

MODEL

FG26A250

WINDING

R1



REF: FG26A250R1-0 JAN 2019

WINDING DETAILS

Code	R1	Insulation class	H
Phase	3	Leads	12
Pole number	4	Pitch	2/3

MECHANICAL DETAILS

Standard protection	IP21
Overspeed	rpm 2250
Air flow 50Hz/60Hz	m ³ /s 0.25/0.30

EXCITATION DETAILS

Excitation system	SHUNT	PMG
AVR model	GRT7-TH4E	IVR
Sustained short-circuit current	-	300:10s
Steady state voltage regulation	+/- 0.5 %	+/- 0.25 %

WAVEFORM

<i>Line voltage on no load or balanced linear rated load</i>	
Total harmonic content THC	< 3 %
Telephone influence factor TIF (NEMA)	< 50 %
Telephone harmonic factor THF (IEC)	< 2 %

LINE VOLTAGE

Frequency / speed		50Hz / 1500rpm			60Hz / 1800rpm				
Series star	V	380	400	415	380	416	440	460	480
Series delta	V	220	230	240	220	240	254	266	277
Parallel star	V	190	200	208	190	208	220	230	240

RATING

Power factor 0.8, Altitude <=1000m

Class H rise BR	125/40	kVA	298	313	313	326	358	379	395	400
		kW	238	250	250	261	286	303	316	320
Class H rise PR	150/40	kVA	327	344	344	343	375	398	415	420
		kW	261	275	275	274	300	318	332	336
Class H rise PR	163/27	kVA	342	359	359	359	394	416	435	440
		kW	273	288	288	287	315	333	348	352
Class F rise BR	105/40	kVA	268	281	281	294	322	341	356	360
		kW	214	225	225	235	257	273	284	288

EFFICIENCIES

Power factor 0.8

110% Class H BR	%	92.2	92.5	93.6	92.9	93.3	93.5	93.7	93.9
100% Class H BR	%	93.0	93.2	94.1	93.4	93.7	93.9	94.1	94.3
75% Class H BR	%	94.0	94.1	94.8	94.3	94.5	94.7	94.8	94.9
50% Class H BR	%	94.2	94.2	94.4	94.1	94.3	94.4	94.4	94.4
25% Class H BR	%	91.7	91.6	92.5	92.2	92.4	92.4	92.4	92.3

CHARACTERISTIC PARAMETERS

Reactance base class H BR rating

K _{cc}	Short-circuit ratio		0.34	0.38	0.43	0.24	0.27	0.29	0.32	0.35
X _d	D-Axis synchronous reactance (unsaturated)	pu	3.47	3.28	3.06	4.56	4.17	3.95	3.77	3.51
X' _d	D-Axis transient reactance (saturated)	pu	0.09	0.08	0.08	0.12	0.11	0.10	0.10	0.09
X'' _d	D-Axis sub-transient reactance (saturated)	pu	0.087	0.082	0.076	0.114	0.104	0.099	0.094	0.088
X _q	Q-Axis synchronous reactance (unsaturated)	pu	1.56	1.47	1.37	2.05	1.87	1.77	1.69	1.57
X'' _q	Q-Axis sub-transient reactance (saturated)	pu	0.144	0.137	0.127	0.190	0.174	0.165	0.157	0.146
X ₂	Negative-sequence reactance (saturated)	pu	0.120	0.110	0.100	0.150	0.140	0.130	0.130	0.120
X ₀	Zero-sequence reactance (independent)	pu	0.006	0.006	0.005	0.008	0.007	0.007	0.007	0.006
T' _d	D-Axis transient time constant	ms		49				49		
T'' _d	D-Axis sub-transient time constant	ms		2				2		
T' _{do}	D-Axis open-circuit time constant	ms		1906				1906		
T _a	Armature time constant	ms		12				12		

EXCITATION VOLTAGE AND CURRENT

No load excitation voltage	V	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
No load excitation current	A	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Class H BR excitation voltage	V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
Class H BR excitation current	A	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60

WINDING RESISTANCE

At 20 °C

Stator line-to-line (Series Star)	Ω	0.017			Exciter field		Ω	8.57
Main field	Ω	0.95						

According to: IEC 60034-1 & 22, BS 4999/5000, NEMA MG 1-33

Values quoted are typical. In line with our policy of continuous improvement, we reserve the right to change specification without notice.

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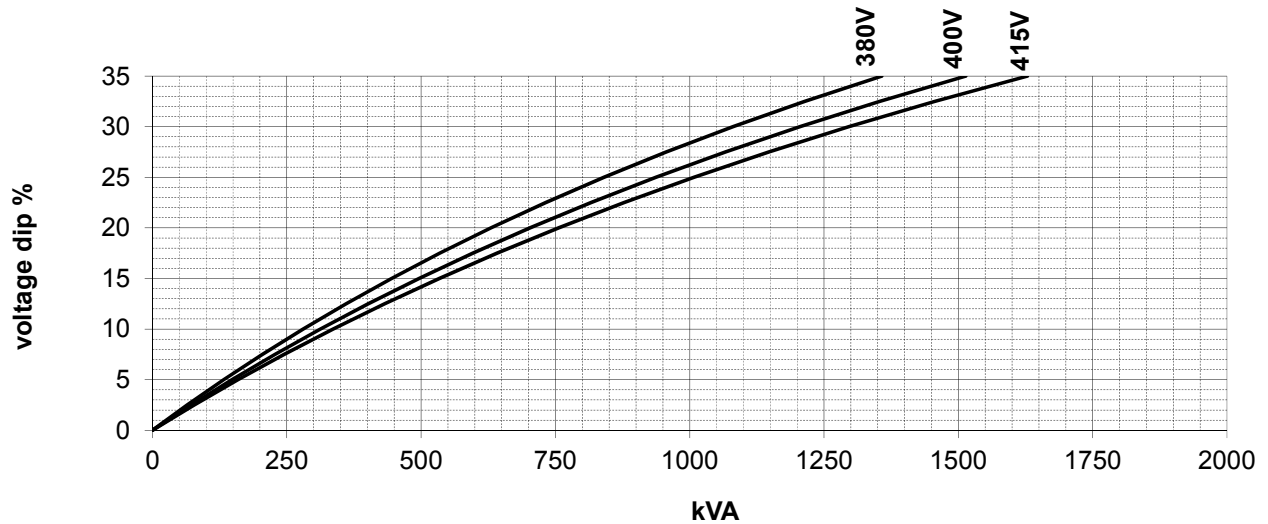


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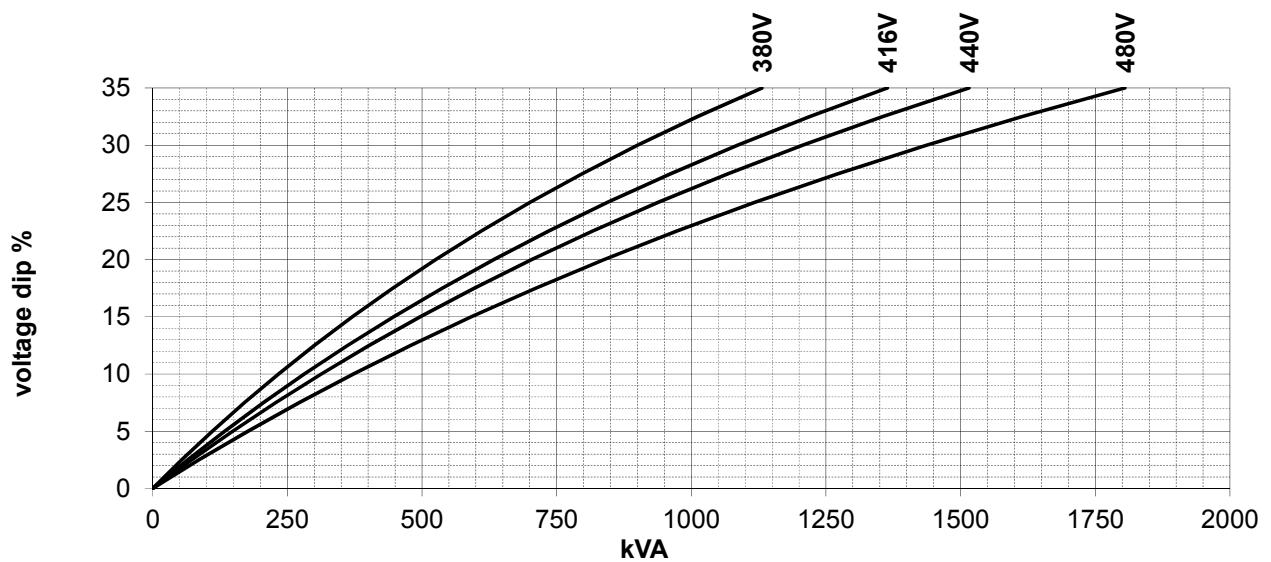
LOCKED ROTOR MOTOR STARTING CURVES

Power factor 0.6

50 Hz



60 Hz



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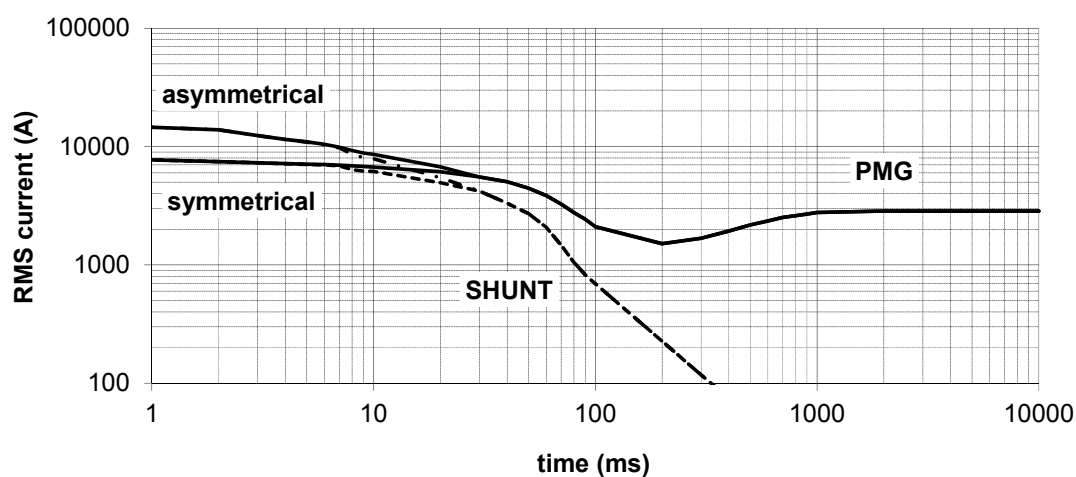
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THREE PHASE - SHORT CIRCUIT DECREMENT CURVES

No-load excitation at rated speed

400V 50Hz, 480V 60Hz

Series Star



Multiplication Factors

50Hz Voltages

380 400 415

Multiplication Factor 0.95 1.00 1.04

Apply factor up to 2xT'd, remainder of curve unchanged

60Hz Voltages

380 416 440 460 480

Multiplication Factor 0.79 0.87 0.92 0.96 1.00

Apply factor up to 2xT'd, remainder of curve unchanged

Winding Connection

Series Star Parallel Star Series Delta

Multiplication Factor 1.00 2.00 1.73

Apply factor to the complete curve

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