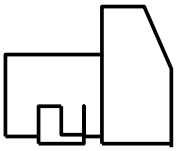
MARATHON ELECTRIC GENERATORS

TYPICAL SUBMITTAL DATA



MODEL : 433RSL4019

BASE MODEL: 433RSL4019 **Winding H-SG430042**

Submittal Data: 415 Volts*, 290.4 kW, 363 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase **8/24/2011**

Kilowatt ratings at	**1500 RPM**		**50 Hertz**		**12 LEADS**	**Standard 3 phase**			
kW (kVA)	**3 Phase**		**0.8 Power Factor**			**Dripproof or Open Enclosure**			
	Class B	**Class F**					**Class H**		
Voltage*	**80° C ① Continuous**	**90° C ① Lloyds**	**95° C ① ABS**	**105° C ② British Standard**	**105° C ① Continuous**	**130° C ① Standby**	**125° C ② British Standard**	**125° C ① Continuous**	**150° C ① Standby**
440/220	160 (200)	185 (231)	200 (250)	205 (256)	205 (256)	230 (288)	230 (288)	230 (288)	260 (325)
415/208	225 (281)	240 (300)	250 (313)	270 (338)	270 (338)	290 (363)	290 (363)	290 (363)	315 (394)
400/200	235 (294)	250 (313)	265 (331)	275 (344)	275 (344)	295 (369)	295 (369)	295 (369)	325 (406)
380/190	245 (306)	260 (325)	265 (331)	285 (356)	285 (356)	300 (375)	300 (375)	300 (375)	325 (406)
346/173	225 (281)	240 (300)	245 (306)	255 (319)	255 (319)	275 (344)	275 (344)	275 (344)	300 (375)

① *Rise by resistance method, Mil-Std-705, Method 680.1b.* ② *British Standard Rating per BS 5000*

Submittal Data: 415 Volts*, 290.4 kW, 363 kVA, 0.8 P.F., 1500 RPM, 50 Hz, 3 Phase **STD. CONNECTION**

Mil-Std-705B			**Mil-Std-705B**		
Method	**Description**	**Value**	**Method**	**Description**	**Value**
301.1b	Insulation Resistance	>1.5 Meg	505.3b	Overspeed	1875 RPM
302.1a	High Potential Test		507.1c	Phase Sequence CCW-ODE	ABC
	Main Stator	2000 Volts	508.1c	Voltage Balance, L-L or L-N	0.20%
	Main Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Total	5.0%
	Exciter Stator	1500 Volts		(Distortion Factor)	
	Exciter Rotor	1500 Volts	601.4a	L-L Harmonic Maximum - Single	3.0%
	PMG Stator	1500 Volts	601.1c	Deviation Factor	5.0%
401.1a	Stator Resistance, Line to Line		---	TIF (1960 Weightings)	< 50
	High Wye Connection	0.014 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.286 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	22.5 Ohms			
	Exciter Rotor	0.022 Ohms	---	Main Stator Capacitance to ground	0.019 mfd
	PMG Stator	2.1 Ohms			
410.1a	No Load Exciter Field Amps	0.92 A DC			
	at 208/415 Volts Line to Line			**Additional Prototype Mil-Std Methods**	
420.1a	Short Circuit Ratio	0.827		**are Available on Request.**	
421.1a	Xd Synchronous Reactance	1.947 pu	--	Generator Frame	433
		0.924 ohms	--	Type	MAGNAMAXDVR
422.1a	X2 Negative Sequence React.	0.169 pu	--	Insulation	Class H
		0.08 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.031 pu	--	Amortisseur Windings	Full
		0.015 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.096 pu	--	Voltage Regulator	DVR2000E+
		0.046 ohms	--	Voltage Regulation	0.25%
426.1a	X''d Subtransient Reactance	0.083 pu			
		0.039 ohms			
--	Xq Quadrature Synchronous	0.566 pu	--	Cooling Air Volume	860 CFM
		0.269 ohms			
427.1a	T'd Transient Short Circuit		--	Heat rejection rate	1096 Btu's/min
	Time Constant	0.075 sec.			
428.1a	T''d Subtransient Short Circuit		--	Full load current	505 amps
	Time Constant	0.008 sec.			
430.1a	T'do Transient Open Circuit		--	Minimum Input hp required	415.1
	Time Constant	1.55 sec.		Efficiency at rated load :	93.8%
432.1a	Ta Short Circuit Time				
	Constant of Armature Winding	0.009 sec.	--	Full load torque	1453 Lb-ft

(3) Excitation support system or PMG required to sustain short circuit currents.

** Voltages refer to wye (star) connection, unless otherwise specified.*

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TYPICAL DYNAMIC CHARACTERISTICS

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