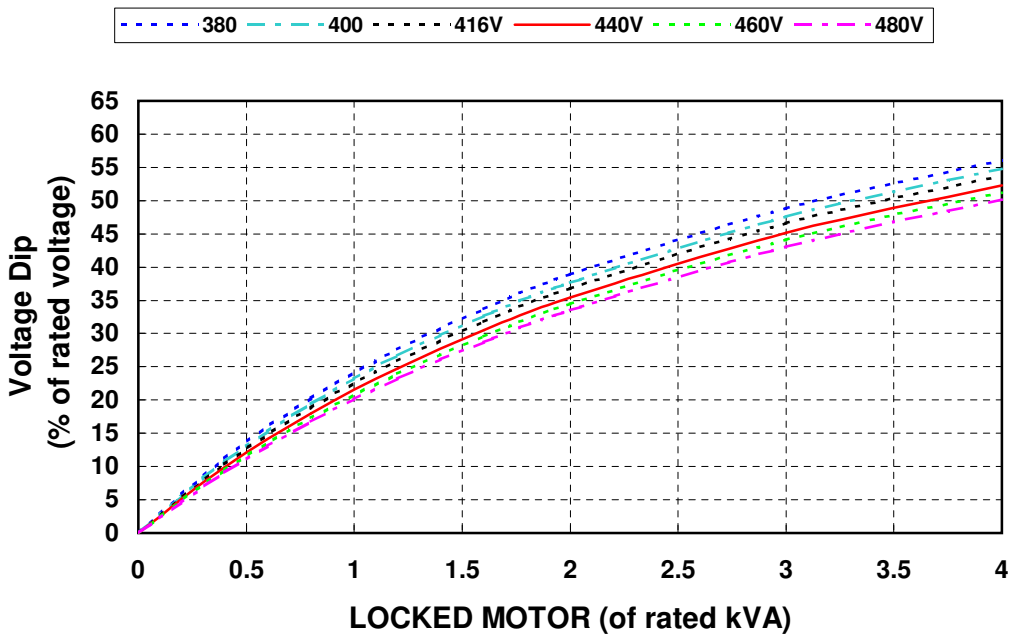
THREE PHASE SYNCHRONROUS GENERATOR

EG560-2200N 20130527

LOCKED ROTOR MOTOR STARTING CURVES AT 50Hz



LOCKED ROTOR MOTOR STARTING CURVES AT 60Hz

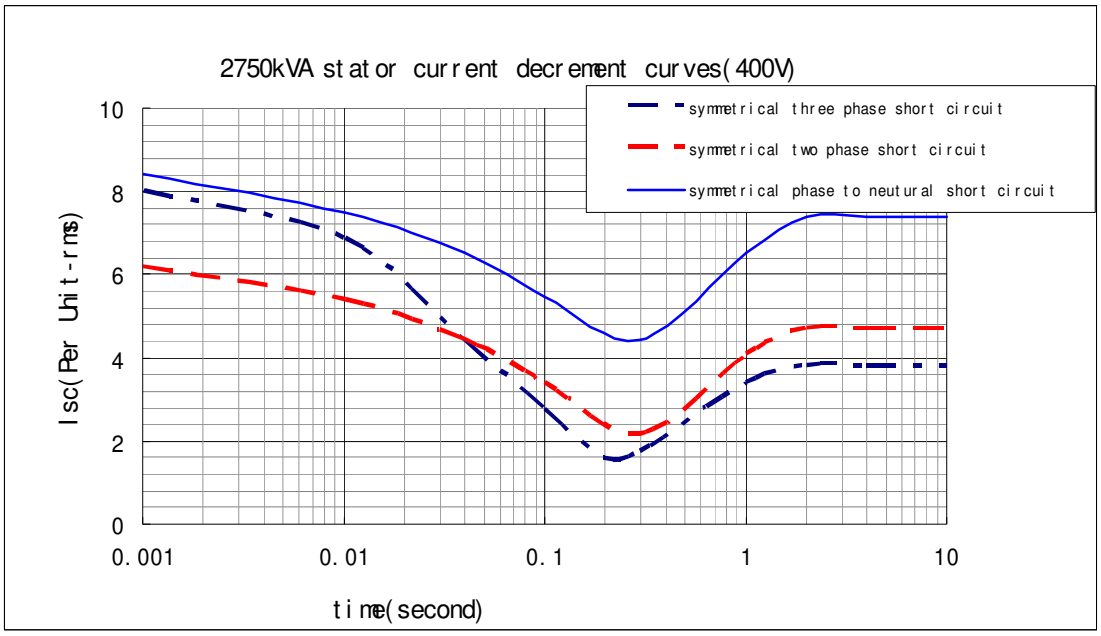


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THREE-PHASE SYNCHRONOUS GENERATOR
STATOR CURRENT DECREMENT CURVES

EG560-2200N

20140601



with PMG or Auxiliary winding