

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: Standard Efficiency Three-Phase	Product code :	14796992	
		Catalog # :	.5012ES3E56-S	
Frame	: 56	Cooling method	: IC411 - TEFC	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight ²	: 26.5 lb	
Protection degree	: IP55	Moment of inertia (J)	: 0.1065 sq.ft.lb	
Output [HP]	0.5	0.5	0.5	
Poles	6	6	6	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	2.19-1.98/0.992	2.14/1.07	2.02/1.07	
L. R. Amperes [A]	11.8-10.7/5.36	9.20/4.60	9.28/4.92	
LRC [A]	5.4x(Code K)	4.3x(Code G)	4.6x(Code H)	
No load current [A]	1.33-1.54/0.772	1.52/0.758	1.54/0.816	
Rated speed [RPM]	1160	945	950	
Slip [%]	3.33	5.50	5.00	
Rated torque [ft.lb]	2.26	2.78	2.76	
Locked rotor torque [%]	210	160	180	
Breakdown torque [%]	300	210	240	
Service factor		1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	39s (cold) 22s (hot)	0s (cold) 0s (hot)	0s (cold) 0s (hot)	
Noise level ²	50.0 dB(A)	48.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%	62.0	63.8	61.2
	50%	64.0	64.8	62.9
	75%	70.0	69.4	68.6
	100%	72.0	69.9	70.1
Power Factor	25%	0.24	0.29	0.27
	50%	0.44	0.52	0.49
	75%	0.56	0.65	0.62
	100%	0.65	0.75	0.71
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: V'Ring Without Bearing Seal	Max. traction	: 52 lb	
		Max. compression	: 78 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes USABLE @208V SF 1.00				
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.		These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.		
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Performed by				
Checked by			Page	Revision
Date	11/04/2022		1 / 13	

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Standard Efficiency Three-Phase

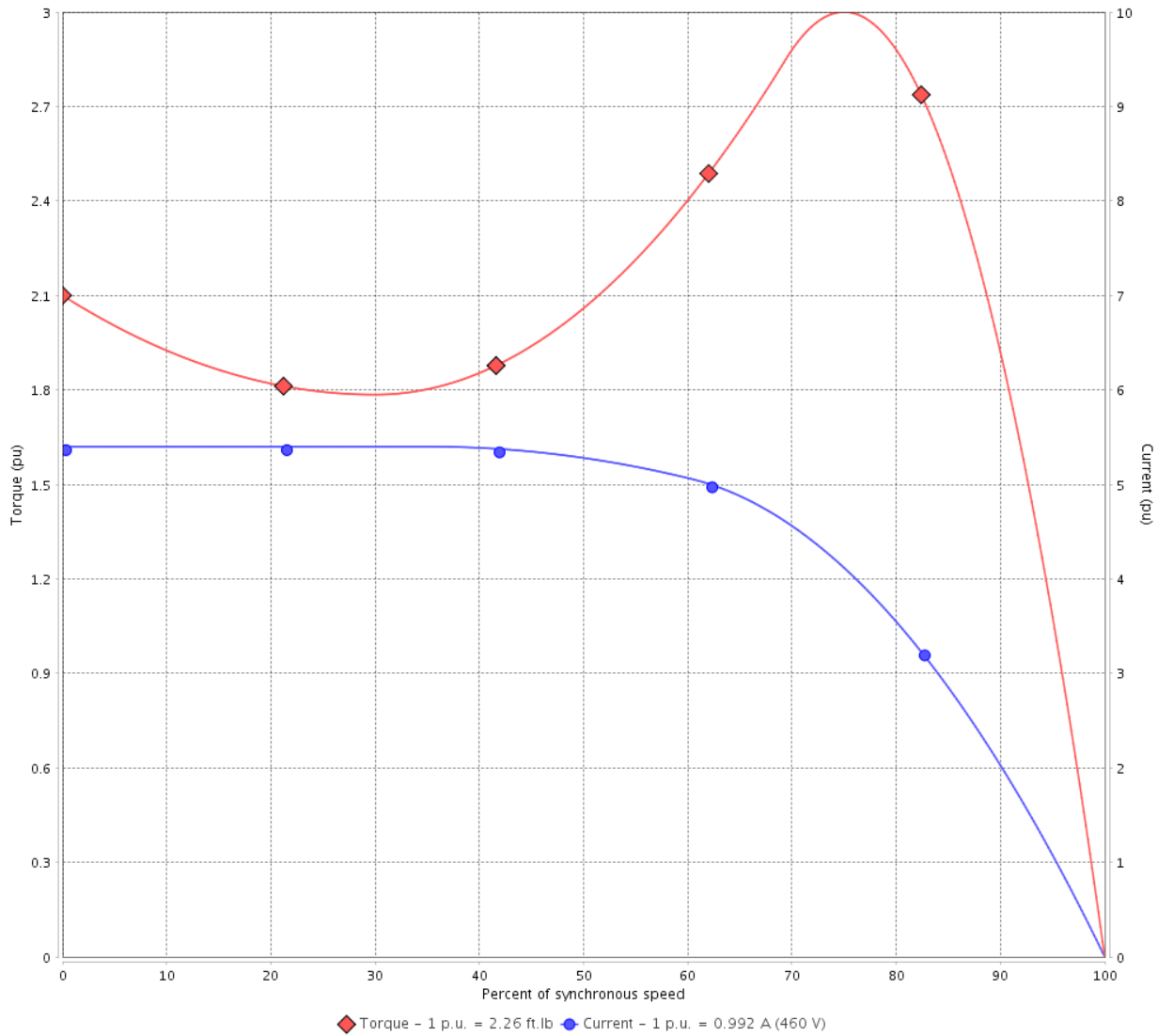
Product code :

14796992

Catalog # :

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TORQUE AND CURRENT VS SPEED CURVE



Performance : 208-230/460 V 60 Hz 6P

Rated current : 2.19-1.98/0.992 A
 LRC : 5.4
 Rated torque : 2.26 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 300 %
 Rated speed : 1160 rpm

Moment of inertia (J) : 0.1065 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

Locked rotor time : 39s (cold) 22s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



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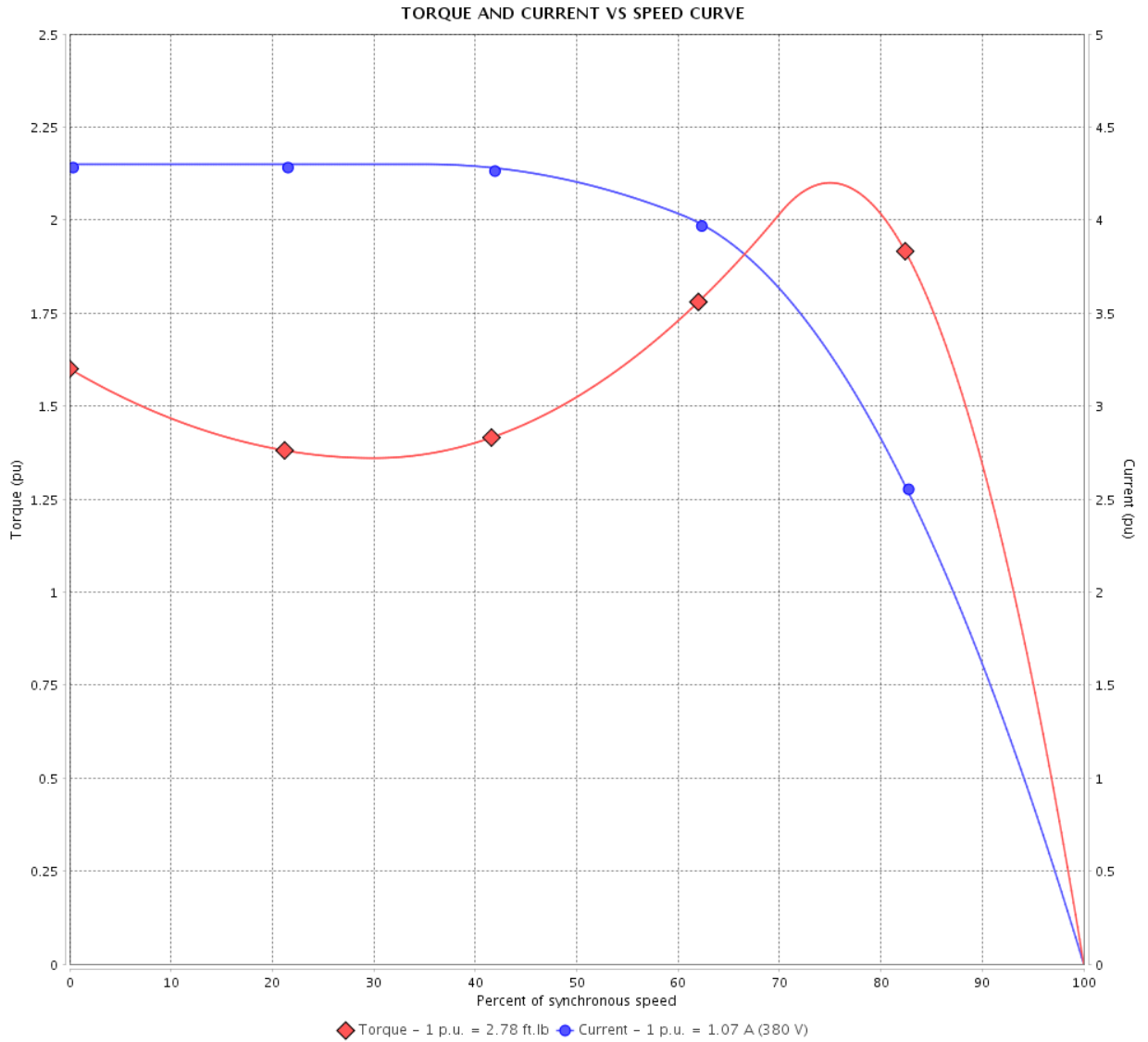
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Performance : 190/380 V 50 Hz 6P

Rated current : 2.14/1.07 A
 LRC : 4.3
 Rated torque : 2.78 ft.lb
 Locked rotor torque : 160 %
 Breakdown torque : 210 %
 Rated speed : 945 rpm

Moment of inertia (J) : 0.1065 sq.ft.lb
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 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 0s (cold) 0s (hot)

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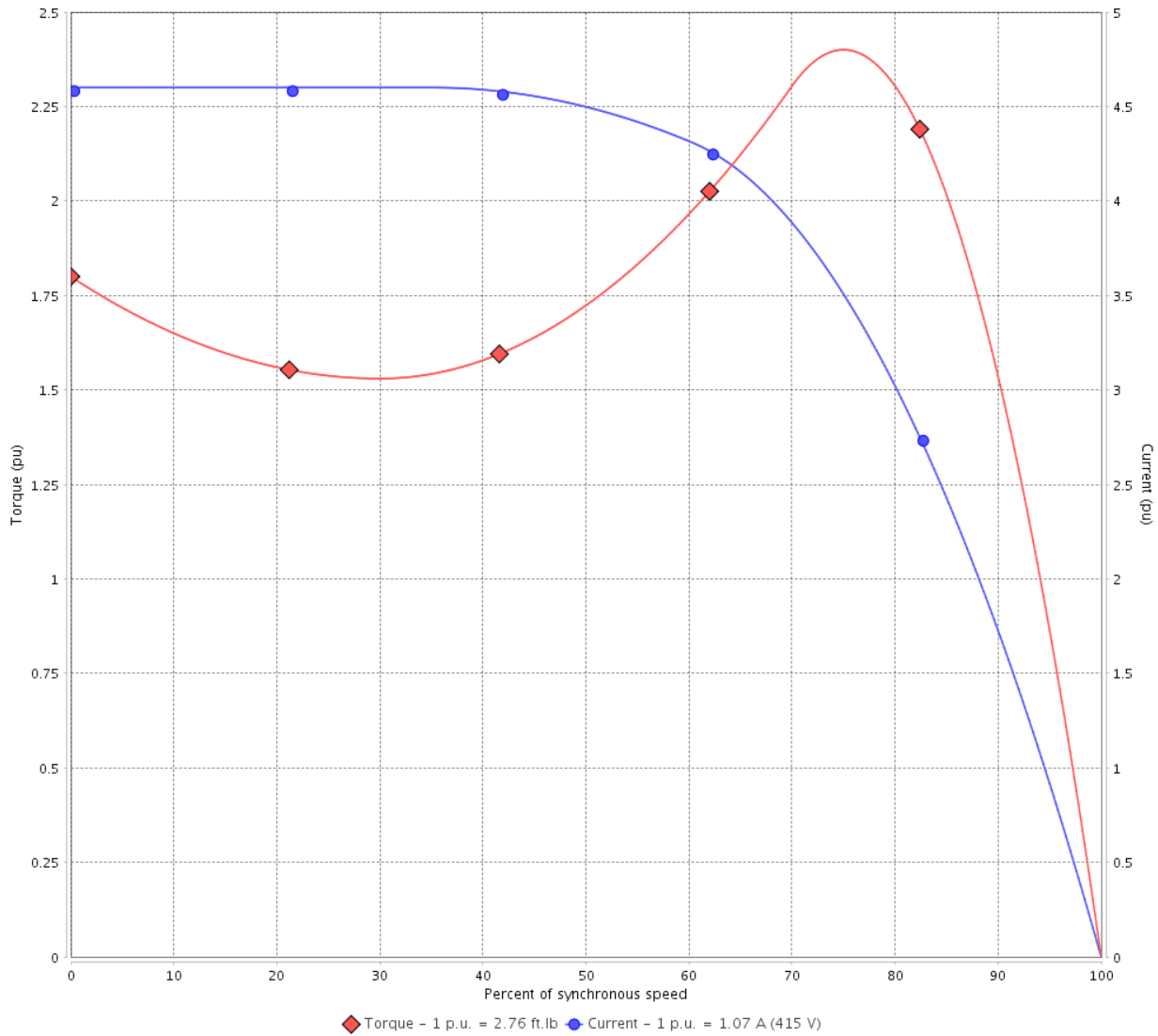
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 2.02/1.07 A
 LRC : 4.6
 Rated torque : 2.76 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 240 %
 Rated speed : 950 rpm

Moment of inertia (J) : 0.1065 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 0s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

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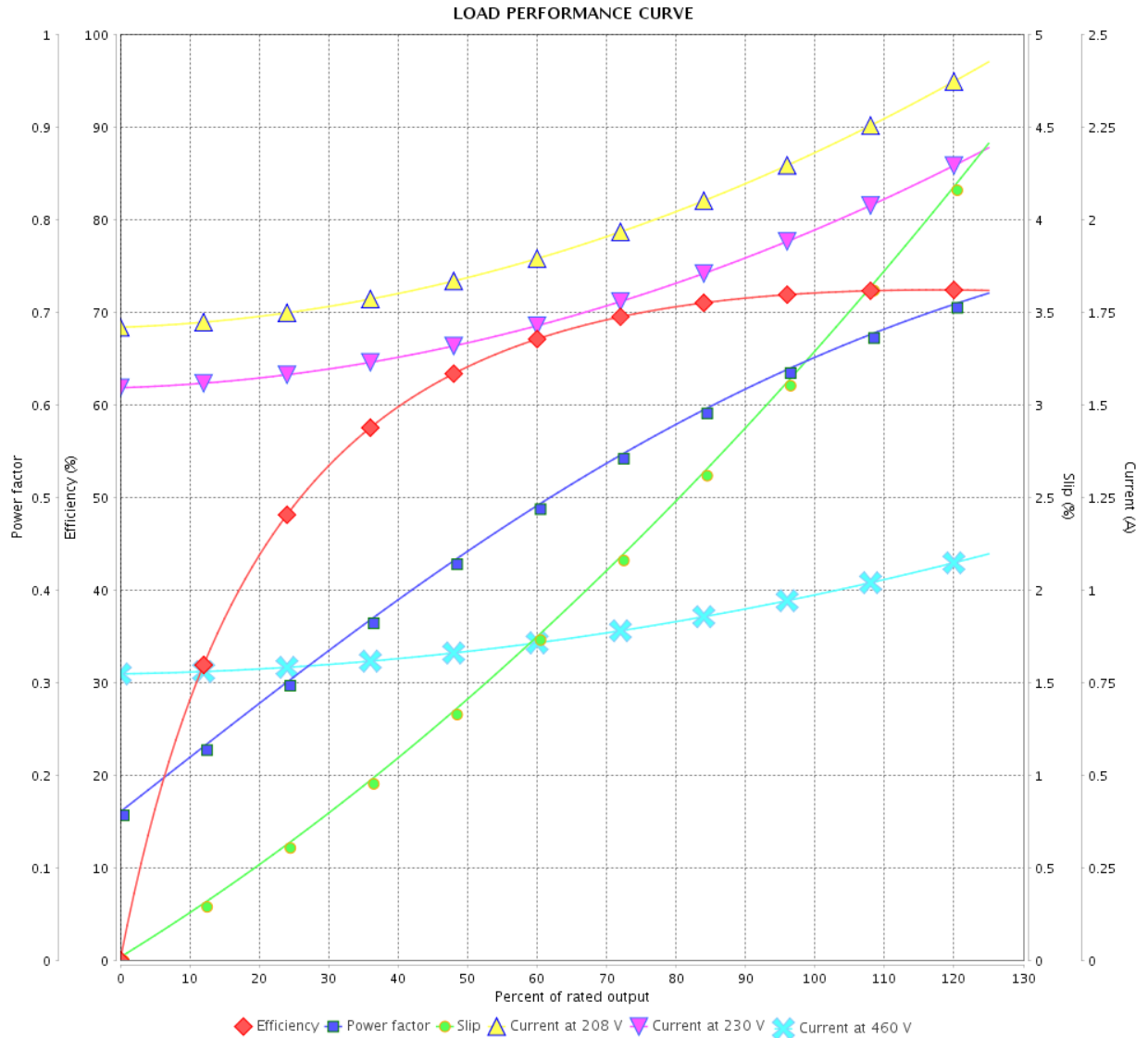
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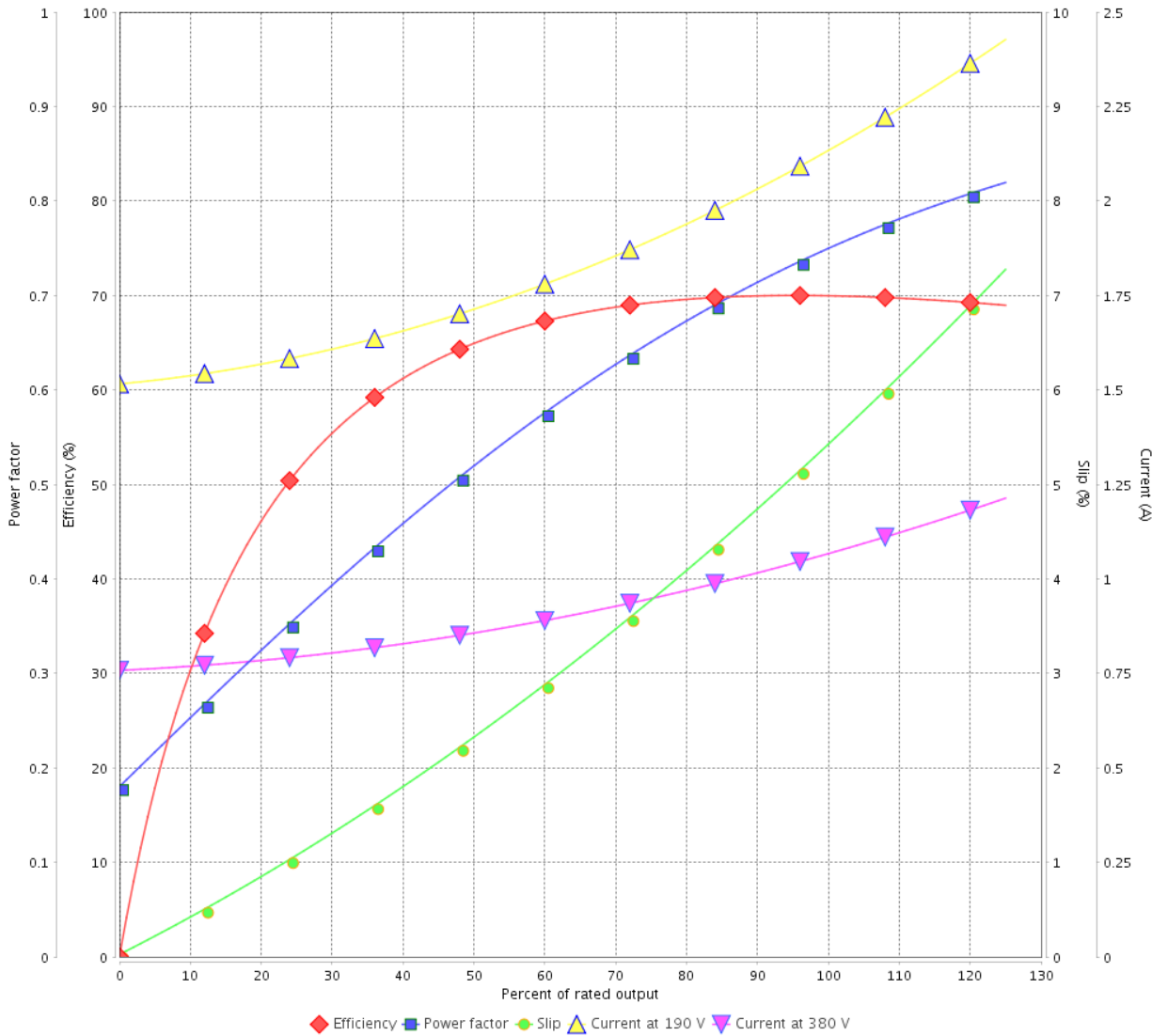
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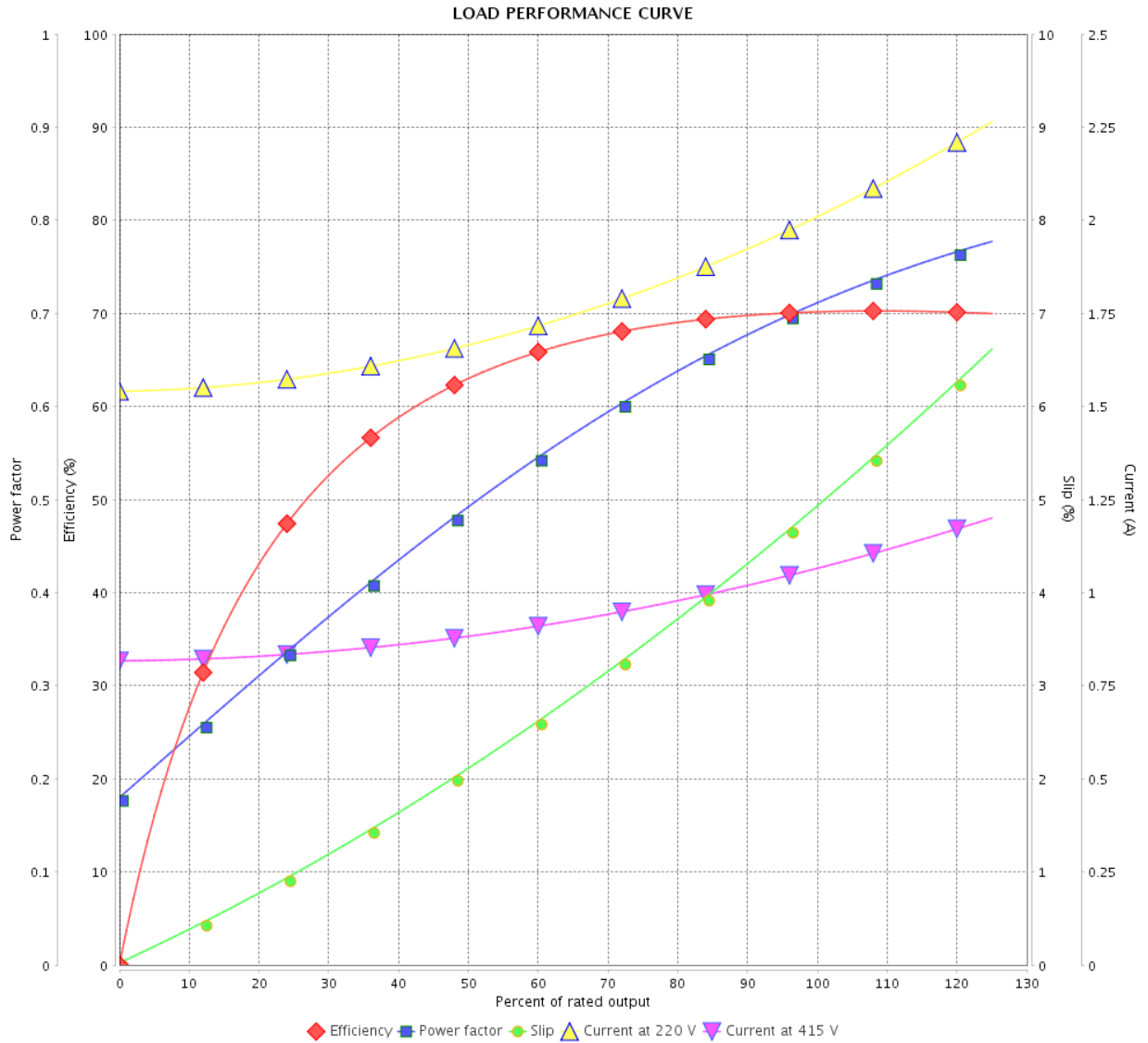
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THERMAL LIMIT CURVE

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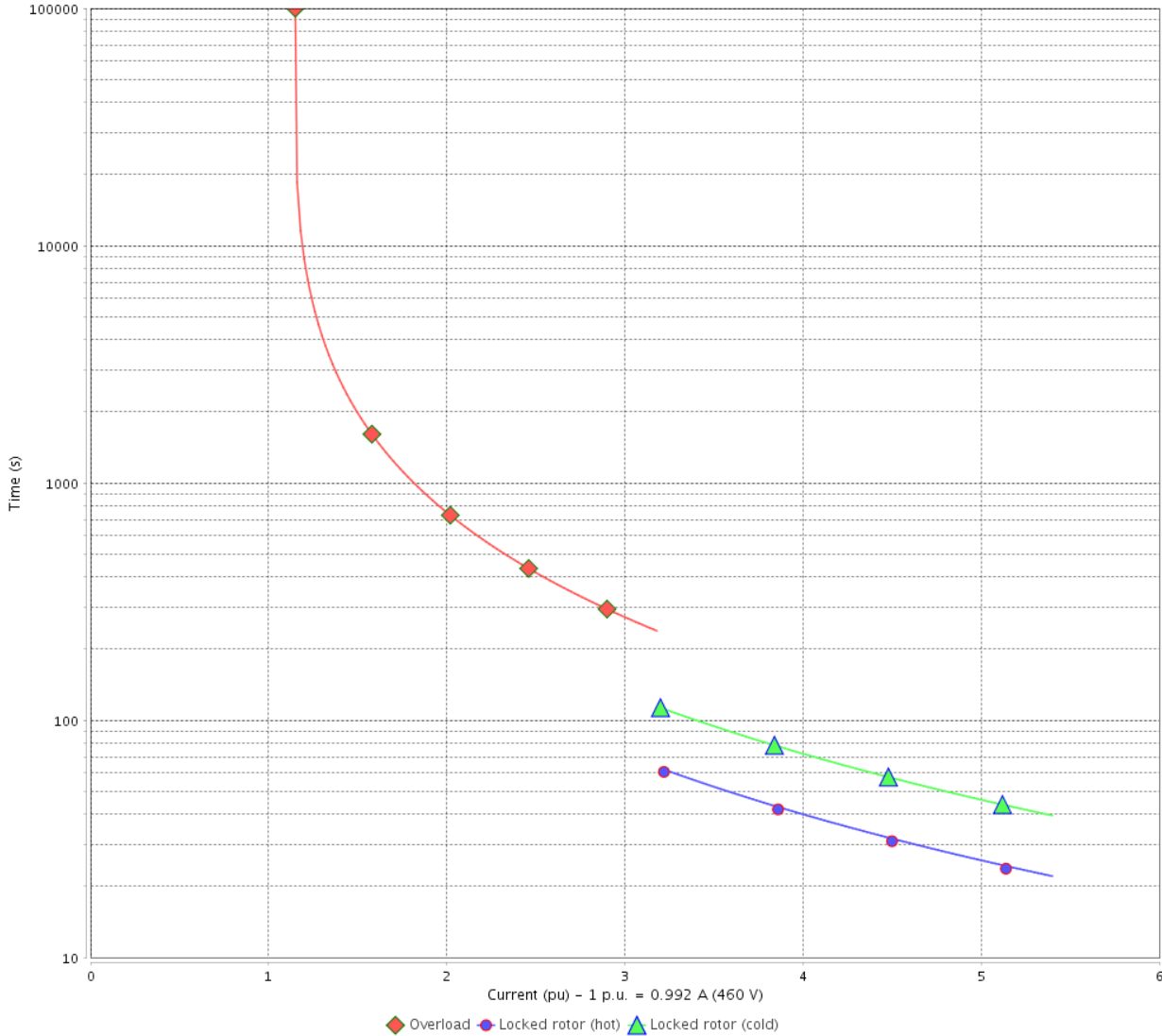
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Heating constant

Cooling constant

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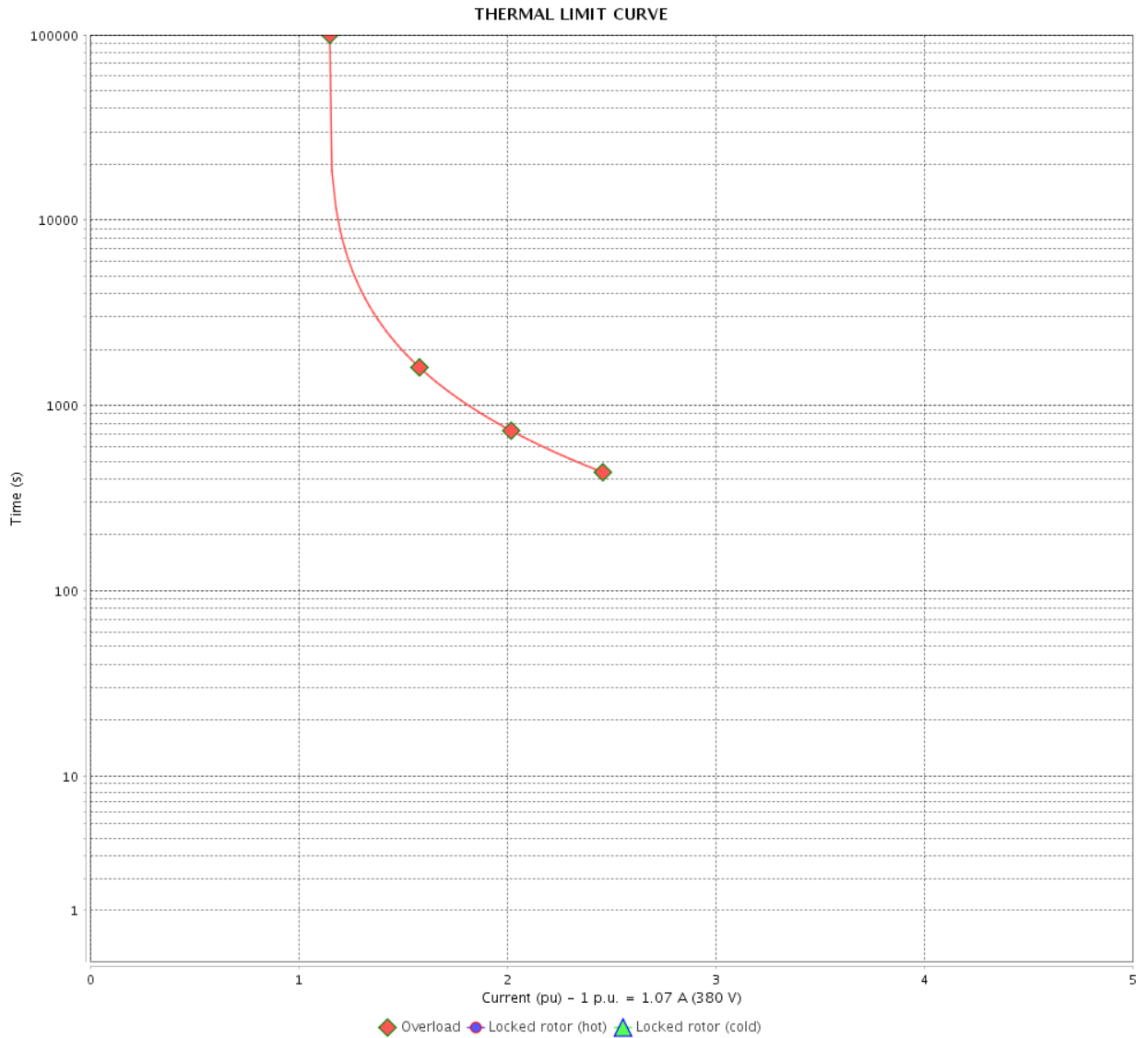
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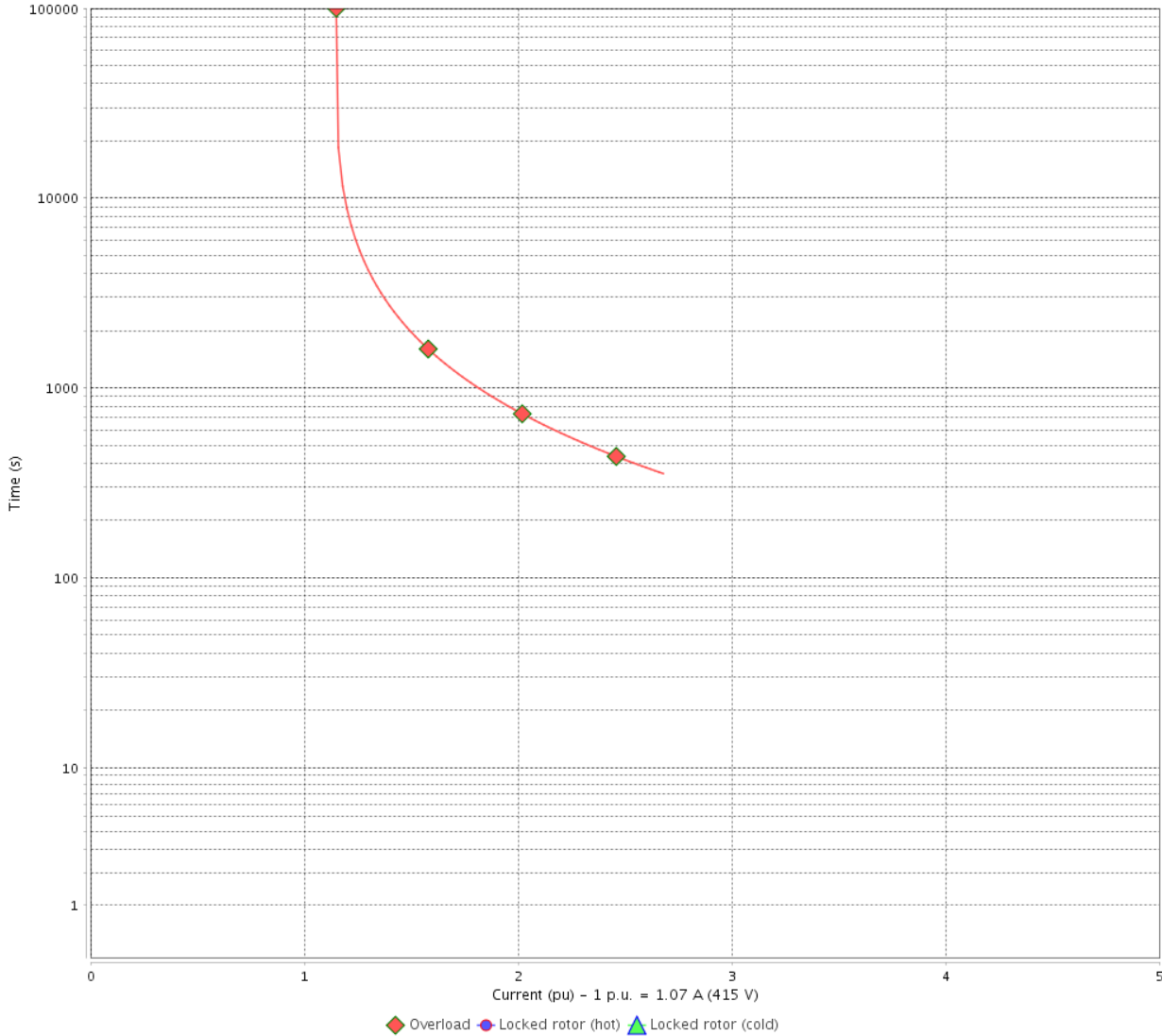
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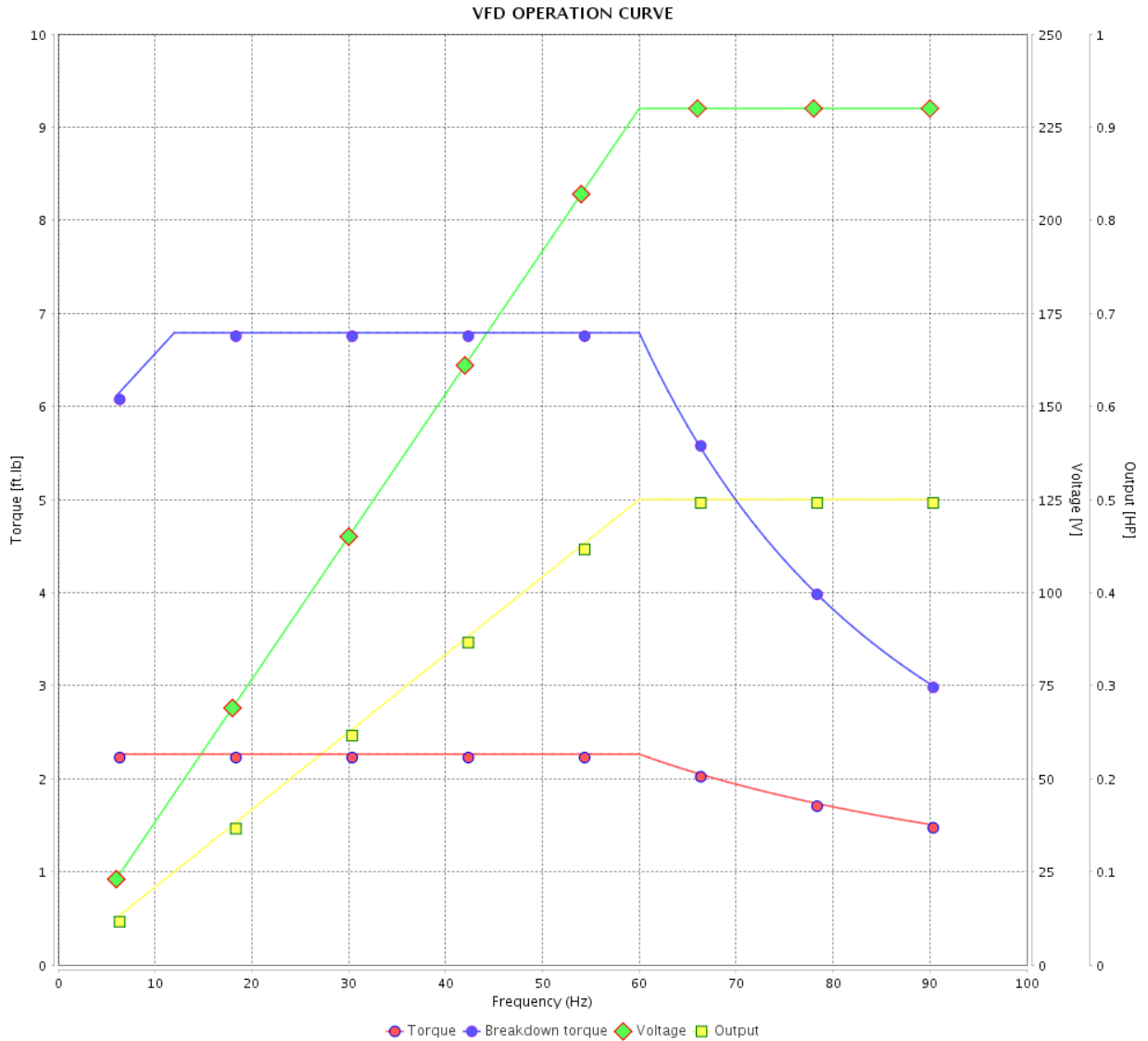
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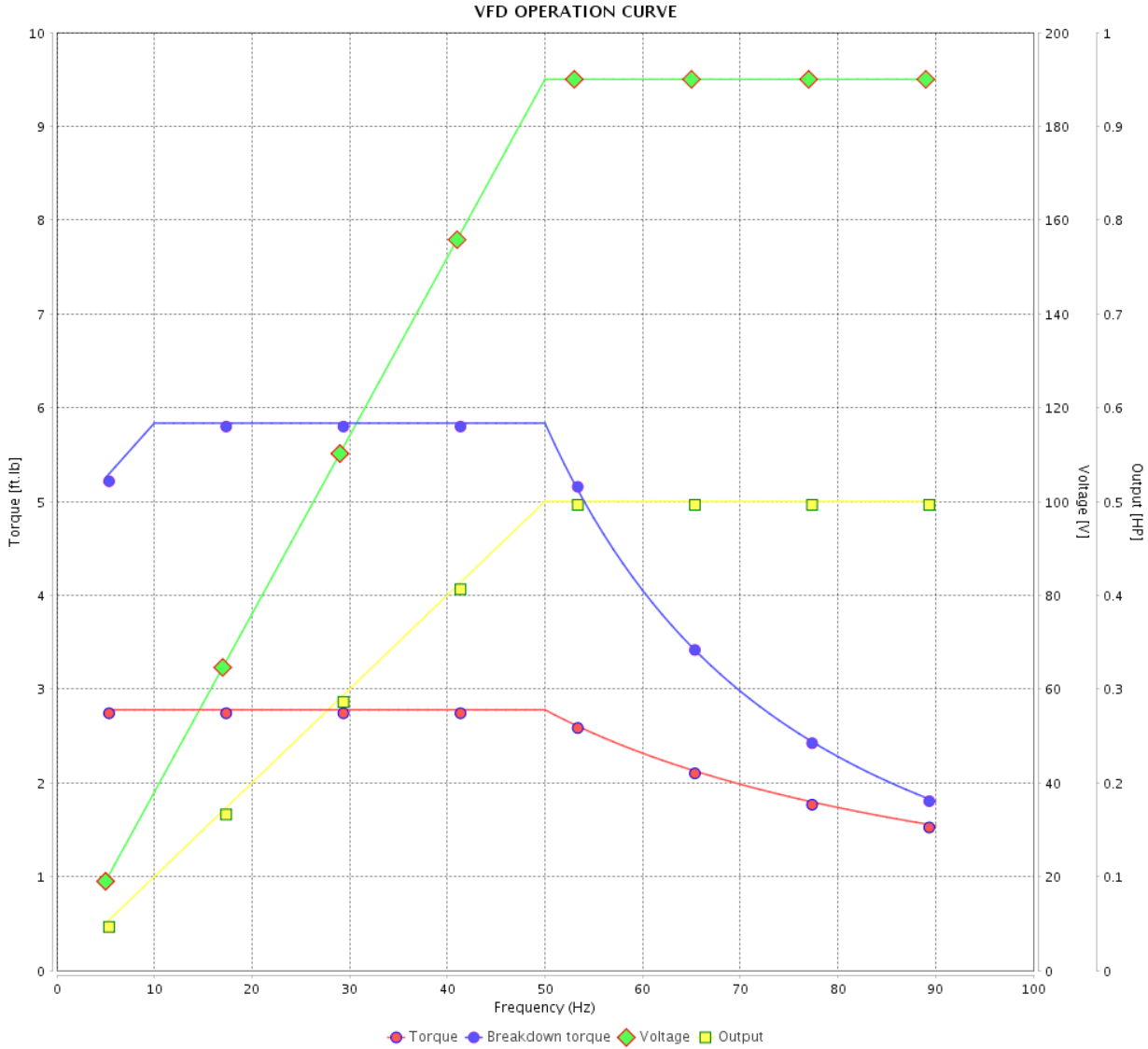
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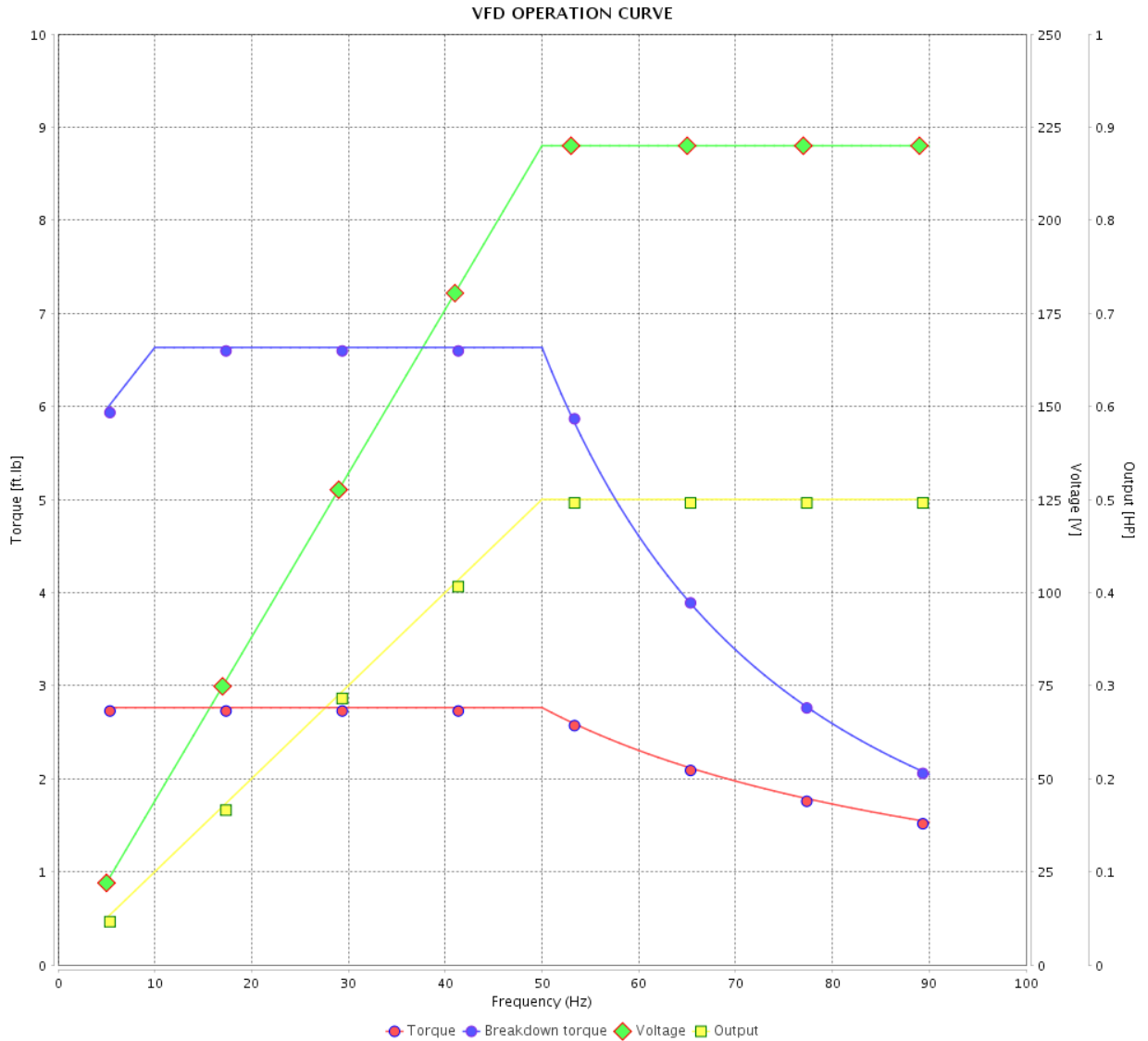
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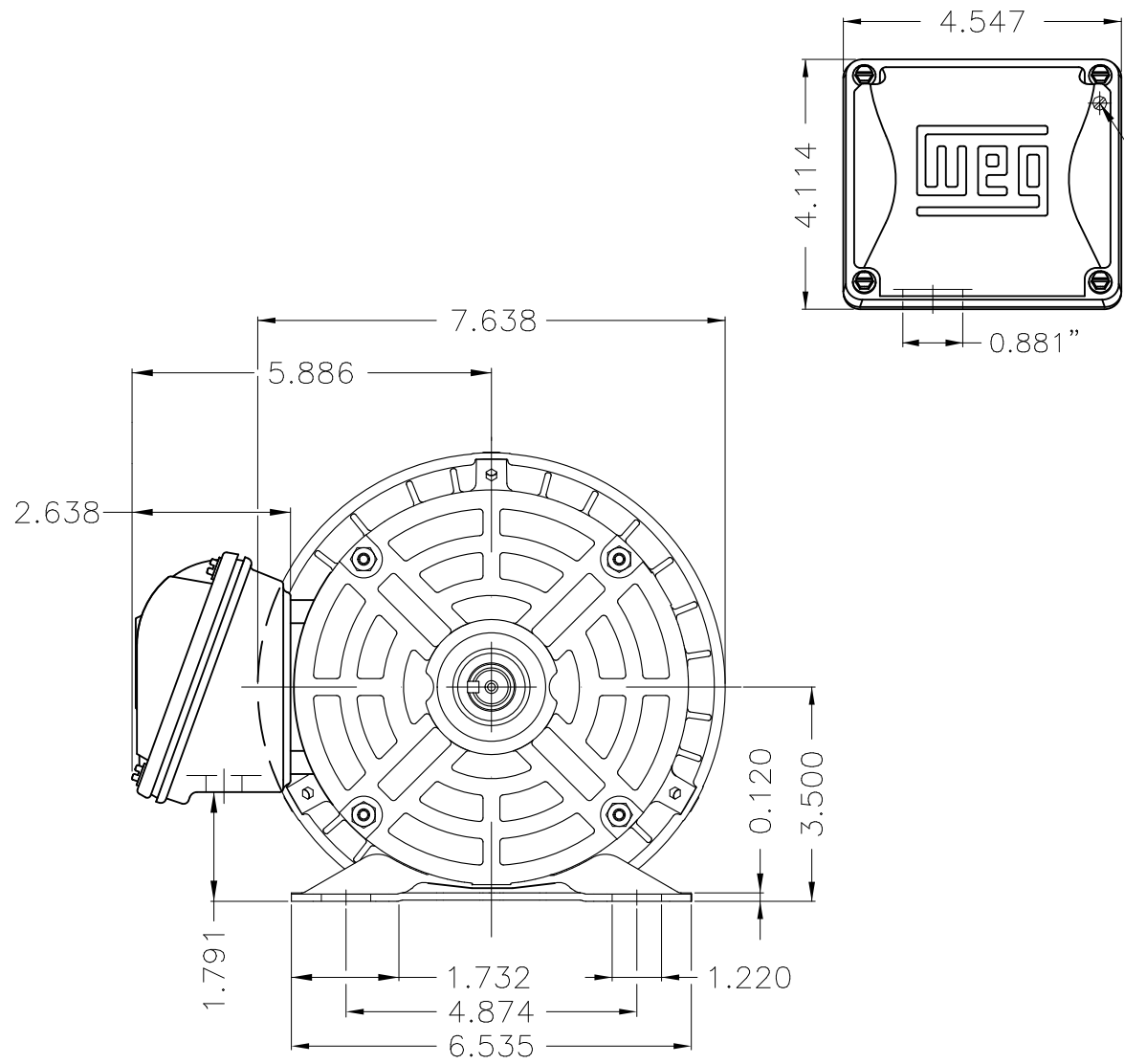
A

B

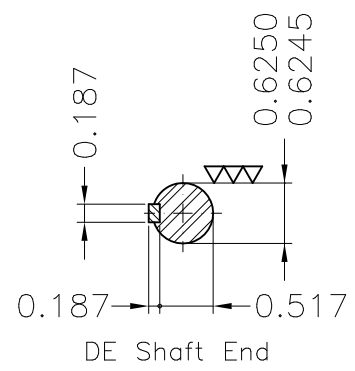
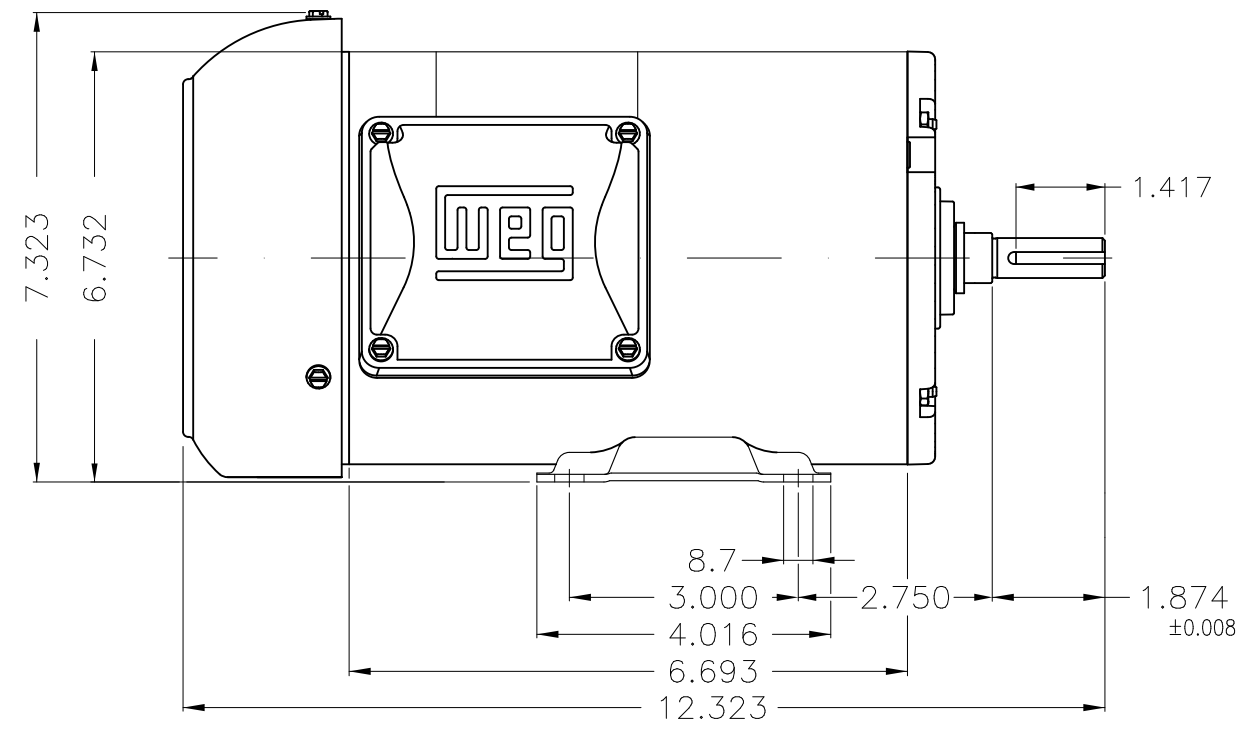
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D


E



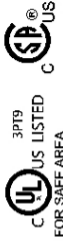
Grounding



Dimensions in inches

Fan cover - steel plate											
Without coating											
Mounting F-1/B3R(D)											
ECM	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL						PREVIEW WDD			
CHECKED		FRAME 56 IP55 TEFC									
RELEASED											
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1					

0.5 HP 06 Poles 60 Hz



MADE IN BRAZIL

MAT: 14796992
W01.TE0IC0X0X
MODEL .5012ES3E56-S
11APR2022 B/N:

For 60Hz: Class I, Zone 2, IIC
Class I, Div.2, Gr. A,B,C,D - T3
Div 2 Inverter Duty (SF1.00)
CT 2:1/VT 1000:1

PH 3	Hz 60	HP 0.50
FR 56		KW 0.37
DUTY CONT.		V 208-230/460
ALT 1000 m.a.s.l.		A 2.19-1.98/0.992
INS CL F AT 80K	IP55	SFA 2.19-2.28/1.14
AMB 40°C	DES -	SF 1.15
ENCL TEFC	CODE K	PF 0.65
USABLE @ 208V SF1.00		RPM 1160
		NEMA 72.0%
		NOM. EFF

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.15
2.14-2.02/1.07-1.07A 945RPM EFF 89.8% (IE2) IEC 60034-1

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

DE 6203-ZZ ODE 6202-ZZ MOBIL POLYREX EM



T1-BLU T2-WHT
T3-ORG T4-YEL
T5-BLK T6-GRY
T7-PNK T8-RED
T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION



WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

AVERTISSEMENT: Le moteur doit être mis à la terre

conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

