

TAYLOR POWER SYSTEMS

TYPICAL SUBMITTAL DATA

MODEL : 743RSL4052

BASE MODEL: 743RSL4052

Winding H-SG740045

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

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

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Mil-Std-705B		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	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	0.0018 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.979 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	22 Ohms		Main Stator Capacitance to ground	0.07 mfd
	Exciter Rotor	0.043 Ohms			
	PMG Stator	2.1 Ohms			
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.88 A DC			
420.1a	Short Circuit Ratio	0.685		Additional Prototype Mil-Std Methods are Available on Request.	
421.1a	Xd Synchronous Reactance	2.02 pu	--	Generator Frame	743
		0.213 ohms	--	Type	MAGNAMAXDVR
422.1a	X2 Negative Sequence React.	0.185 pu	--	Insulation	Class H
		0.019 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.06 pu	--	Amortisseur Windings	Full
		0.006 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.135 pu	--	Voltage Regulator	DVR2000E+
		0.014 ohms	--	Voltage Regulation	0.25%
426.1a	X"d Subtransient Reactance	0.112 pu			
		0.012 ohms	--	Cooling Air Volume	3260 CFM
--	Xq Quadrature Synchronous	1 pu			
		0.105 ohms	--	Heat rejection rate	4175 Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.157 sec.	--	Full load current	2632 amps
428.1a	T"d Subtransient Short Circuit Time Constant	0.01 sec.			
430.1a	T'do Transient Open Circuit Time Constant	2.95 sec.	--	Minimum Input hp required	2444.8
				Efficiency at rated load :	96.0%
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.028 sec.	--	Full load torque	7131 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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