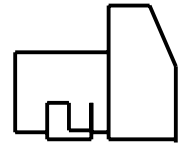


MARATHON ELECTRIC

GENERATORS

TYPICAL SUBMITTAL DATA



MODEL : 743RSL4052

BASE MODEL: 743RSL4052

Winding H-SG 740045

Submittal Data: 480 Volts*, 1750.4 kW, 2188 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

10/24/2001

Kilowatt ratings at		1800 RPM	60 Hertz	4 BARS	Standard 3 phase				
kW (kVA)		3 Phase			0.8 Power Factor		Dripproof or Open Enclosure		
Voltage*	Class B	Class F					Class H		
	80° C ⌀ Continuous	90° C ⌀ Lloyds	95° C ⌀ ABS	105° C British Standard	105° C Continuous	130° C ⌀ Standby	125° C British Standard	125° C Continuous	150° C ⌀ Standby
480	1310 (1638)	1440 (1800)	1500 (1875)	1600 (2000)	1600 (2000)	1750 (2188)	1600 (2000)	1700 (2125)	1750 (2188)
460	1350 (1688)	1490 (1863)	1480 (1850)	1640 (2050)	1640 (2050)	1710 (2138)	1640 (2050)	1710 (2138)	1710 (2138)
440	1420 (1775)	1540 (1925)	1430 (1788)	1680 (2100)	1680 (2100)	1710 (2138)	1680 (2100)	1710 (2138)	1710 (2138)
416	1400 (1750)	1480 (1850)	1400 (1750)	1610 (2013)	1610 (2013)	1610 (2013)	1610 (2013)	1610 (2013)	1620 (2025)
380	1290 (1613)	1370 (1713)	1300 (1625)	1480 (1850)	1480 (1850)	1480 (1850)	1480 (1850)	1480 (1850)	1480 (1850)

⊙ Rise by resistance method, Mil-Std-705, Method 680.1b.

British Standard Rating per BS 5000

Submittal Data: 480 Volts*, 1750.4 kw, 2188 kVA, 0.8 P.F., 1800 RPM, 60 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	2250 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 (Distortion Factor)	5.0%
	Exciter Stator	1500 Volts	601.4a	L-L Harmonic Maximum - Single	3.0%
	Exciter Rotor	1500 Volts	601.1c	Deviation Factor	5.0%
	PMG Stator	1500 Volts	---	TIF (1960 Weightings)	< 50
401.1a	Stator Resistance, Line to Line		---	THF (IEC, BS & NEMA Weightings)	< 2 %
	High Wye Connection	0.0018 Ohms	652.1a	Shaft Current	< 0.1 ma
	Rotor Resistance	0.979 Ohms		Main Stator Capacitance to ground	0.07 mfd
	Exciter Stator	22 Ohms		Additional Prototype Mil-Std Methods are Available on Request.	
	Exciter Rotor	0.043 Ohms		Generator Frame	743
	PMG Stator	2.1 Ohms		Type	MAGNAMAXDVR
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.88 A DC		Insulation	Class H
420.1a	Short Circuit Ratio	0.685		Coupling - Single Bearing	Flexible
421.1a	Xd Synchronous Reactance	2.02 p.u.		Amortisseur Windings	Full
		0.213 ohms		Excitation	Ext. Voltage Regulated, Brushless
422.1a	X2 Negative Sequence React.	0.185 pu		Voltage Regulator	DVR2000
		0.019 ohms		Voltage Regulation	0.25%
423.1a	X0 Zero Sequence Test Reactance	0.06 pu		Cooling Air Volume	3260 CFM
		0.006 ohms		Heat rejection rate	4661 Btu's/min
425.1a	X'd Transient Reactance	0.135 pu		Full load current	2632 amps
		0.014 ohms		Minimum Input hp required	2456.2
426.1a	X"d Subtransient Reactance	0.112 pu		Efficiency at rated load :	95.5%
		0.012 ohms		Full load torque	7164 Lb-ft
--	Xq Quadrature Synch. React.	1 pu			
		0.105 ohms			
427.1a	T'd Transient Short Circuit Time Constant	0.157 sec.			
428.1a	T"d Subtransient Short Circuit Time Constant	0.01 sec.			
430.1a	T'do Transient Open Circuit Time Constant	2.95 sec.			
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.028 sec.			

(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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