

# TAYLOR

## POWER SYSTEMS

### TYPICAL SUBMITTAL DATA

MODEL : 574RSL4037

BASE MODEL: 574RSL4037

Winding H-SG570077

Submittal Data: 480 Volts\*, 824.8 kW, 1031 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Kilowatt ratings at		1800 RPM		60 Hertz		12 LEADS		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
480/240	670 (838)	730 (913)	700 (875)	800 (1000)	800 (1000)	825 (1031)	825 (1031)	825 (1031)	900 (1125)
460/230	675 (844)	720 (900)	700 (875)	780 (975)	780 (975)	845 (1056)	830 (1038)	830 (1038)	900 (1125)
440/220	660 (825)	700 (875)	680 (850)	760 (950)	760 (950)	820 (1025)	805 (1006)	805 (1006)	875 (1094)
416/208	630 (788)	670 (838)	655 (819)	725 (906)	725 (906)	785 (981)	770 (963)	770 (963)	825 (1031)
380/190	590 (738)	625 (781)	615 (769)	670 (838)	670 (838)	670 (838)	670 (838)	670 (838)	670 (838)

① Rise by resistance method, Mil-Std-705, Method 680.1b.

② 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	0.0049 Ohms	---	THF (IEC, BS & NEMA Weightings)	< 2 %
	Rotor Resistance	0.584 Ohms	652.1a	Shaft Current	< 0.1 ma
	Exciter Stator	23 Ohms		Main Stator Capacitance to ground	0.037 mfd
	Exciter Rotor	0.045 Ohms			
	PMG Stator	2.1 Ohms			
410.1a	No Load Exciter Field Amps at 240/480 Volts Line to Line	0.79 A DC			
420.1a	Short Circuit Ratio	0.718		<b>Additional Prototype Mil-Std Methods are Available on Request.</b>	
421.1a	Xd Synchronous Reactance	2.29 pu	--	Generator Frame	574
		0.512 ohms	--	Type	MAGNAMAXDVR
422.1a	X2 Negative Sequence React.	0.183 pu	--	Insulation	Class H
		0.041 ohms	--	Coupling - Single Bearing	Flexible
423.1a	X0 Zero Sequence Reactance	0.054 pu	--	Amortisseur Windings	Full
		0.012 ohms	--	Excitation	Ext. Voltage Regulated, Brushless
425.1a	X'd Transient Reactance	0.13 pu	--	Voltage Regulator	DVR2000E+
		0.029 ohms	--	Voltage Regulation	0.25%
426.1a	X"d Subtransient Reactance	0.118 pu			
		0.026 ohms	--	Cooling Air Volume	1220 CFM
--	Xq Quadrature Synchronous	0.98 pu			
		0.219 ohms	--	Heat rejection rate	2490 Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.127 sec.	--	Full load current	1240 amps
428.1a	T"d Subtransient Short Circuit Time Constant	0.014 sec.			
430.1a	T'do Transient Open Circuit Time Constant	2.33 sec.	--	Minimum Input hp required	1164.3
				Efficiency at rated load :	95.0%
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.02 sec.	--	Full load torque	3396 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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