

MAGNAMAX®

TYPICAL SUBMITTAL DATA

BASE MODEL: 572RSL6427

Winding: 570072

Date: 02/09/22

Kilowatt ratings at	1800 RPM	60 Hertz	12 Leads With Bus Bars		
kW (kVA)	3 Phase	0.8 Power Factor		Dripproof or Open Enclosure	
	CONTINUOUS ^{1, 2}			STANDBY ^{1, 2}	
Voltage*	NEMA B / 80 °C	NEMA F / 105 °C	NEMA H / 125 °C	NEMA F / 130 °C	NEMA H / 150 °C
240/480	440 (550)	500 (625)	515 (644)	515 (644)	560 (700)
220/440	410 (513)	460 (575)	485 (606)	500 (625)	520 (650)
208/416	400 (500)	445 (556)	470 (588)	475 (594)	505 (631)
200/400	382 (478)	427 (534)	441 (551)	443 (554)	459 (574)
190/380	360 (450)	405 (506)	405 (506)	405 (506)	405 (506)

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

② Machine rated for Max Ambient of 40 °C, Max Altitude 3300 ft

Submittal Data: 416 Volts*, 475 kW, 594 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase High Wye CONNECTION

Mil-Std-705B Method	Description	Value	Units	Mil-Std-705C Method	Description	Value	Units
301.1b	Insulation Resistance	>1.5 Meg	Ohms	505.3b	Overspeed	2250	RPM
302.1a	High Potential Test			507.1c	Phase Sequence CCW-ODE	ABC	
	Main Stator	1960	Volts	508.1c	Voltage Balance, L-L or L-N	0.2%	
	Main Rotor	1500	Volts	601.4a	L-L Harmonic Max - Total (Distortion Factor)	5.0%	
	Exciter Stator	1500	Volts				
	Exciter Rotor	1500	Volts	601.4a	L-L Harmonic Max - Single	3.0%	
PMG Stator	1500	Volts	601.1c	Deviation Factor	5.0%		
401.1a	Stator Resistance, Line to Line High Wye Connection	0.01260	Ohms	---	TIF (1960 Weightings)	<50	
				---	THF (IEC, BS & NEMA Weightings)	<2%	
	Rotor Resistance	0.398	Ohms	---	Winding Pitch	2/3	
	Exciter Stator	23	Ohms				
	Exciter Rotor	0.045	Ohms				
	PMG Stator	2.1	Ohms				
410.1a	No Load Exciter Field Amps at 416 Volts Line to Line	0.49	A DC	Additional Prototype Mil-Std Methods are Available on Request.			
420.1a	Short Circuit Ratio	0.481					
421.1a	Xd Synchronous Reactance	3.279	PU	--	Generator Frame	572	
		0.956	Ohms	--	Type	MagnaMax	
422.1a	X2 Negative Sequence React.	0.278	PU	--	Insulation	Class H	
		0.081	Ohms	--	Coupling - Single Bearing	Flexible	
423.1a	X0 Zero Sequence Reactance	0.069	PU	--	Amortisseur Windings	Full	
		0.020	Ohms	--	Excitation	Ext. Voltage Regulated, Brushless	
425.1a	X'd Transient Reactance	0.199	PU	--	Voltage Regulator	PM500	
		0.058	Ohms	--	Voltage Regulation	0.50%	
426.1a	X''d Subtransient Reactance	0.168	PU				
		0.049	Ohms				
--	Xq Quadrature Synchronous Reactance	1.351	PU	--	Cooling Air Volume	1520	CFM
		0.394	Ohms	--	Heat rejection rate	1783	Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.114	Sec	--	Full load current	824	Amps
				--	Minimum Input hp required	678.7	HP
428.1a	T''d Subtransient Short Circuit Time Constant	0.01	Sec	--	Full load torque	1980	Lb-ft
				--	Efficiency at rated load :	93.8%	
430.1a	T'do Transient Open Circuit Time Constant	1.68	Sec				
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.017	Sec	--	Weight	2840	lbs

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

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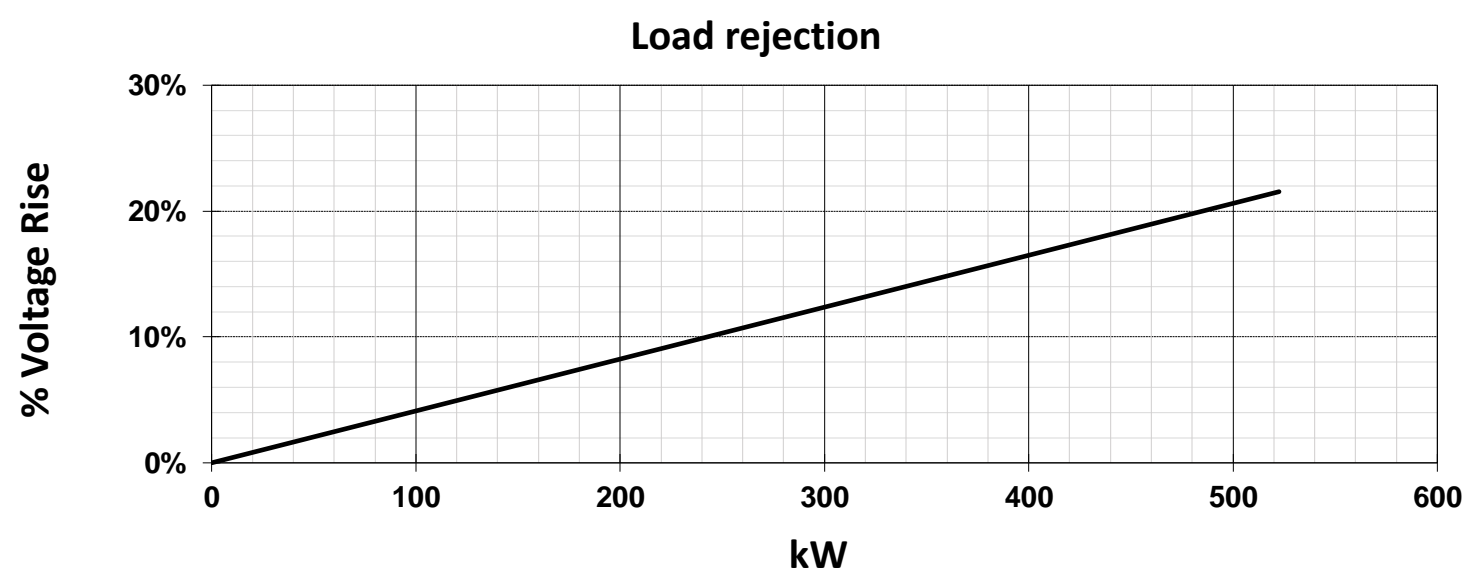
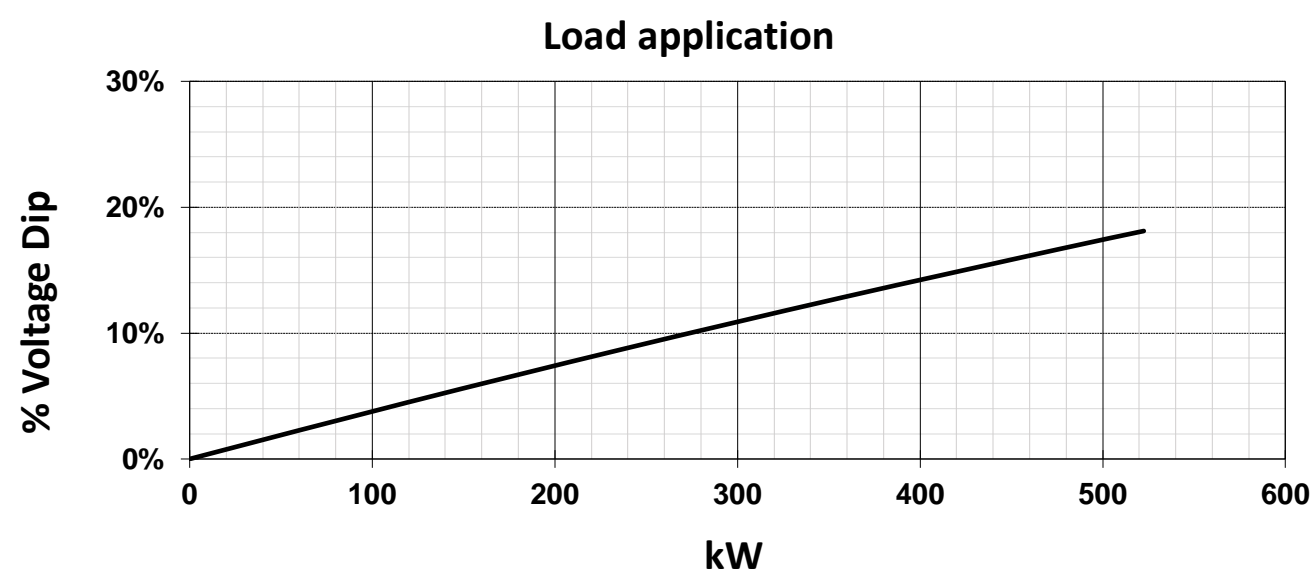
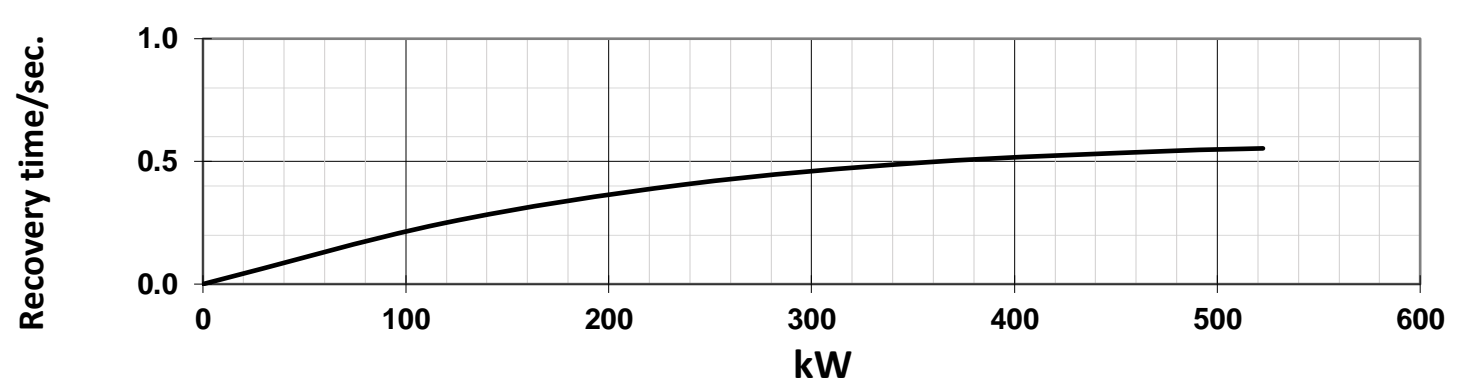
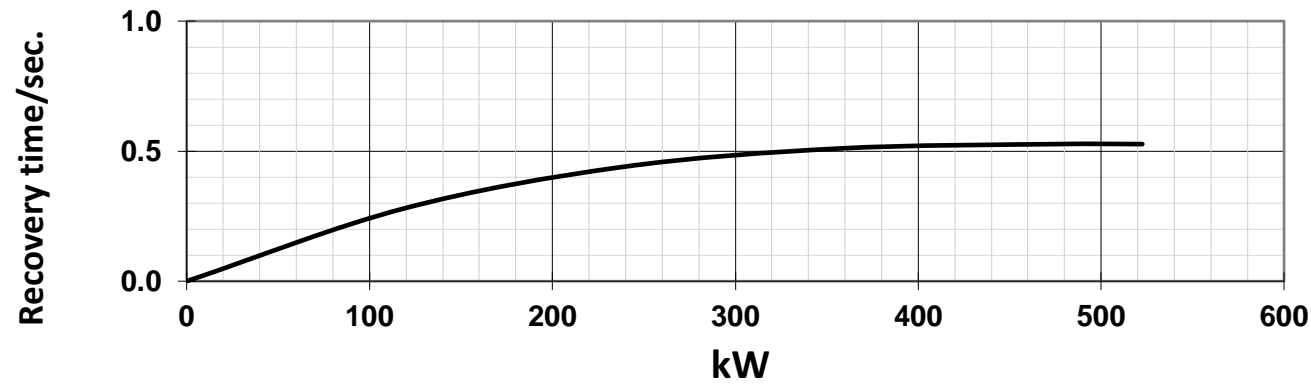
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TYPICAL DYNAMIC CHARACTERISTICS

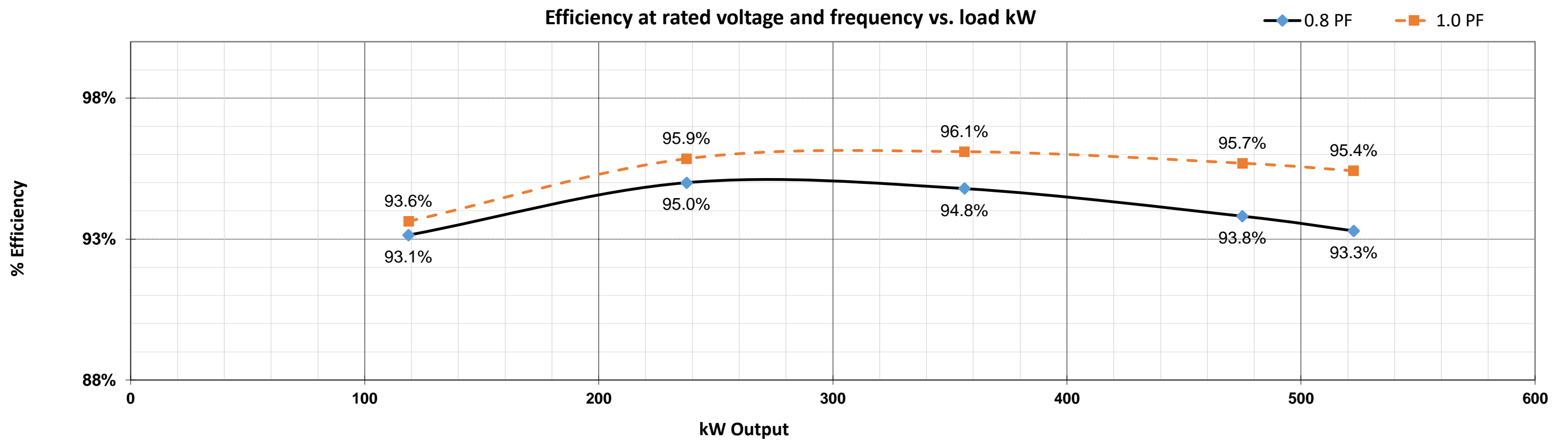
BASE MODEL: **572RSL6427**

Date: **02/09/22**

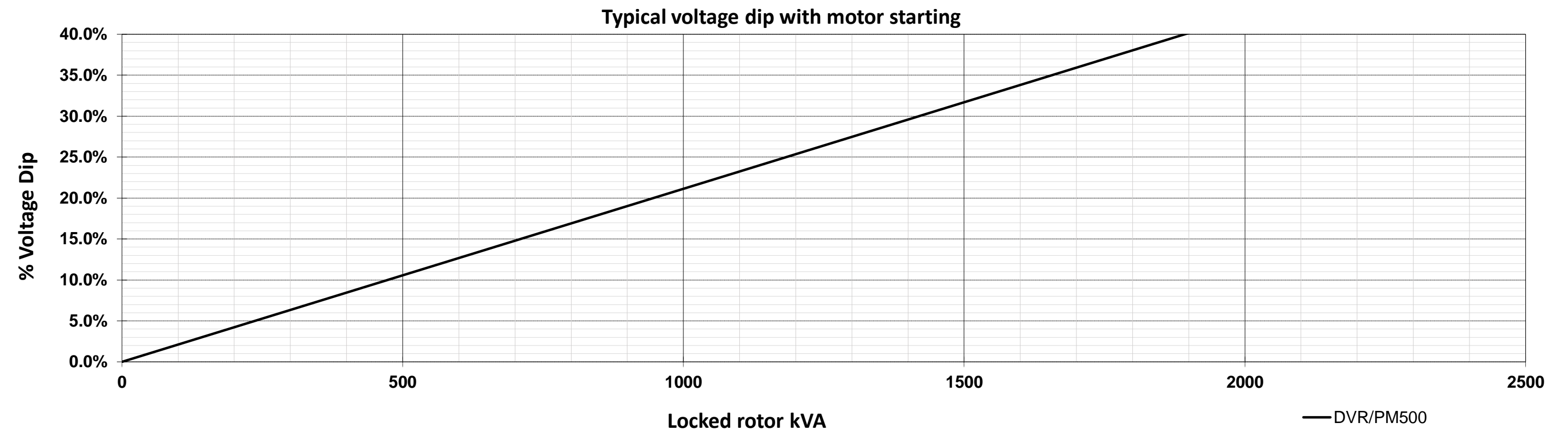
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Efficiency at rated voltage and frequency vs. load kW



Typical voltage dip with motor starting



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DECREMENT CURVE

BASE MODEL: 572RSL6427

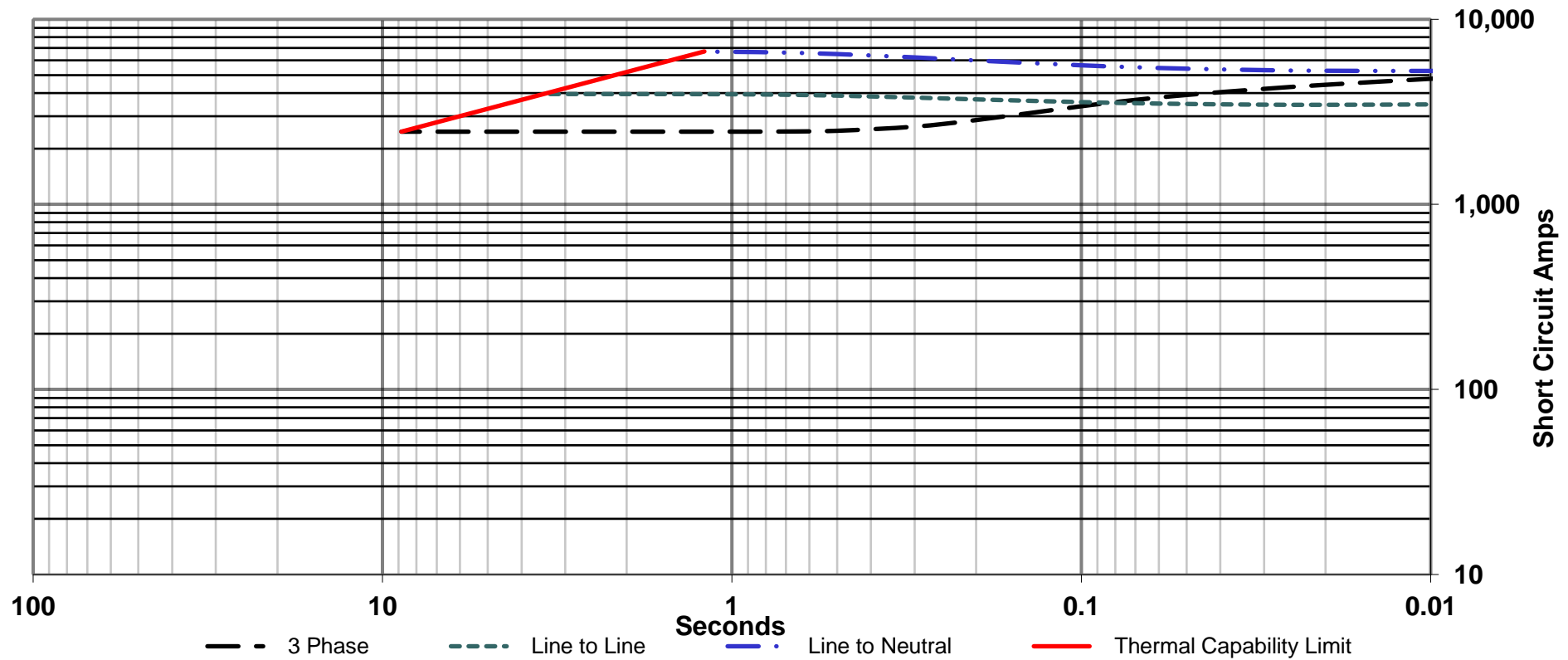
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Date : 02/09/22

Full Load Current : 824 amps
Steady State S.C. Current : 2472 amps

Max. 3 ph. Symm. S.C. Current : 4898 amps
INCLUDES EXCITATION SUPPORT (PMG)

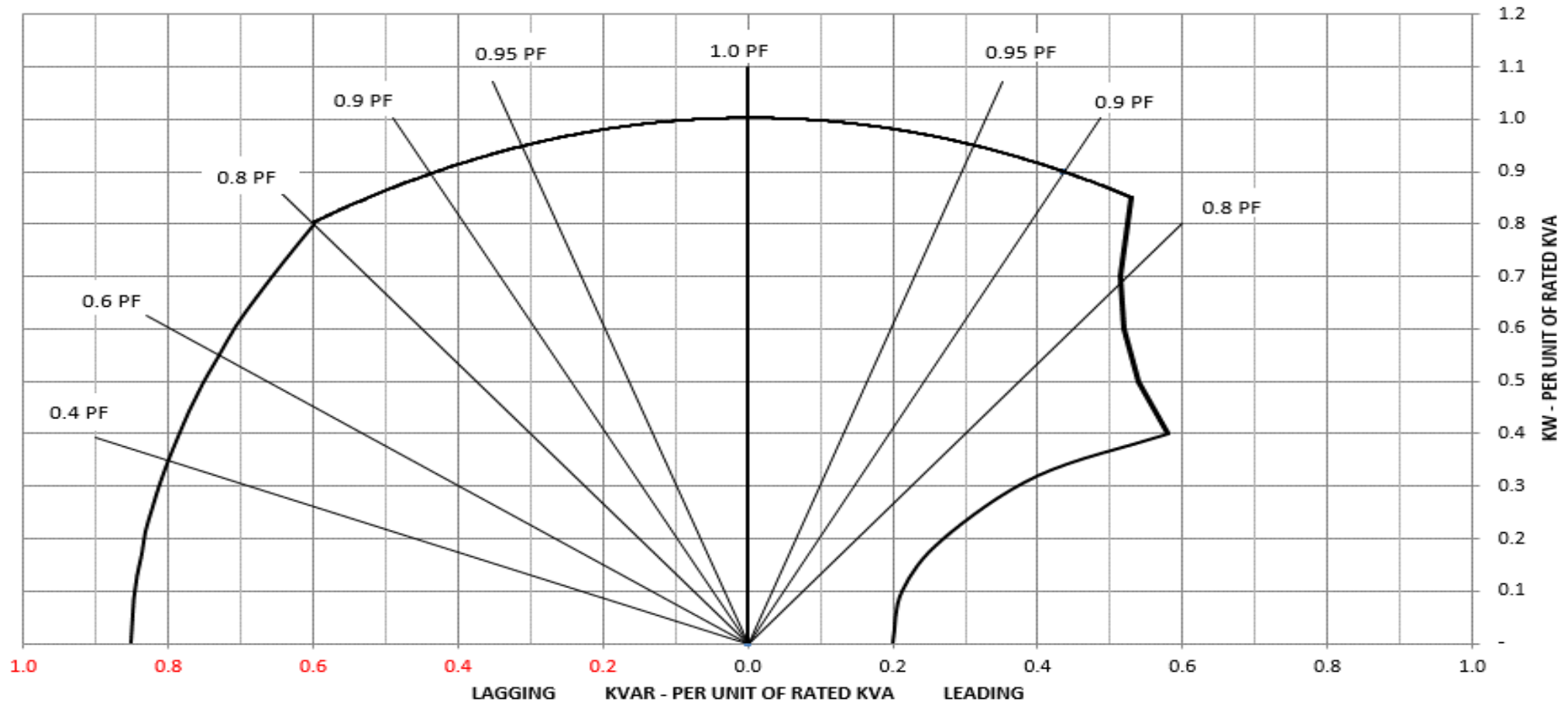
Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values



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Typical Reactive Capability Curve

Date : 02/09/22



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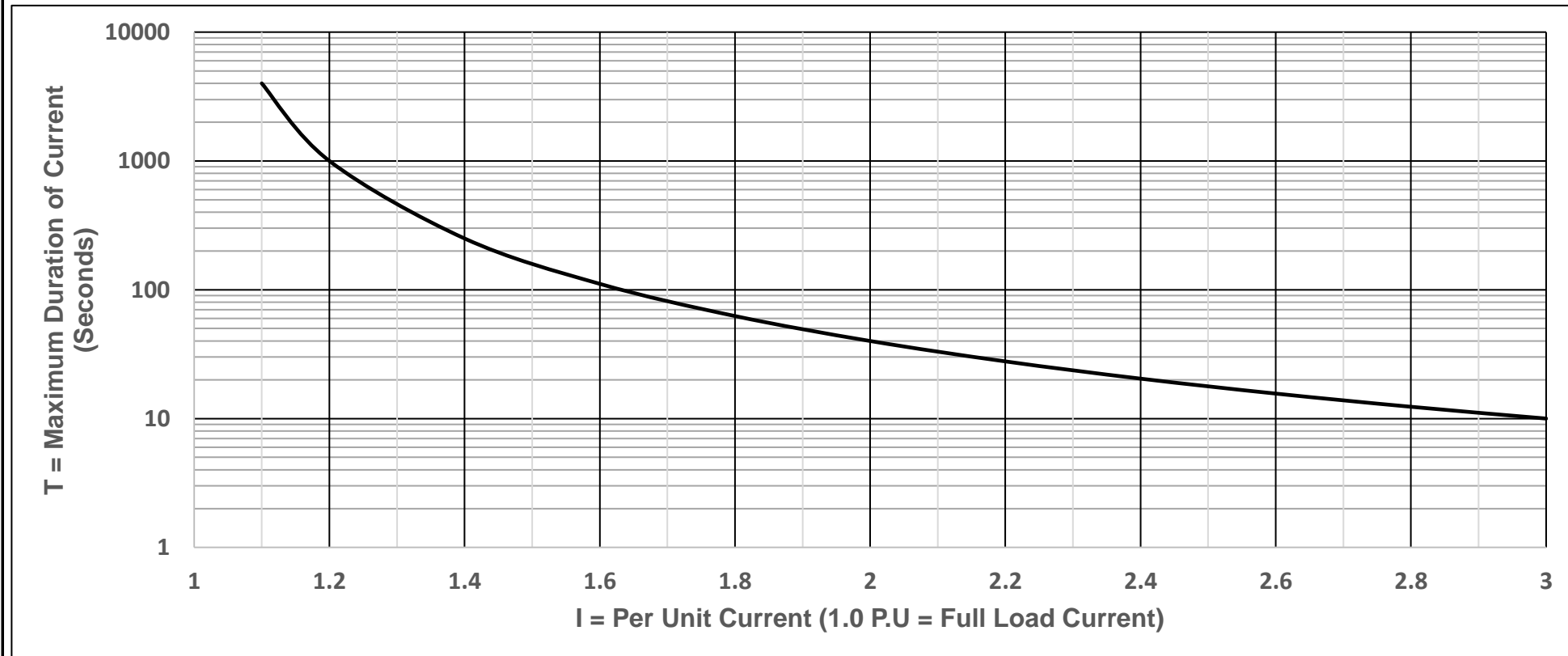
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THERMAL DAMAGE CURVE

Date : 02/09/22

Base is 3.0 P.U. current for 10 seconds from $T = 40/(I-1)^2$
Windings at operating temperature



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