

MAGNAPLUS®

TYPICAL SUBMITTAL DATA

BASE MODEL: **431PSL6202**

Winding: **1900**

Date: **01/28/22**

Kilowatt ratings at	1800 RPM	60 Hertz	12 Leads		
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	125 (156)	142 (178)	151 (189)	155 (194)	160 (200)
220/440	125 (156)	143 (179)	151 (189)	153 (191)	160 (200)
208/416	125 (156)	140 (175)	147 (184)	151 (189)	155 (194)
200/400	121 (151)	136 (170)	142 (178)	146 (183)	151 (189)
190/380	115 (144)	130 (163)	135 (169)	140 (175)	145 (181)

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: 208 Volts*, 151 kW, 189 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase **Low 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%	
			601.1c	Deviation Factor	5.0%		
401.1a	Stator Resistance, Line to Line Low Wye Connection	0.01795	Ohms	---	TIF (1960 Weightings)	<50	
	Rotor Resistance	0.598	Ohms	---	THF (IEC, BS & NEMA Weightings)	<2%	
	Exciter Stator	18.5	Ohms	---	Winding Pitch	2/3	
	Exciter Rotor	0.116	Ohms				
410.1a	No Load Exciter Field Amps at 208 Volts Line to Line	0.44	A DC	Additional Prototype Mil-Std Methods are Available on Request.			
420.1a	Short Circuit Ratio	0.312					
421.1a	Xd Synchronous Reactance	4.144	PU	--	Generator Frame	431	
		0.950	Ohms	--	Type	MagnaPlus	
422.1a	X2 Negative Sequence React.	0.348	PU	--	Insulation	Class H	
		0.080	Ohms	--	Coupling - Single Bearing	Flexible	
423.1a	X0 Zero Sequence Reactance	0.065	PU	--	Amortisseur Windings	Full	
		0.015	Ohms	--	Excitation	Ext. Voltage Regulated, Brushless	
425.1a	X'd Transient Reactance	0.246	PU	--	Voltage Regulator	SE350	
		0.056	Ohms	--	Voltage Regulation	1.00%	
426.1a	X''d Subtransient Reactance	0.236	PU				
		0.054	Ohms				
--	Xq Quadrature Synchronous Reactance	1.917	PU	--	Cooling Air Volume	1280	CFM
		0.439	Ohms	--	Heat rejection rate	1010	Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.048	Sec	--	Full load current	523.9	Amps
				--	Minimum Input hp required	226.2	HP
428.1a	T''d Subtransient Short Circuit Time Constant	0.005	Sec	--	Full load torque	660	Lb-ft
				--	Efficiency at rated load :	89.5%	
430.1a	T'do Transient Open Circuit Time Constant	1.34	Sec				
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.014	Sec	--	Weight	1220	lbs

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

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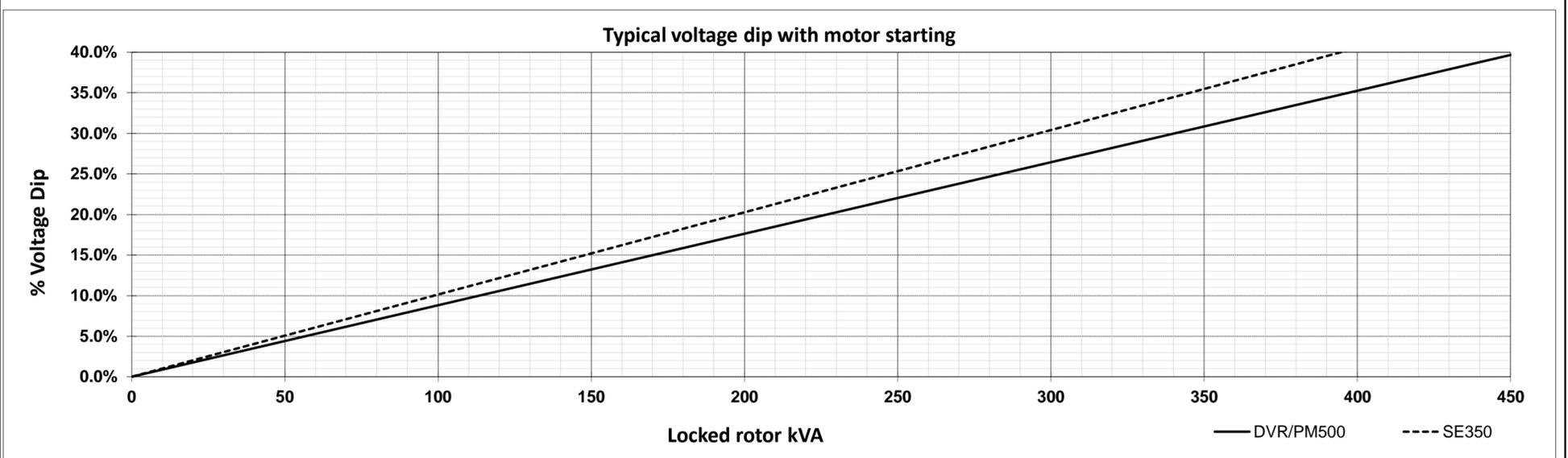
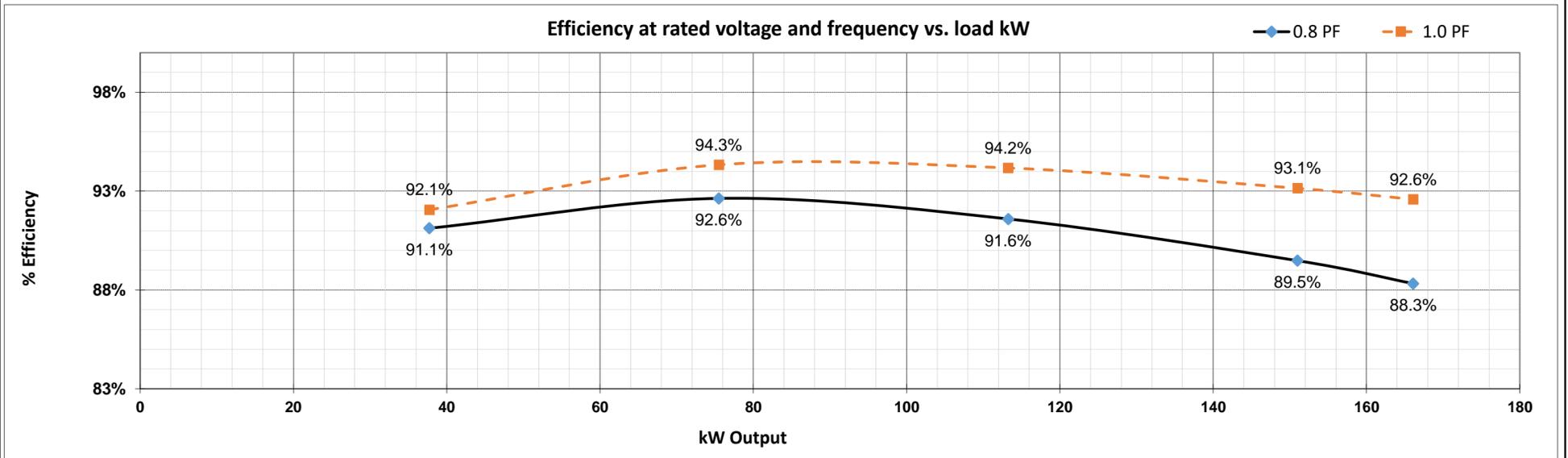
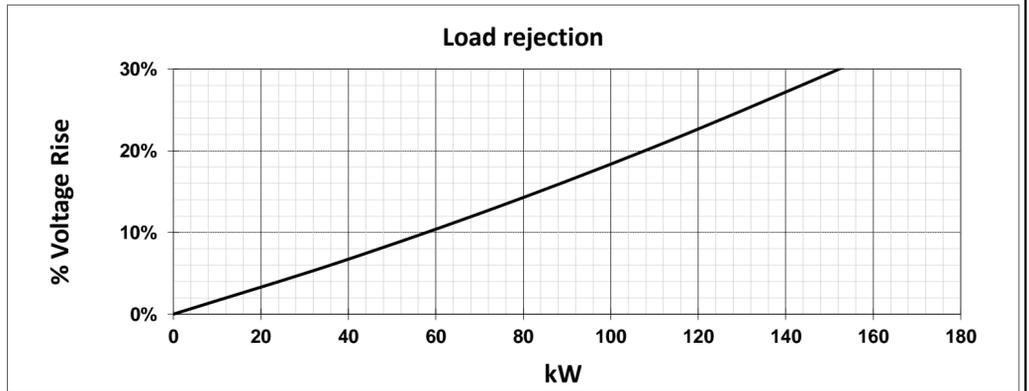
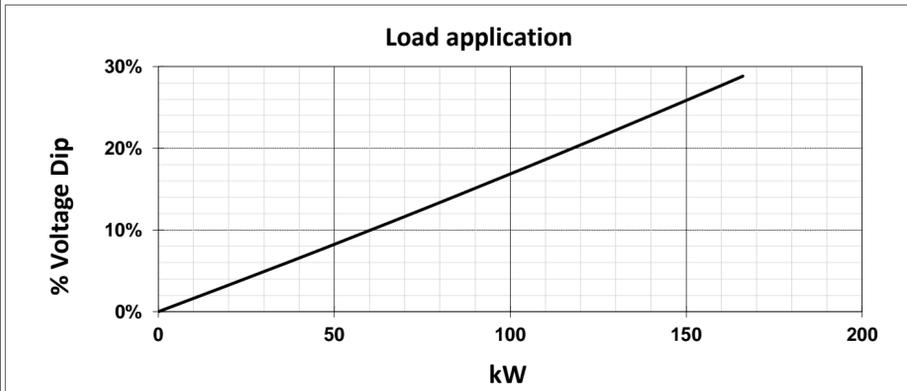
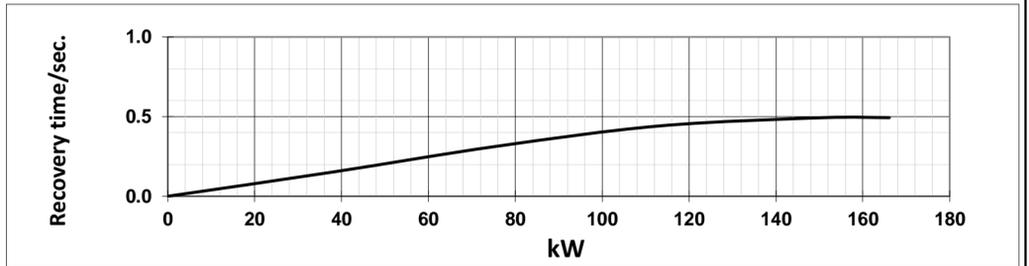
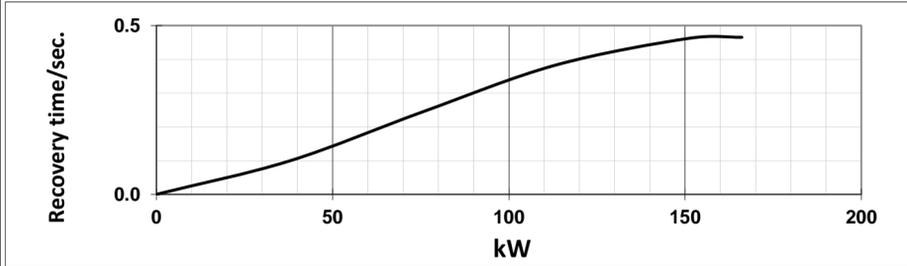
MAGNAPLUS®

TYPICAL DYNAMIC CHARACTERISTICS

BASE MODEL: **431PSL6202**

Date: **01/28/22**

Submittal Data: **208 Volts*, 151 kW, 189 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase**



MAGNAPLUS®

DECREMENT CURVE

BASE MODEL: 431PSL6202

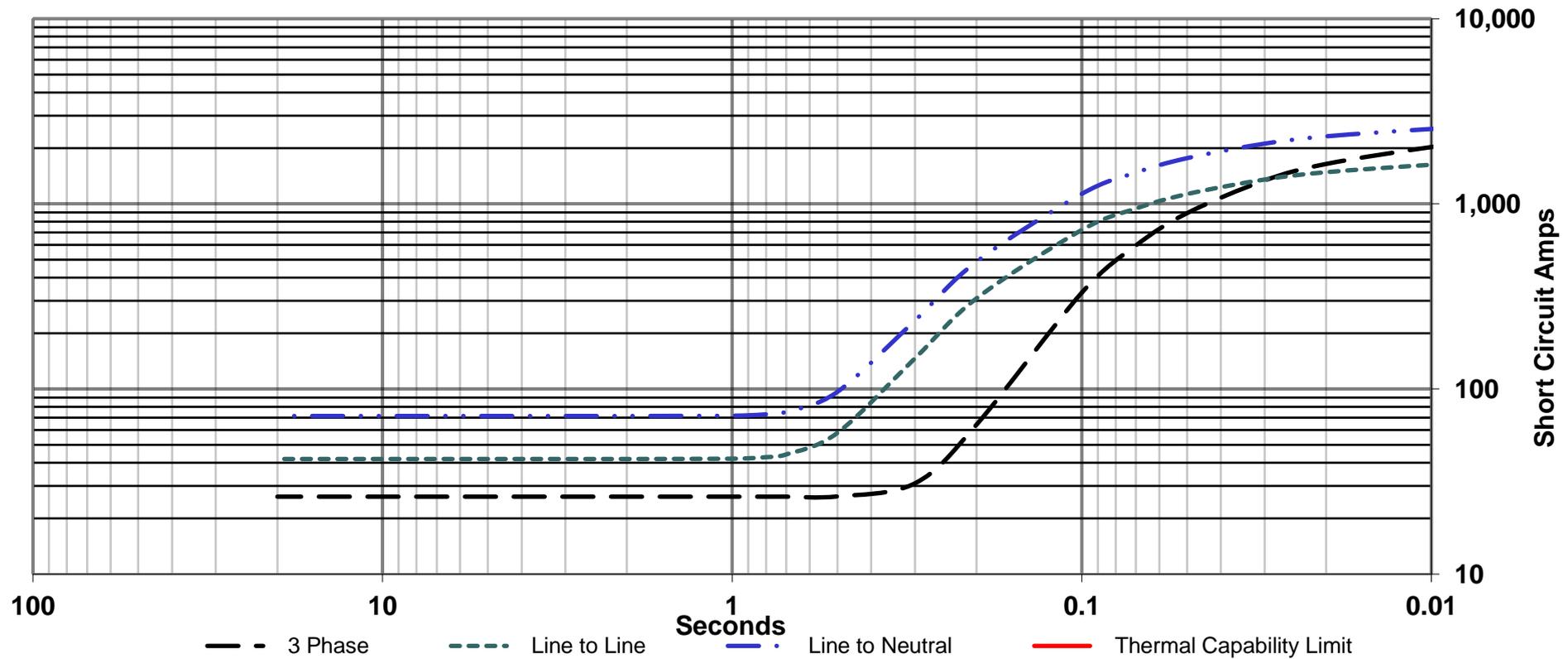
Submittal Data: 208 Volts*, 151 kW, 189 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Date : 01/28/22

Full Load Current : 523.9 amps
Steady State S.C. Current : 26.2 amps

Max. 3 ph. Symm. S.C. Current : 2219 amps

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



MAGNAPLUS®

DECREMENT CURVE

BASE MODEL: 431PSL6202

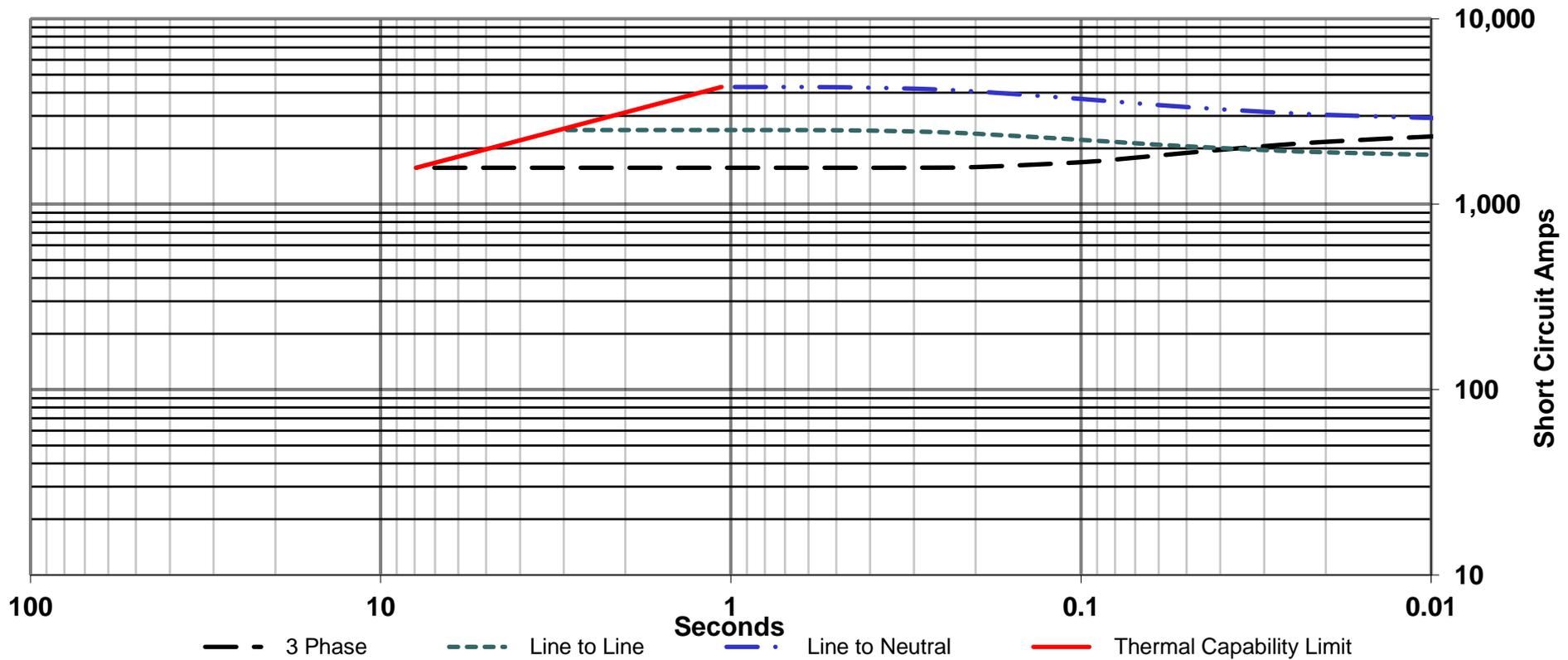
Submittal Data: 208 Volts*, 151 kW, 189 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Date : 01/28/22

Full Load Current : 523.9 amps
Steady State S.C. Current : 1571.7 amps

Max. 3 ph. Symm. S.C. Current : 2219 amps
INCLUDES EXCITATION SUPPORT (PMG)

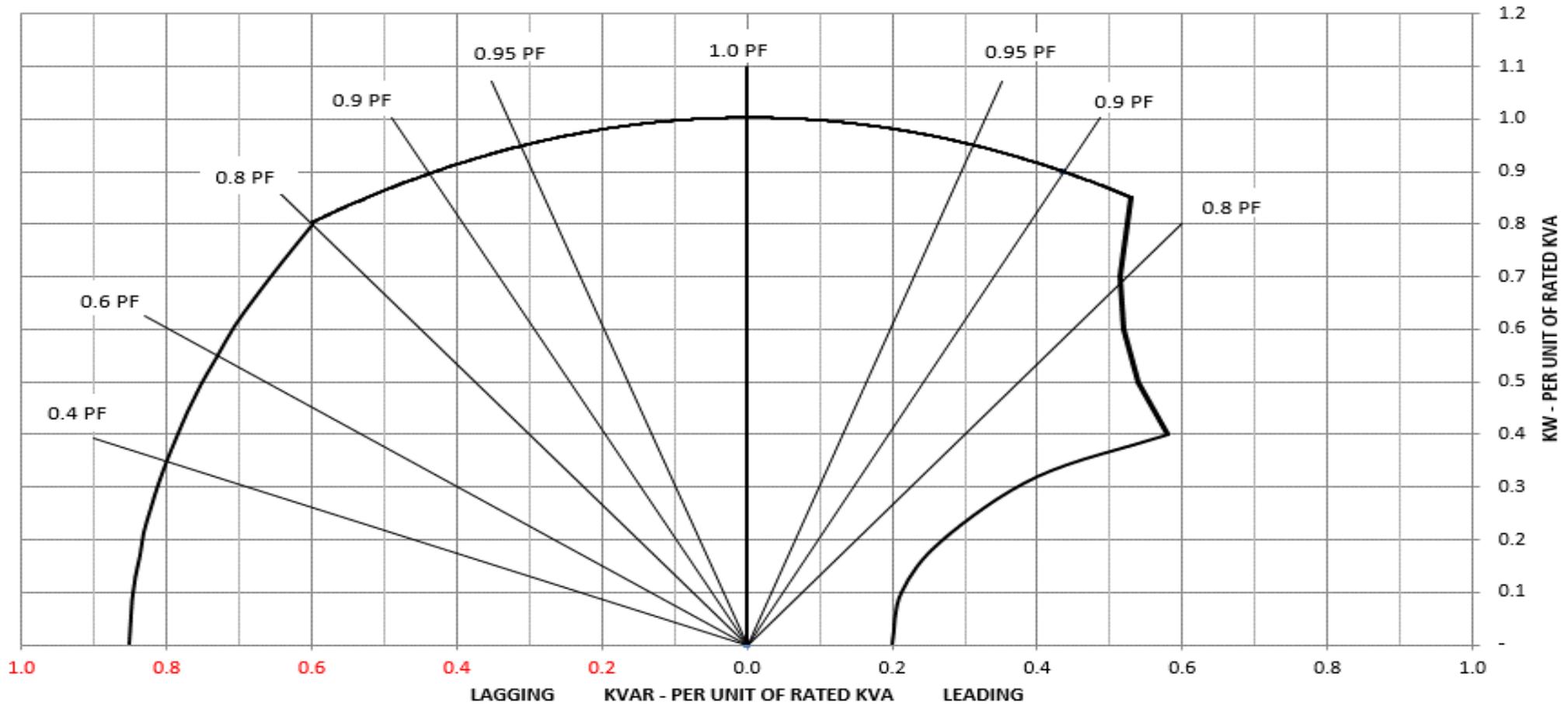
Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values



MAGNAPLUS®

Typical Reactive Capability Curve

Date : 01/28/22



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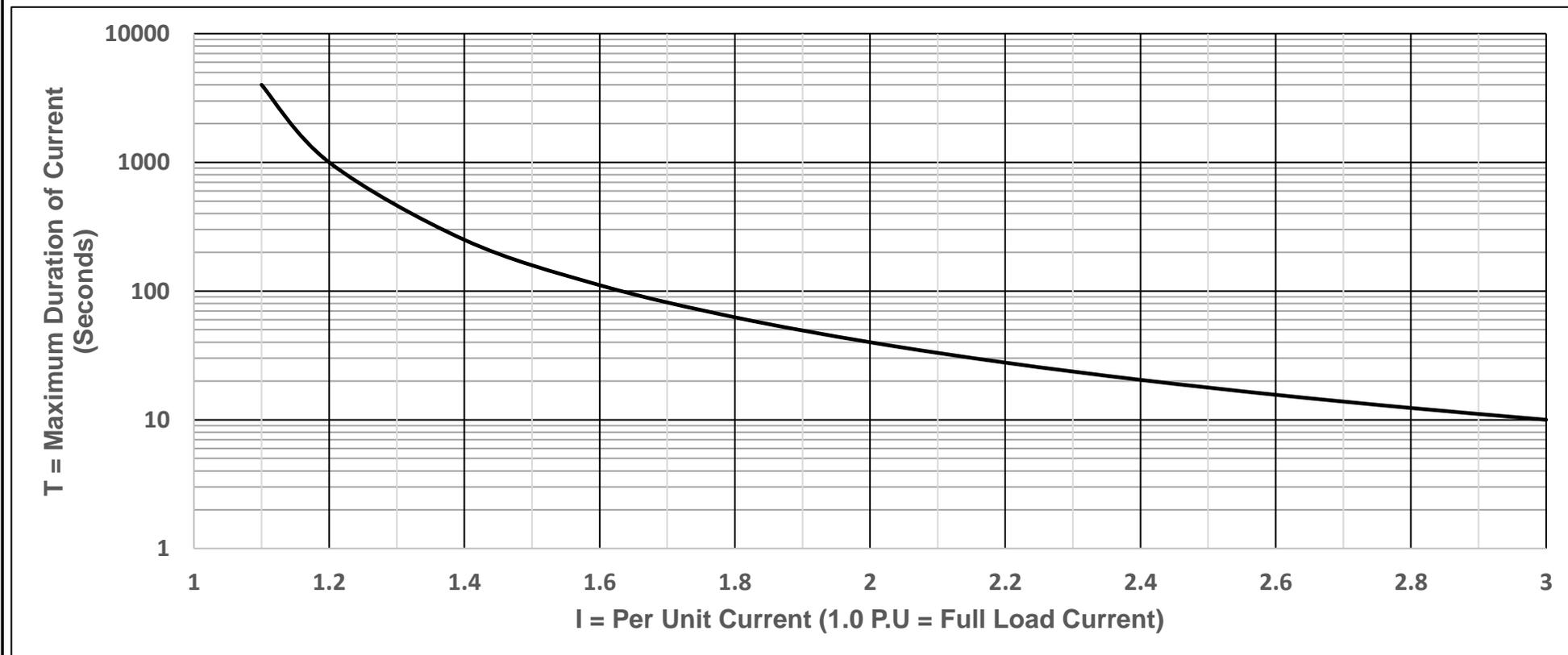
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THERMAL DAMAGE CURVE

Date : 01/28/22

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



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