



M825

CONT 750 kVA



THREE-PHASE SYNCHRONOUS GENERATOR

Datasheet for 4 poles -50Hz @ 1500rpm/ 60Hz @ 1800rpm

Ambient Temperature 环境温度	40 °C	Method of Cooling 冷却方式	Air cooling 风冷
Temperature Rise 温升	125 °C	Direction of Rotation 旋转方向	Clockwise 顺时针
Insulation Class 绝缘等级	H	Maximum Over-speed 最高转速	2250r/min
Power Factor 功率因数	0.8	Degree of Protection / Enclosure 防护等级	IP23
Excitation 励磁方式	Brushless 无刷	Altitude 海拔	1000m
Winding Pitch 绕组节距	2/3	Stator winding 定子绕组	双层叠绕绕组 DLL
Pole 极数	4	Number of Terminal 终端数量	6
Duty 工作制	S1- Continuous	Rotor 转子	With damping cage 带阻尼
Waveform 电话干扰因数	TIF<50		THF<2%
Waveform distortion 波形畸变率	BS EN 61000-6-2&BS EN 61000-6-4,VDE 0875G,VDE0874N		
Radio interference 无线电干扰	Noload<1.5%,Non-distorting balanced linear load<5%		
AVR MODEL AVR型号	Standard 标配	Selection 选配	
	MX341B	MX321	PMG MX341B MX321
Voltage Regulation - in steady state condition 电压调节	±0.5	±0.5	±0.5 ±0.5
Short Circuit Current Capacity 短路电流容量	3250A		

Electrical Characteristic

Frequency 频率	Hz	50				60			
		380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
Voltage (series star)电压 Y	V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Voltage (parallel star)电压 YY	V	220	230	240	254	240	254	266	277
Voltage (series delta)电压 Δ	V	710	750	750	680	810	855	895	938
Rated power at Class H (125 °C) temperature rise 额定功率在H(125 °C)温升	kVA	568	600	600	544	648	684	716	750.4
Efficiency at Class H (P.F.=0.8)绝缘等级H (P.F.=0.8)效率	4/4%	93.2	93.2	93.4	94	93	93.1	93.1	93.2
	3/4%	94.1	94.1	94.2	94.3	93.8	94	94	94
	2/4%	94.3	94.3	94.3	94.1	93.9	94	94	94
Efficiency at Class H (P.F.=1.0)绝缘等级H (P.F.=1.0)效率	4/4%	94.7	94.8	94.9	95.2	94.4	94.5	94.7	94.7
	3/4%	95.3	95.4	95.5	95.7	95	95.1	95.2	95.2
	2/4%	95.6	95.7	95.6	95.3	95.1	95.1	95.2	95.2

Reactances (%) at Class H 绝缘等级H考核时的电抗

		2.73	2.6	2.42	1.95	3.12	2.94	2.82	2.71
Direct axis synchronous reactance unsaturated 直轴同步电抗	X _d	0.17	0.16	0.15	0.12	0.2	0.18	0.18	0.17
Direct axis transient reactance saturated 直轴瞬态电抗	X' _d	0.12	0.12	0.11	0.09	0.14	0.13	0.13	0.12
Direct axis subtransient reactance saturated 直轴瞬变电抗	X'' _d	2.27	2.16	2.01	1.62	2.59	2.44	2.34	2.25
Quadrature axis synchronous reactance unsaturated 交轴同步电抗	X _q	0.28	0.27	0.25	0.2	0.32	0.3	0.29	0.28
Quadrature axis subtransient reactance saturated 交轴起始瞬态电抗	X'' _q	0.1	0.09	0.09	0.07	0.11	0.11	0.1	0.1
Leakage reactance 漏抗	X _l	0.2	0.2	0.18	0.15	0.23	0.22	0.21	0.2
Negative sequence reactance saturated 负序电抗饱和	X ₂	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
Zero sequence reactance unsaturated 零序电抗不饱和	X ₀	0.3663	0.3846	0.4132	0.5128	0.3205	0.3401	0.3546	0.3690
Short-circuit ratio 短路比	K _{cc}								

Short-circuit transient time constant (sec.) 瞬变时间常数 (秒)	T' _d	0.106							
Subtransient time constant (sec.) 超瞬变时间常数 (秒。)	T'' _d	0.013							
Open circuit time constant (sec.) 开路时间常数	T' _{do}	2.91							
Armature time constant (sec.) 电枢时间常数	T _a	0.035							
Stator Winding Resistance (20°C) 定子绕组电阻(20°C)	ohm	0.0039							
Rotor Winding Resistance (20°C) 转子绕组电阻(20°C)	ohm	1.64							
Exciter Stator Resistance (20°C) 励磁机定子电阻(20°C)	ohm	17.5							
Exciter Rotor Phase resistance 励磁机转子相电阻	ohm	0.063							
No load excitation current 空载励磁电流	io (A)	0.6	0.63	0.71	0.65	0.56	0.6	0.62	0.63
Full load excitation current 满载励磁电流	ic(A)	2.6	2.7	2.8	2.7	2.7	2.7	2.8	2.8
Cooling air requirement 空气冷却要求	m ³ /sec	2.18m ³ /s 4619cfm				2.63m ³ /s 5573cfm			

Mechanical Characteristic

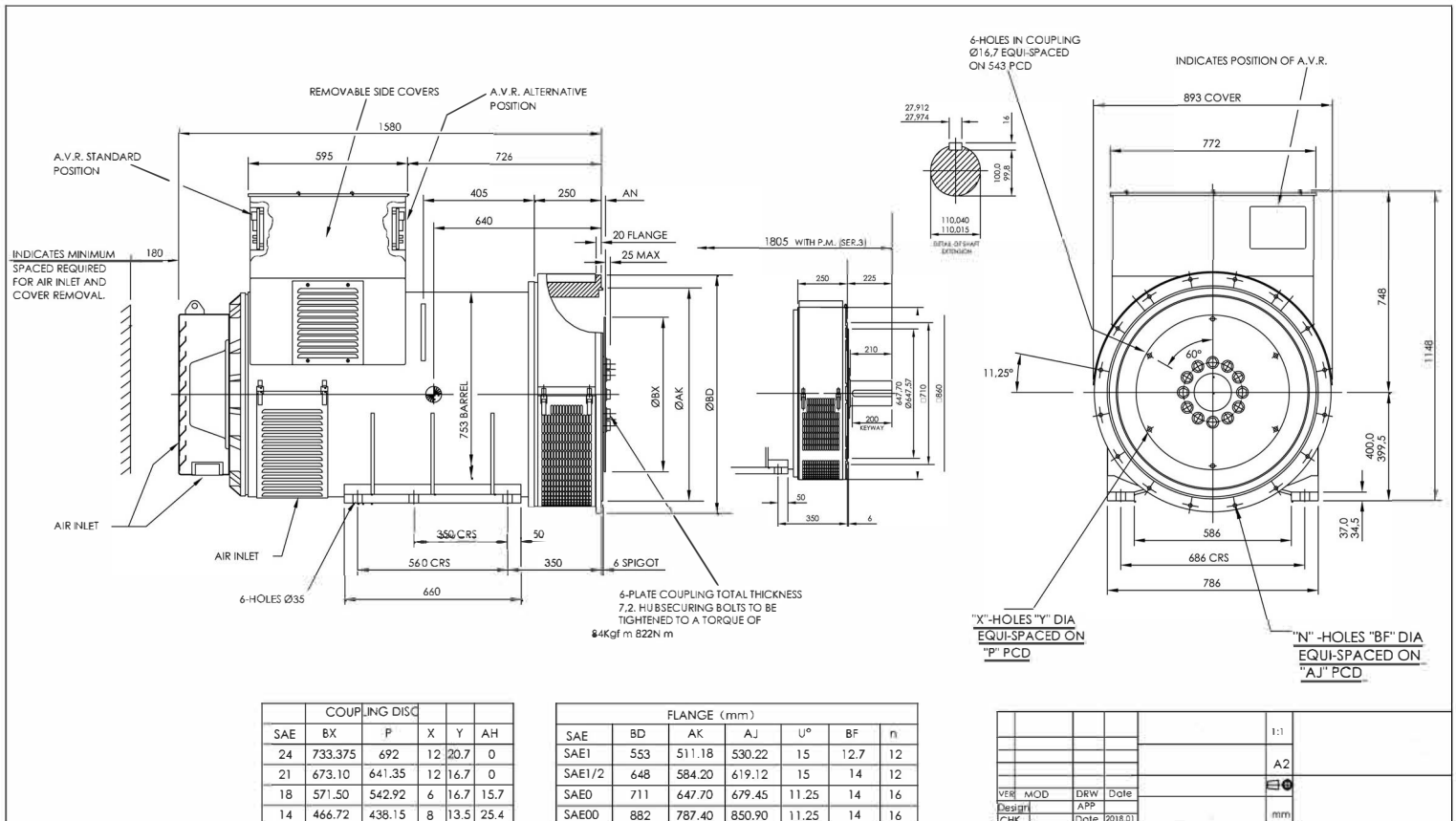
Configuration 结构	Single Bearing 单轴承				Double Bearing 双轴承			
	B2-SAE				IM B34			
Type of Construction 结构形式	1850				1830			
Total Weight - kgs 总重量-公斤	835				835			
Weight wound stator - kgs 定子重量-公斤	760				716			
Weight wound rotor - kgs 转子重量-公斤	16.7816kgm ²				16.2382kgm ²			
Inertia (J) [kgm ²] 转动惯量 (J) [kgm ²]	BALL.6317-2RS(ISO)				BALL.6317-2RS(ISO)			
Drive end bearing / Lubrication 驱动端轴承/润滑	BALL.6317-2RS(ISO)				BALL.6317-2RS(ISO)			
Non-drive end bearing / Lubrication 非驱动端轴承/润滑	178X97X133				186X97X133			
Packing crate size 包装尺寸 (cm)								

Winding 311 0.8 Power Factor

RATINGS

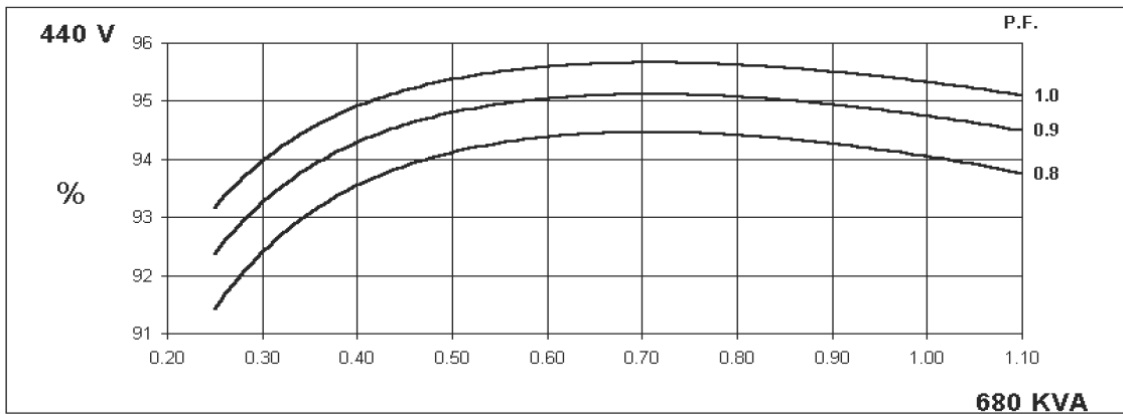
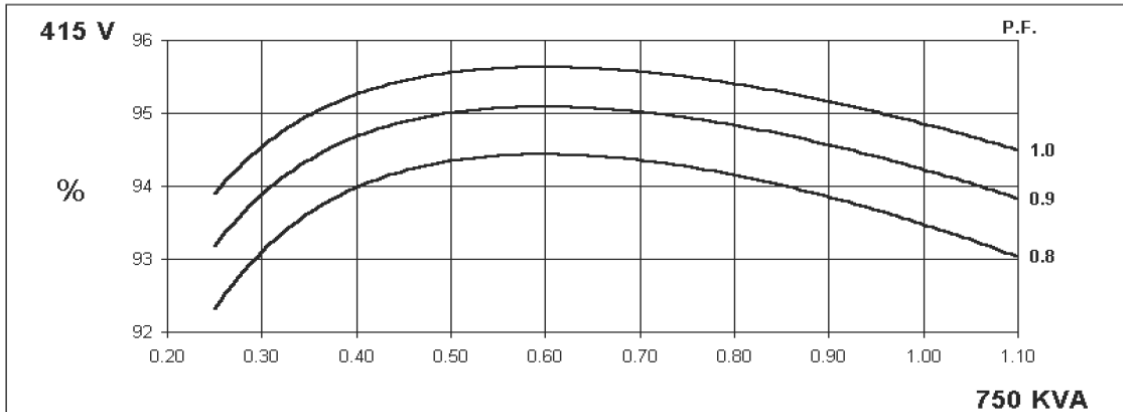
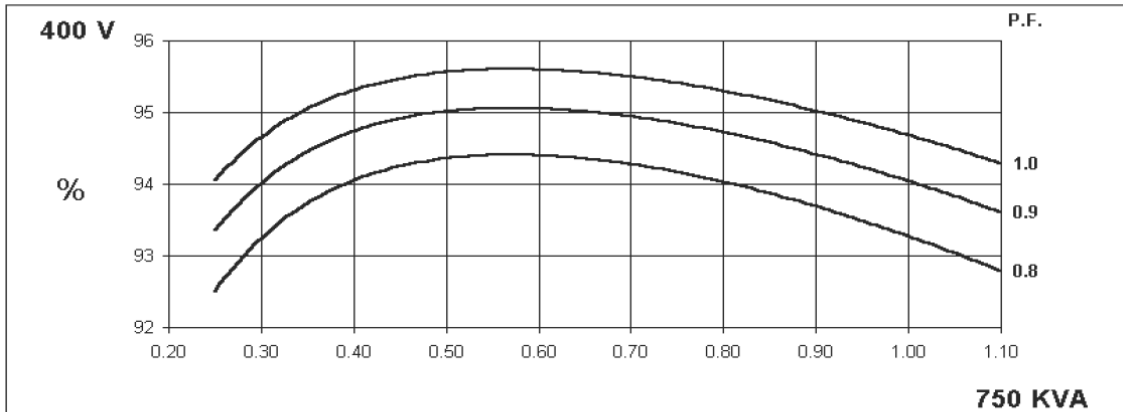
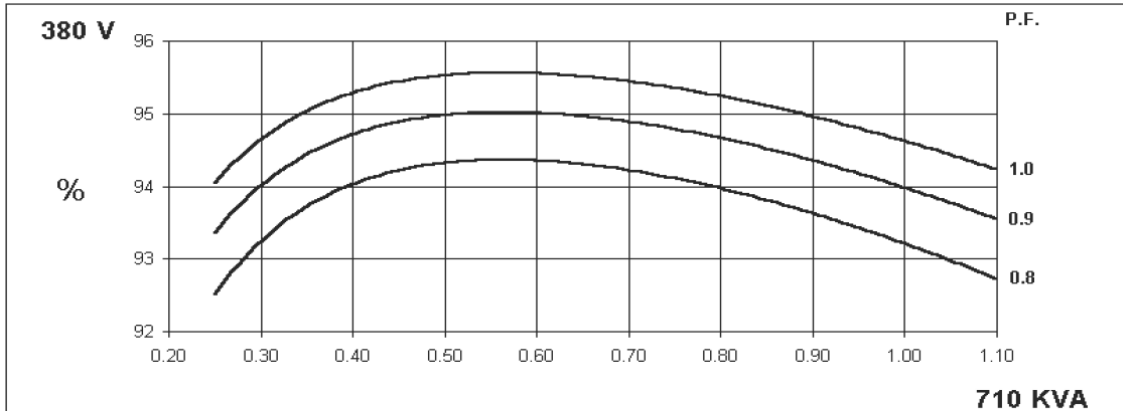
温升等级	F级温升 - 105/40°C	H级温升 - 125/40°C	备载 - 150/40°C	备载 - 163/27°C
50 Hz	星形 (V)	380 400 415 440	380 400 415 440	380 400 415 440
	三角形 (V)	220 230 240 254	220 230 240 254	220 230 240 254
	视在功率 (kVA)	651 687 687 623	710 750 750 680	730 775 775 700
	有功功率 (kW)	521 550 550 498	568 600 600 544	584 620 620 560
	效率 (%)	93.6 93.6 93.8 94.2	93.2 93.3 93.5 94.0	93.1 93.1 93.3 94.0
	有功功率输入	556 587 586 529	609 643 642 579	627 666 665 596
60 Hz	星形 (V)	416 440 460 480	416 440 460 480	416 440 460 480
	三角形 (V)	240 254 266 277	240 254 266 277	240 254 266 277
	视在功率 (kVA)	742 784 820 860	810 855 895 938	840 889 929 970
	有功功率 (kW)	594 627 656 688	648 684 716 750	672 711 743 776
	效率 (%)	93.3 93.5 93.6 93.6	93.0 93.1 93.2 93.3	92.8 93.0 93.1 93.1
	有功功率输入	636 671 701 735	697 735 768 804	724 765 798 834

DIMENSIONS



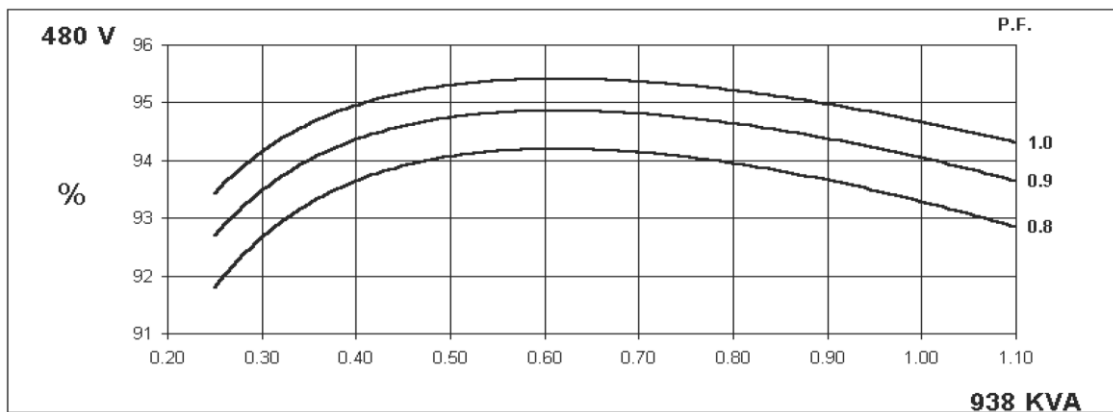
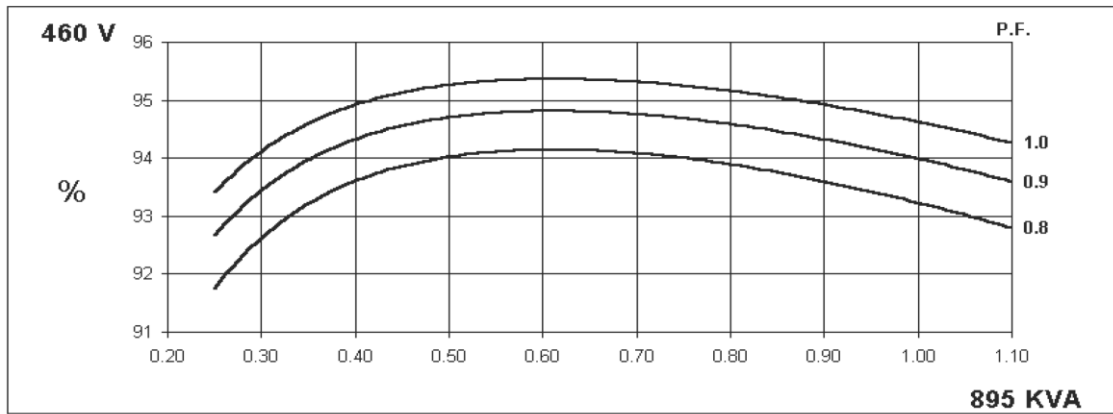
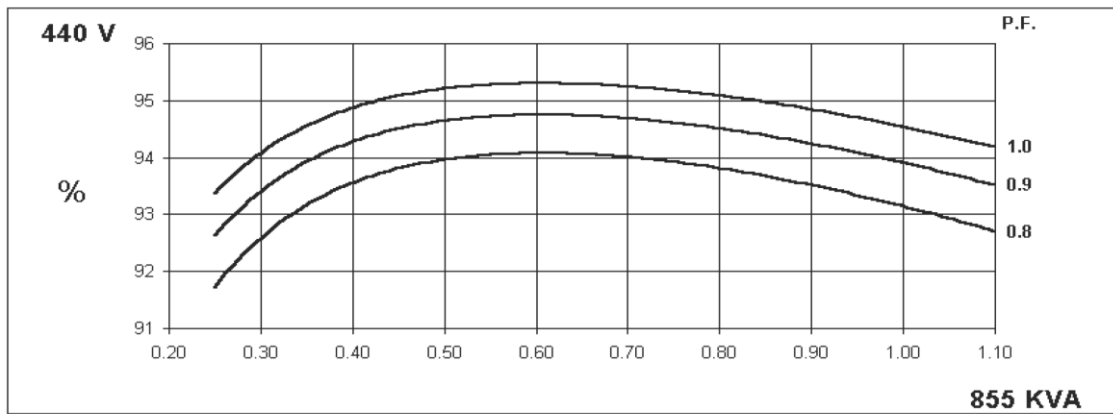
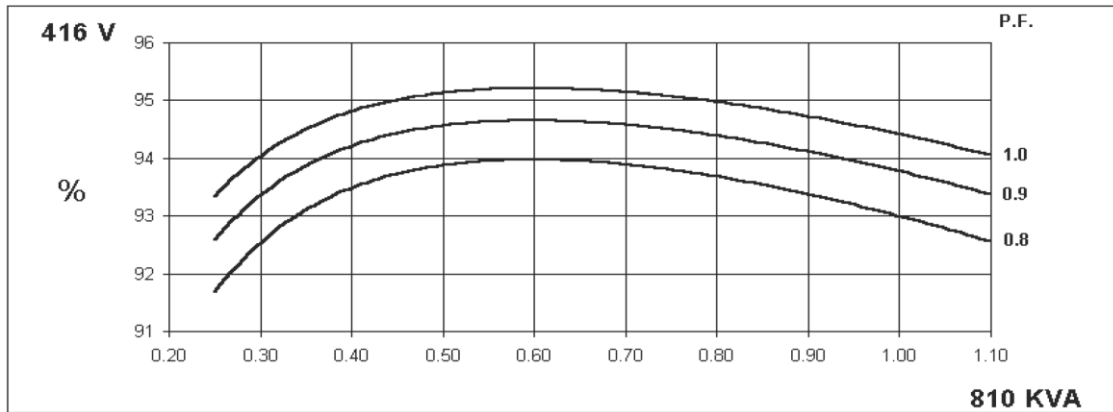
**50
Hz**

**WINDING 311
THREE PHASE EFFICIENCY CURVES**



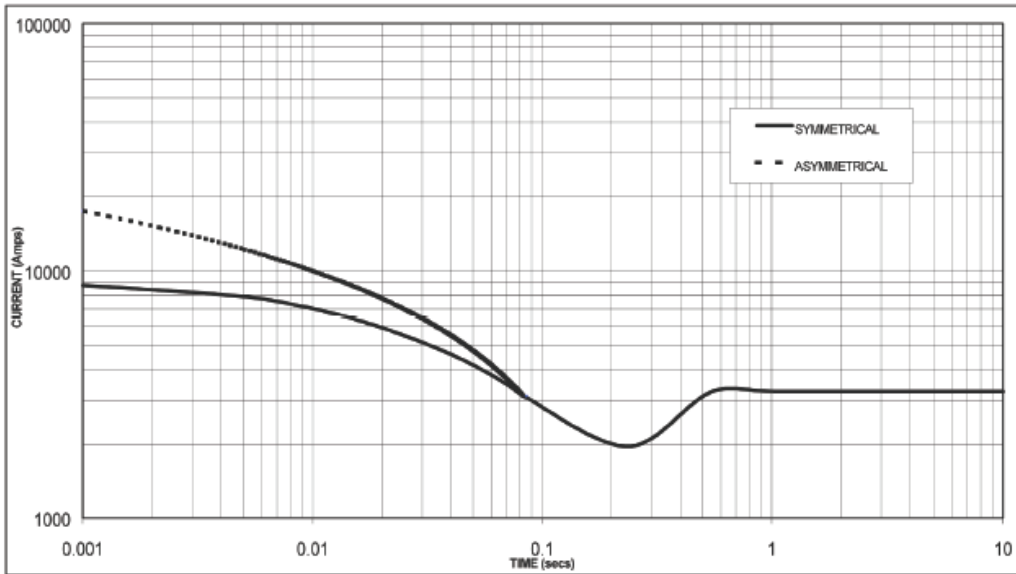
**60
Hz**

**WINDING 311
THREE PHASE EFFICIENCY CURVES**



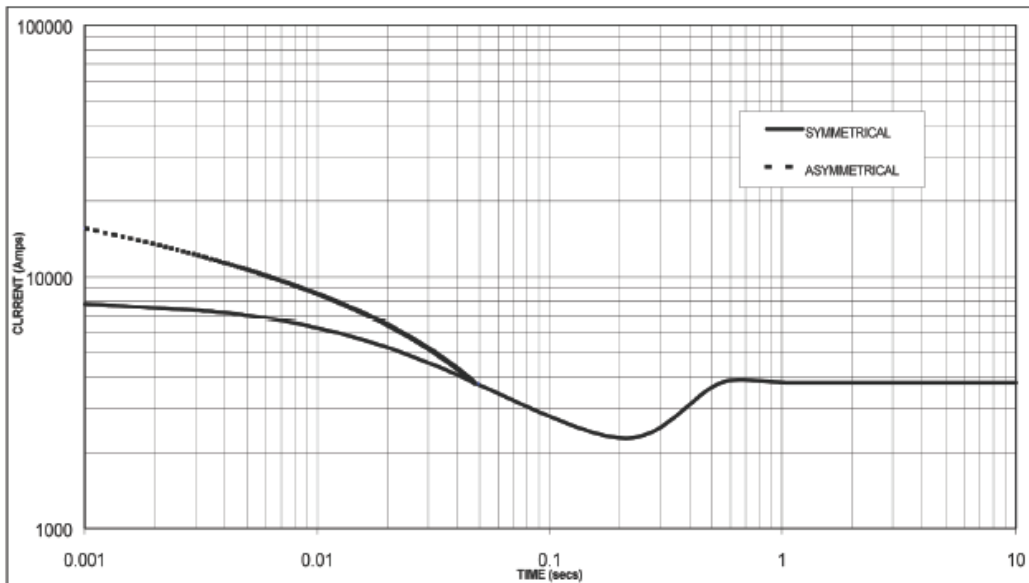
**Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed
Based on star (wye) connection.**

**50
Hz**



Sustained Short Circuit = 3250 Amps

**60
Hz**



Sustained Short Circuit = 3800 Amps

Note 1

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

50Hz		60Hz	
Voltage	Factor	Voltage	Factor
380v	X 1.00	416v	X 1.00
400v	X 1.06	440v	X 1.06
415v	X 1.09	460v	X 1.12
440v	X 1.12	480v	X 1.20

The sustained current value is constant irrespective of voltage level

Note 2

The following multiplication factor should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3-phase	2-phase L-L	1-phase L-N
Instantaneous	x 1.00	x 0.87	x 1.30
Minimum	x 1.00	x 1.80	x 3.20
Sustained	x 1.00	x 1.50	x 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

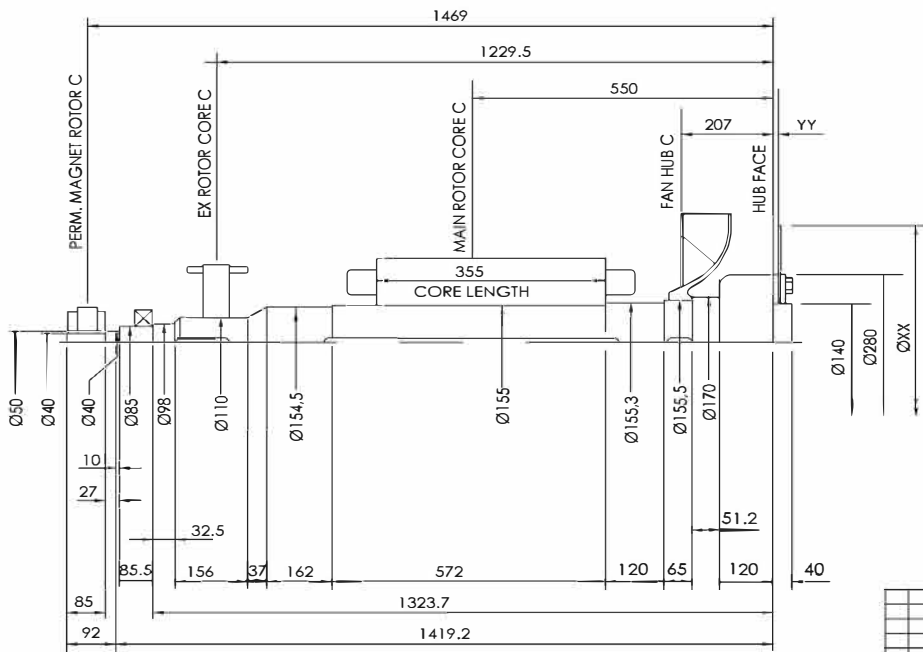
All other times are unchanged

Note 3

Curves are drawn for Star (Wye) connected machines. For other connections the following multipliers should be applied to current values as shown :

Parallel Star = Curve current value X 2

Series Delta = Curve current value X 1.732



COMPONENT	Wt kg	J kgm ²
EX. ROTOR	51.6	0,859
MAIN ROTOR	455.116	14.1934
FAN	16.1	0,6762
SHAFT	191.914	0,5514
HUB	37.098	0,4823
P.M.EX.ROTOR	6.97	0.019
P.M. STUB SHAFT	0.929	0,0003
TOTAL	759.727	16.7816

COUPLING SAE No	COUPLING DIMEN's		COUPLING ASSEMBLY WEIGHT kg	COUPLING DISC J kgm ²
	XX	YY		
14	467	25	25	0,265
16	518	16	24.3	0,403
18	572	16	24.4	0,535
21	673	0	24.25	1.053
24	733	0	28	1.602

VER	MOD	DRW	Date	1:1
Desi		APP		mm
CHK		Date	2018.01	

