

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: Premium Efficiency Three-Phase	Product code :	14016910	
		Catalog # :	.50120T3E56-S	
Frame	: 56	Cooling method	: IC01 - ODP	
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	: 21.9 lb	
		Moment of inertia (J)	: 0.0888 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]	2.06-1.87/0.934	2.08/1.04	1.94/1.03	
L. R. Amperes [A]	10.5-9.53/4.76	8.32/4.16	8.35/4.43	
LRC [A]	5.1x(Code J)	4.0x(Code F)	4.3x(Code G)	
No load current [A]	1.29-1.50/0.750	1.45/0.727	1.49/0.789	
Rated speed [RPM]	1155	935	945	
Slip [%]	3.75	6.50	5.50	
Rated torque [ft.lb]	2.27	2.81	2.78	
Locked rotor torque [%]	200	150	170	
Breakdown torque [%]	260	200	220	
Service factor		1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	50s (cold) 28s (hot)	52s (cold) 29s (hot)	46s (cold) 26s (hot)	
Noise level ²	50.0 dB(A)	48.0 dB(A)	48.0 dB(A)	
Efficiency (%)	25%	66.4	68.9	65.7
	50%	68.0	68.8	66.7
	75%	74.0	72.1	71.3
	100%	75.3	71.3	71.8
Power Factor	25%	0.23	0.29	0.26
	50%	0.43	0.52	0.48
	75%	0.56	0.66	0.62
	100%	0.66	0.76	0.72
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 49 lb	
		Max. compression	: 71 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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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase

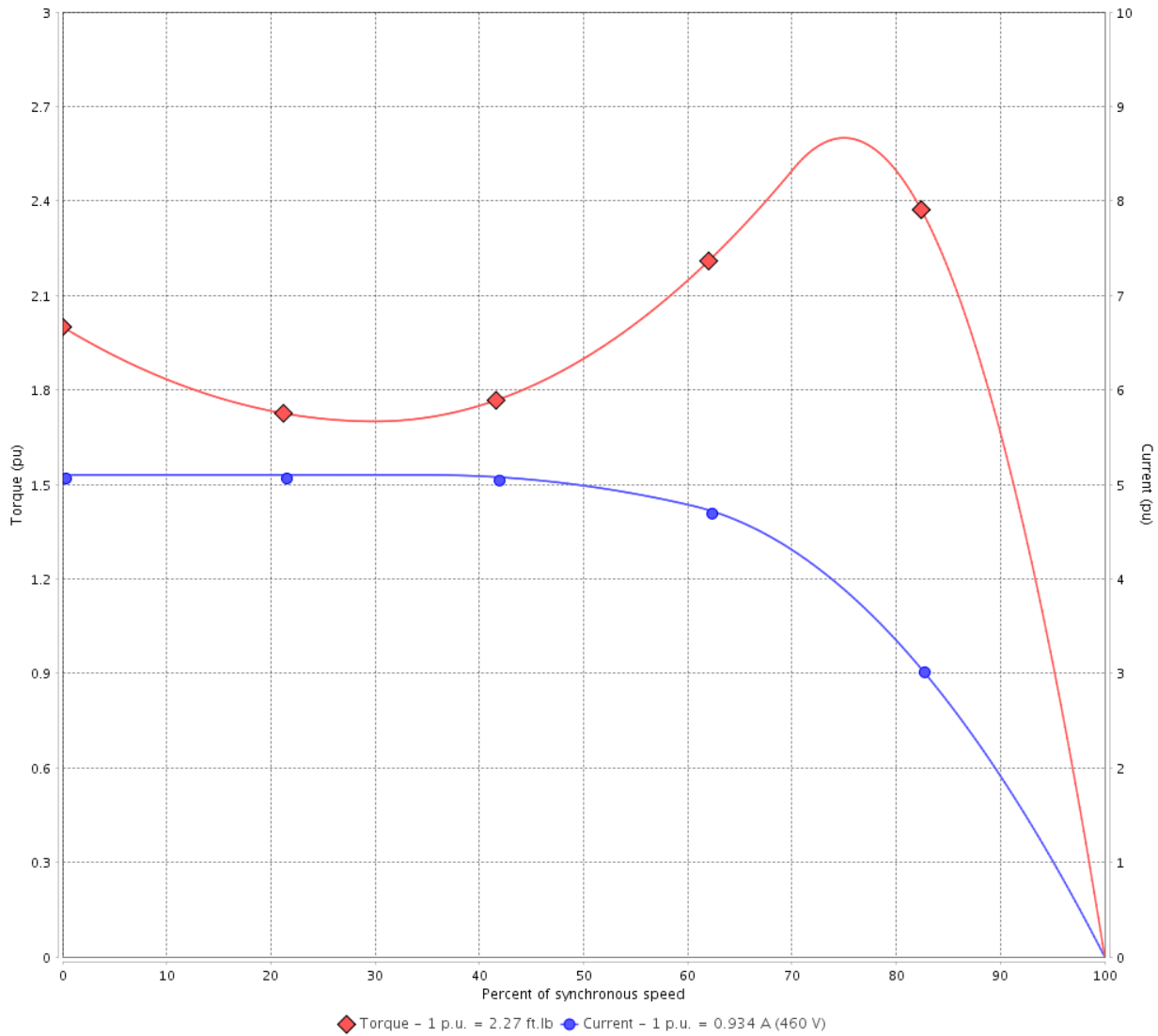
Product code :

14016910

Catalog # :

.5012OT3E56-S

TORQUE AND CURRENT VS SPEED CURVE



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

Rated current : 2.06-1.87/0.934 A
 LRC : 5.1
 Rated torque : 2.27 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 1155 rpm

Moment of inertia (J) : 0.0888 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K

Locked rotor time : 50s (cold) 28s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



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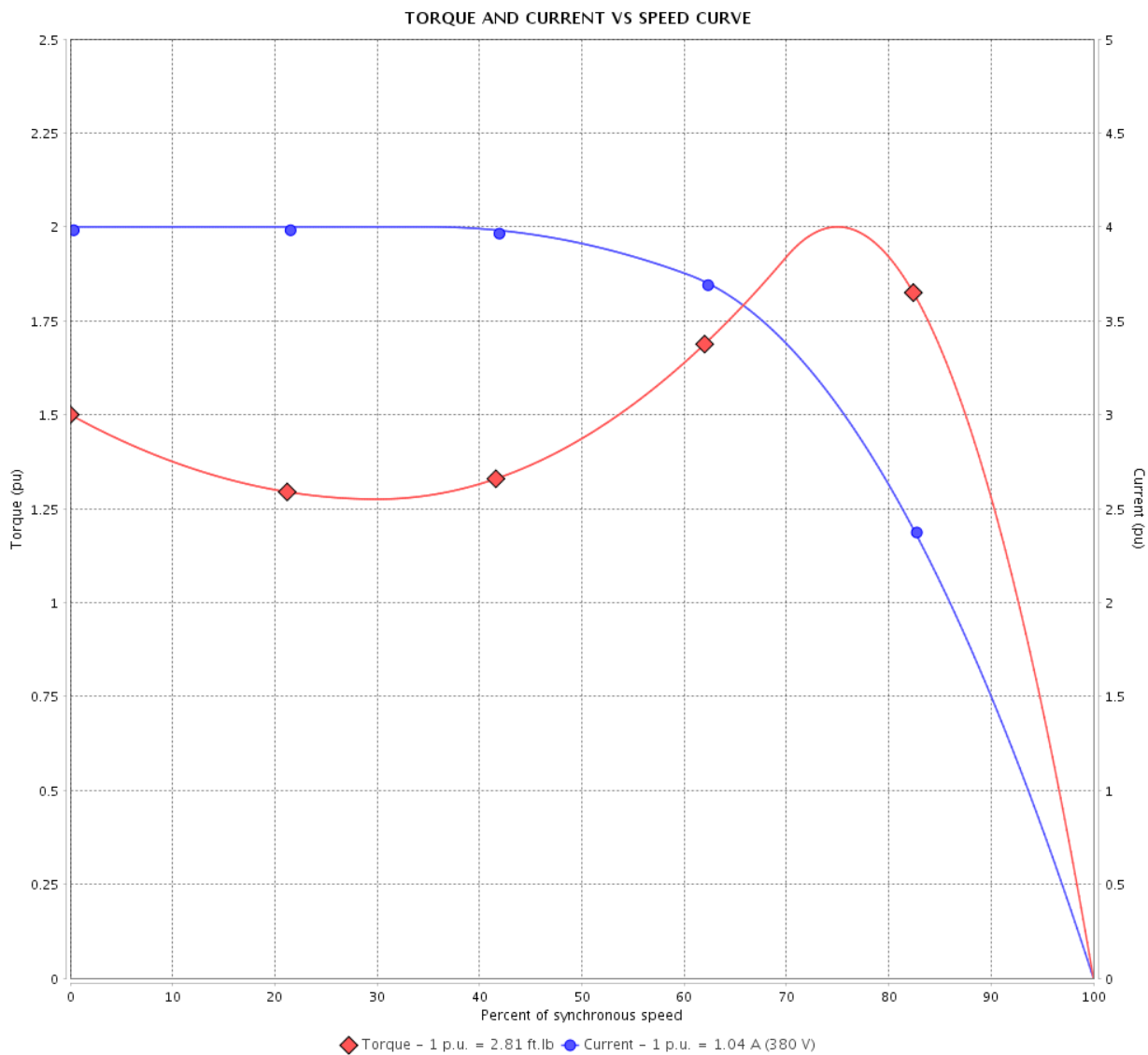
Product line : Premium Efficiency Three-Phase

Product code :

14016910

Catalog # :

.5012OT3E56-S



Performance : 190/380 V 50 Hz 6P

Rated current : 2.08/1.04 A
 LRC : 4.0
 Rated torque : 2.81 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 200 %
 Rated speed : 935 rpm

Moment of inertia (J) : 0.0888 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 52s (cold) 29s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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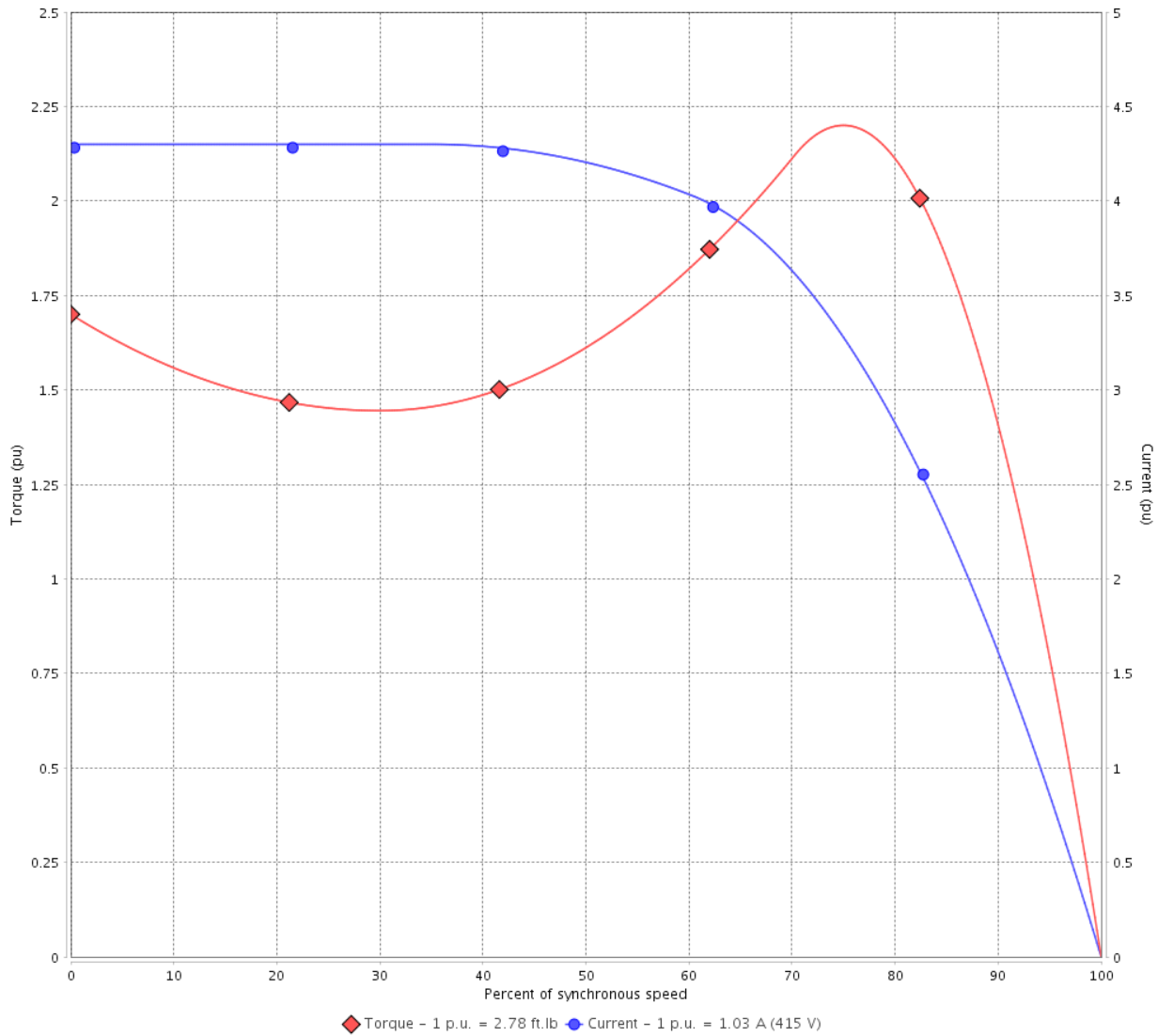
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14016910

Catalog # :

.5012OT3E56-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 1.94/1.03 A
 LRC : 4.3
 Rated torque : 2.78 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 220 %
 Rated speed : 945 rpm

Moment of inertia (J) : 0.0888 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 46s (cold) 26s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

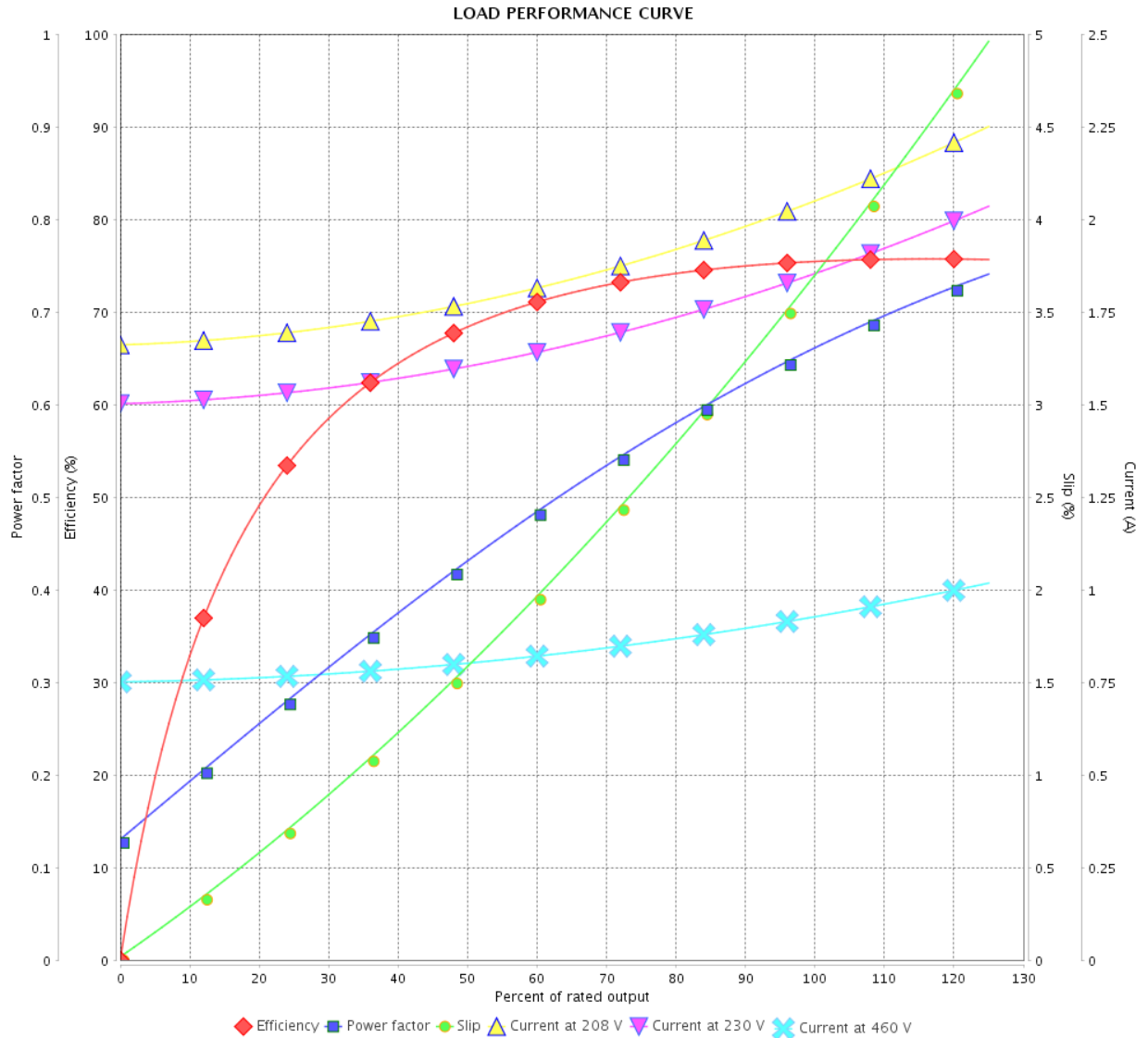
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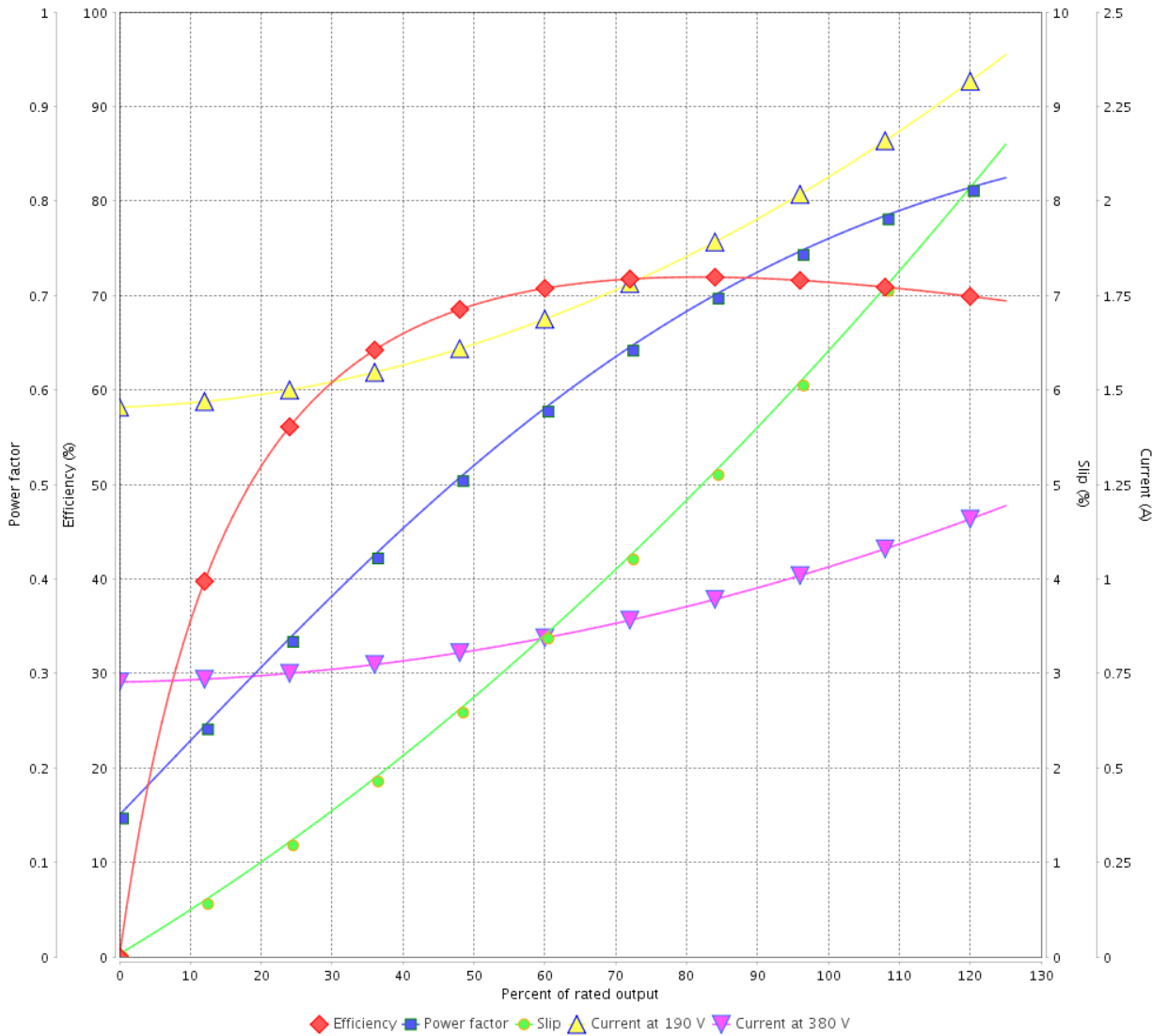
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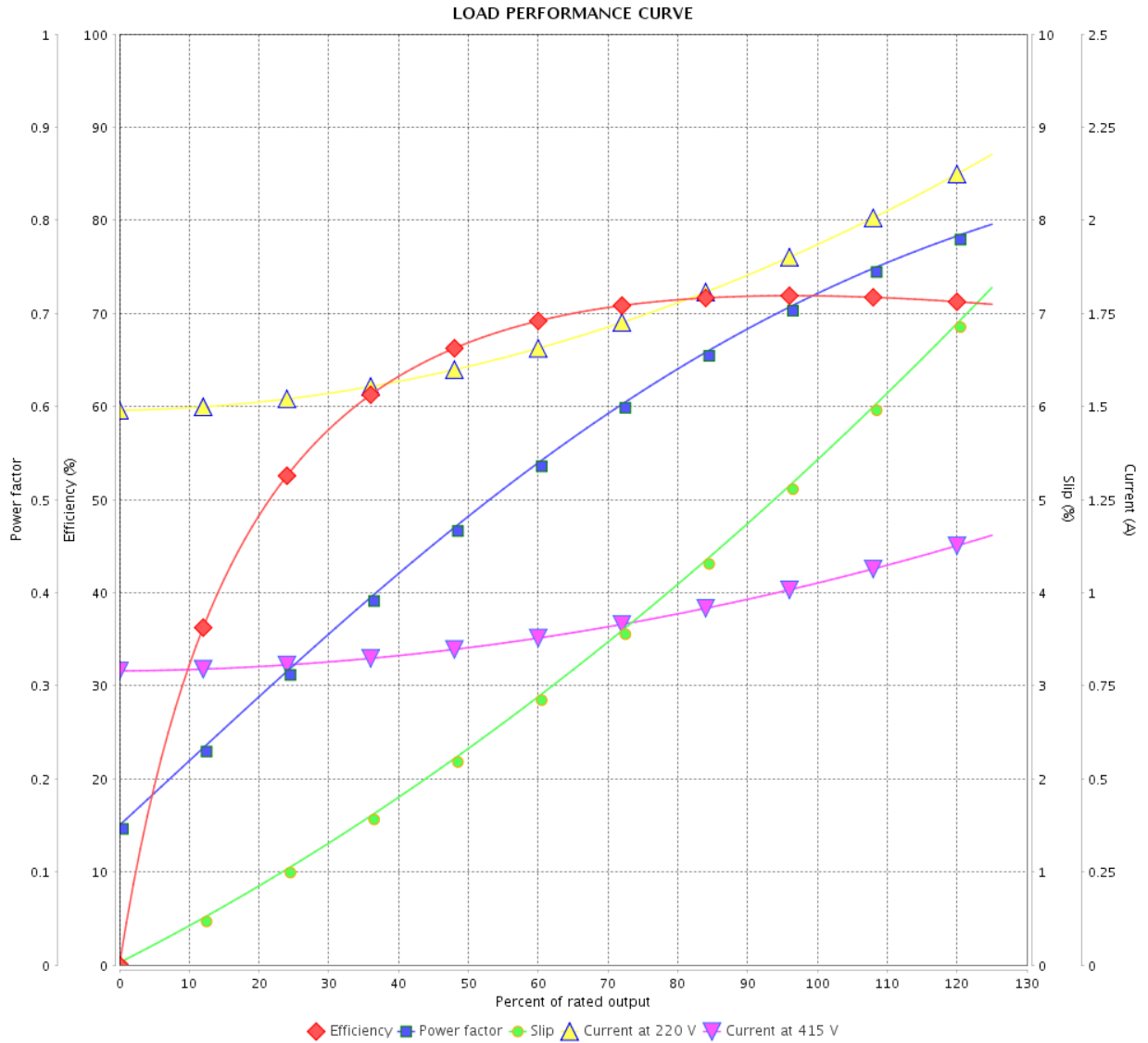
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THERMAL LIMIT CURVE

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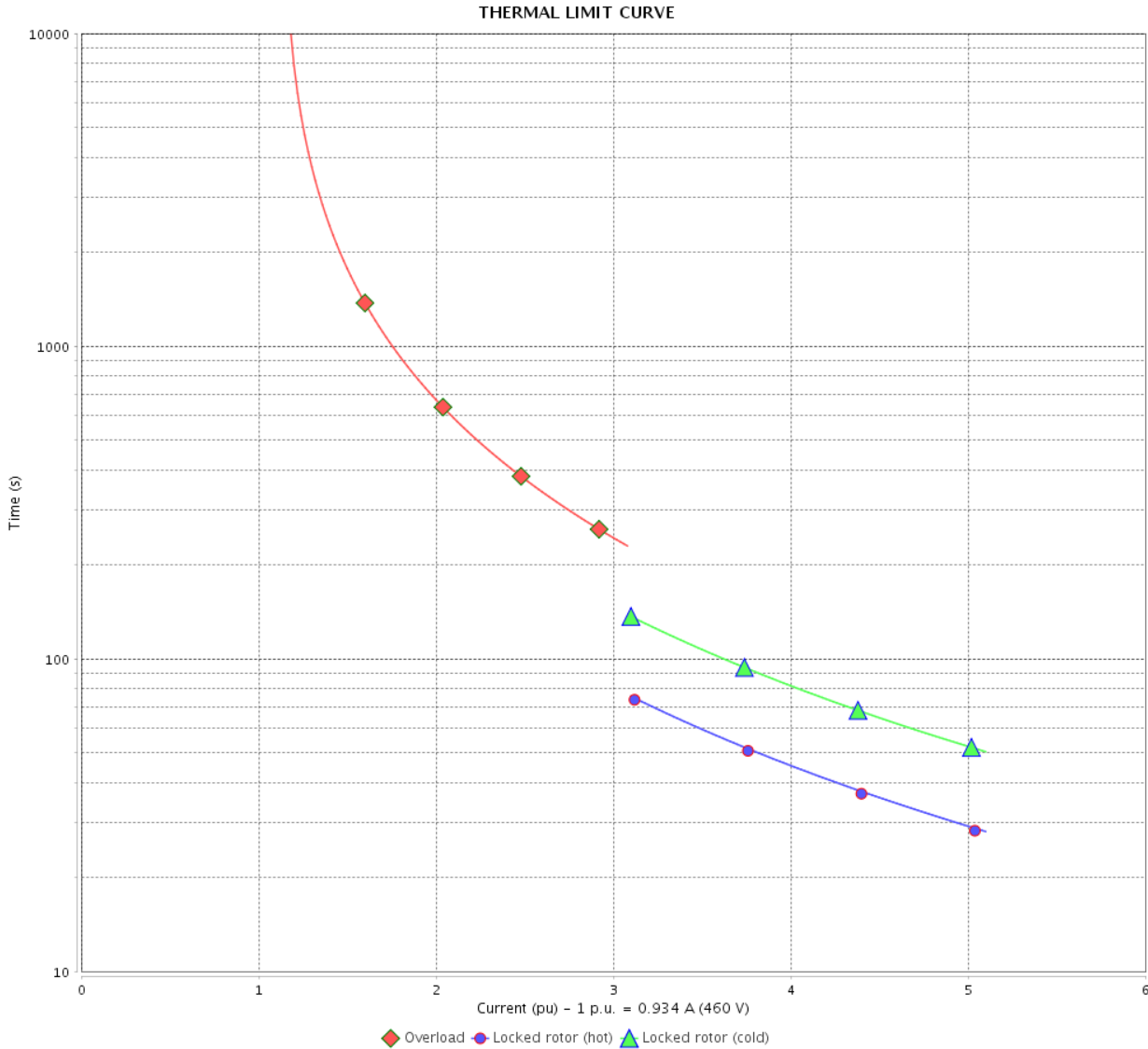


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 Service factor :
 Temperature rise : 80 K

Heating constant

Cooling constant

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THERMAL LIMIT CURVE

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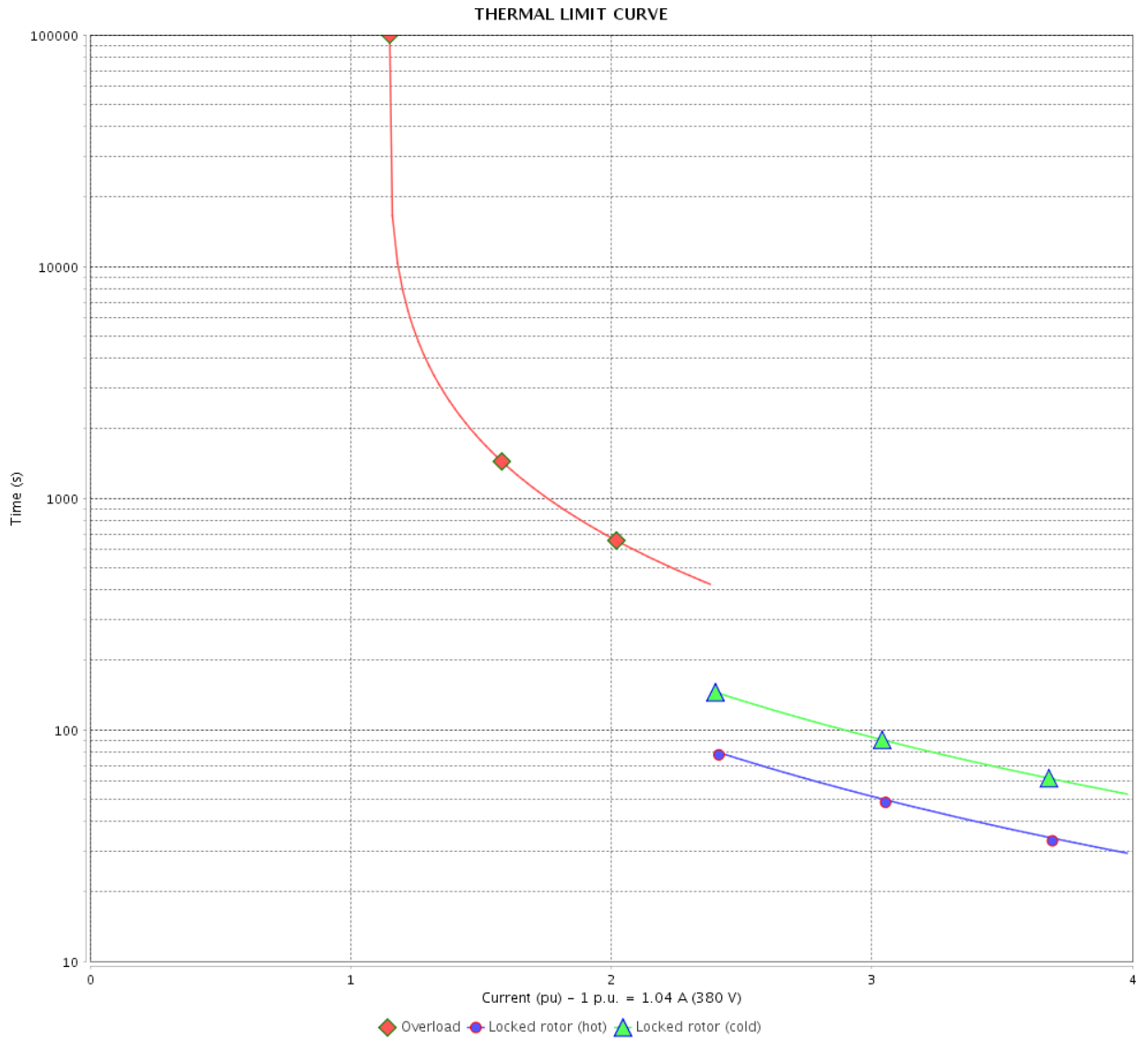
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THERMAL LIMIT CURVE

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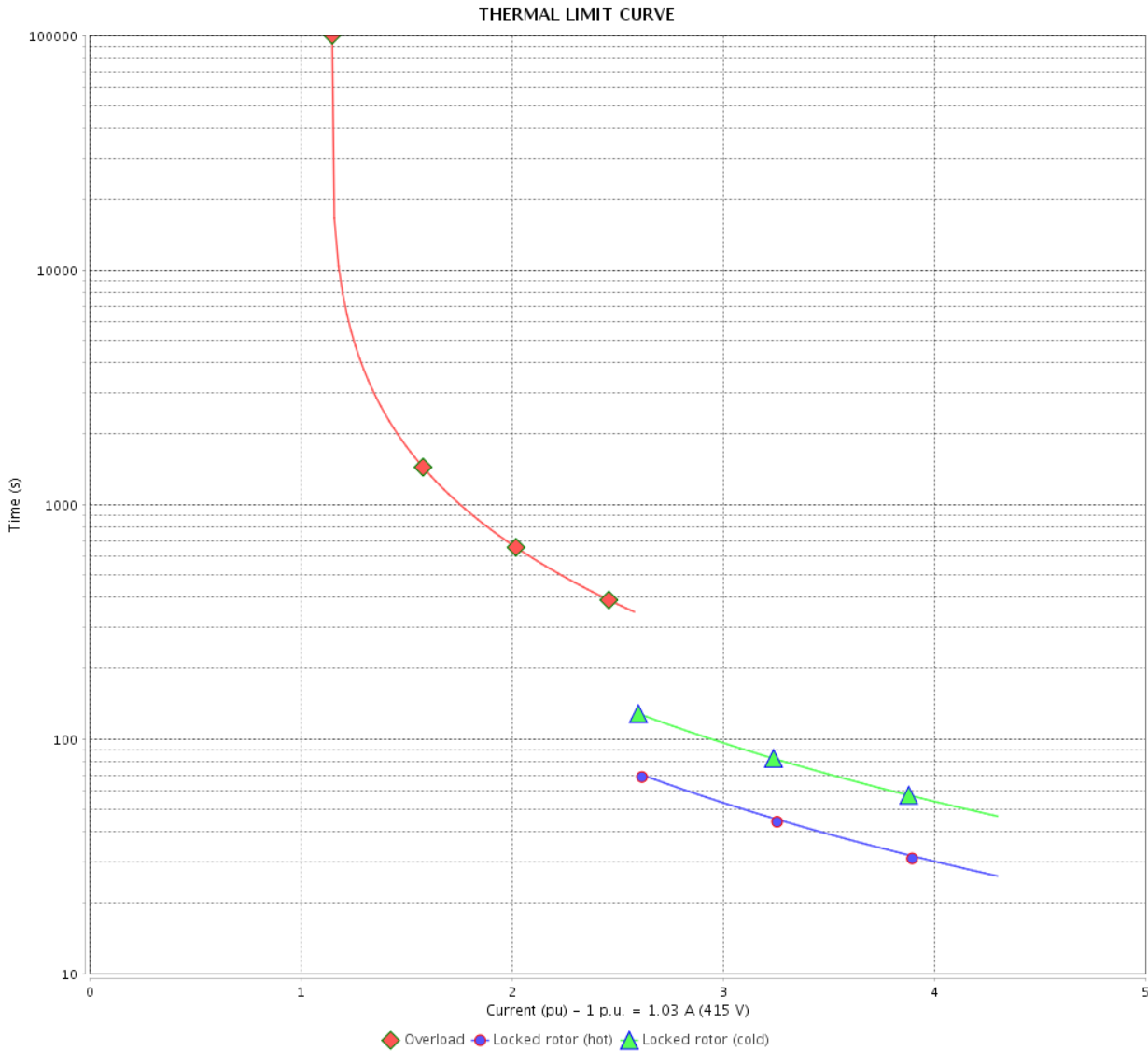
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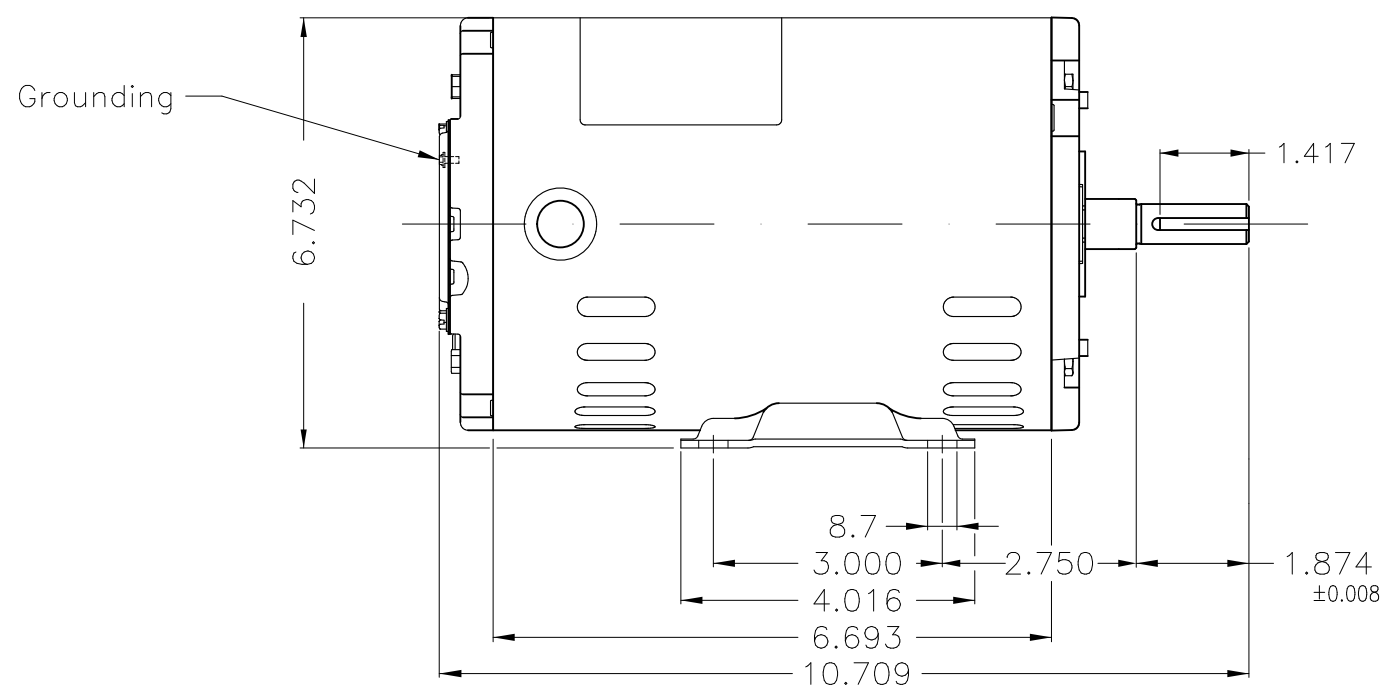
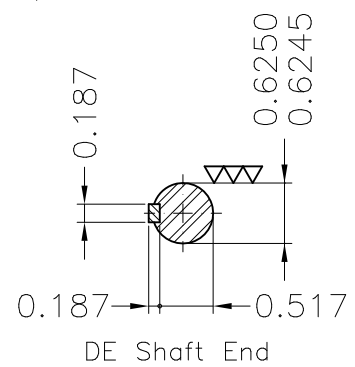
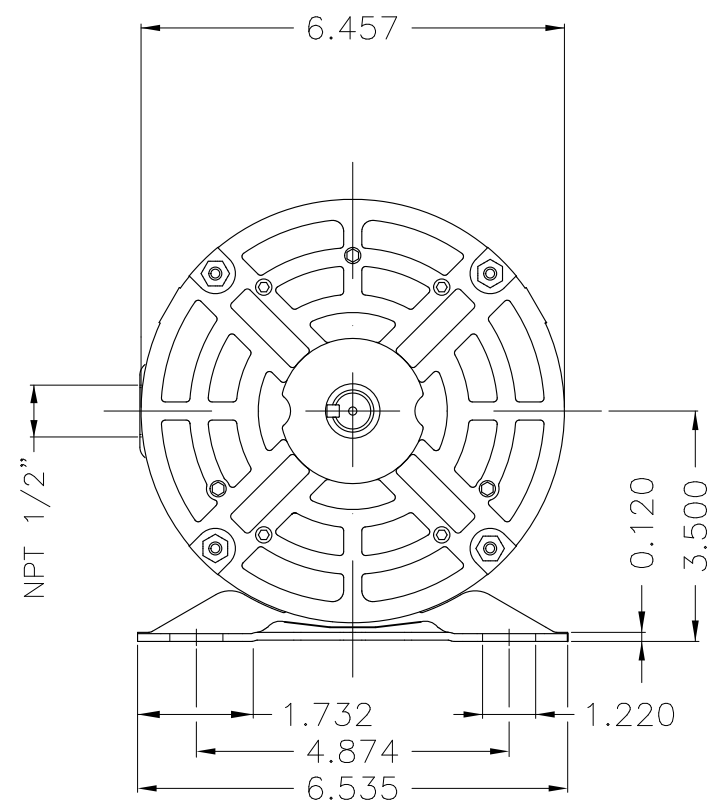
A

B

C

D

E



Without coating										
Mounting F-1/B3R(D)										
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					PREVIEW WDD			
CHECKED		FRAME 56 IP21 ODP								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

0.5 HP 06 Poles 60 Hz

A



NEMA
Premium



MADE IN MEXICO

MAT: 14016910
W01.T00IC0X0X
MODEL 50120T3E56-S
24MAR2022 B/N:



PH 3	Hz 60	HP 0.50
FR 56		KW 0.37
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 1.87/0.934
INS CL F AT 80K		SFA 2.34/1.17
AMB 40°C	DES -	SF 1.25
ENCL ODP	CODE J	PF 0.66
USABLE @ 208V 2.06A		RPM 1155
SF1.00		AVG.F.L. 75.3%

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.15
2.08-1.96/1.04-1.04A 935RPM EFF 71.3% (IE2) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 5:1 CT

DE 6203-ZZ	ODE 6202-ZZ	MOBIL POLYREX EM
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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.

