

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: Premium Efficiency Three-Phase	Product code :	12809248	
		Catalog # :	.5036OT3E56CFL-S	
Frame	: 56C	Cooling method	: IC01 - ODP	
Insulation class	: F	Mounting	: F-1	
Duty cycle	: Cont.(S1)	Rotation <sup>1</sup>	: Both (CW and CCW)	
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line	
Altitude	: 1000 m.a.s.l.	Approx. weight <sup>2</sup>	: 17.0 lb	
		Moment of inertia (J)	: 0.0389 sq.ft.lb	
Output [HP]	0.5	0.5	0.5	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	208-230/460	190/380	220/415	
Rated current [A]	1.79-1.62/0.811	1.85/0.925	1.72/0.911	
L. R. Amperes [A]	11.1-10.1/5.03	8.88/4.44	8.76/4.65	
LRC [A]	6.2x(Code K)	4.8x(Code G)	5.1x(Code H)	
No load current [A]	0.776-0.900/0.450	0.880/0.440	1.19/0.630	
Rated speed [RPM]	3490	2855	2870	
Slip [%]	3.06	4.83	4.33	
Rated torque [ft.lb]	0.752	0.920	0.915	
Locked rotor torque [%]	229	160	180	
Breakdown torque [%]	280	210	240	
Service factor		1.25	1.25	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	70s (cold) 39s (hot)	81s (cold) 45s (hot)	73s (cold) 41s (hot)	
Noise level <sup>2</sup>	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	
Efficiency (%)	25%	61.1	66.3	62.7
	50%	64.0	67.0	64.4
	75%	70.0	71.3	70.0
	100%	73.4	71.5	71.5
Power Factor	25%	0.35	0.41	0.33
	50%	0.57	0.65	0.59
	75%	0.69	0.78	0.72
	100%	0.78	0.85	0.82
Bearing type	: Drive end 6203 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 13 lb	
		Max. compression	: 30 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.		
Rev.	Changes Summary	Performed	Checked	Date
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# TORQUE AND CURRENT VS SPEED CURVE

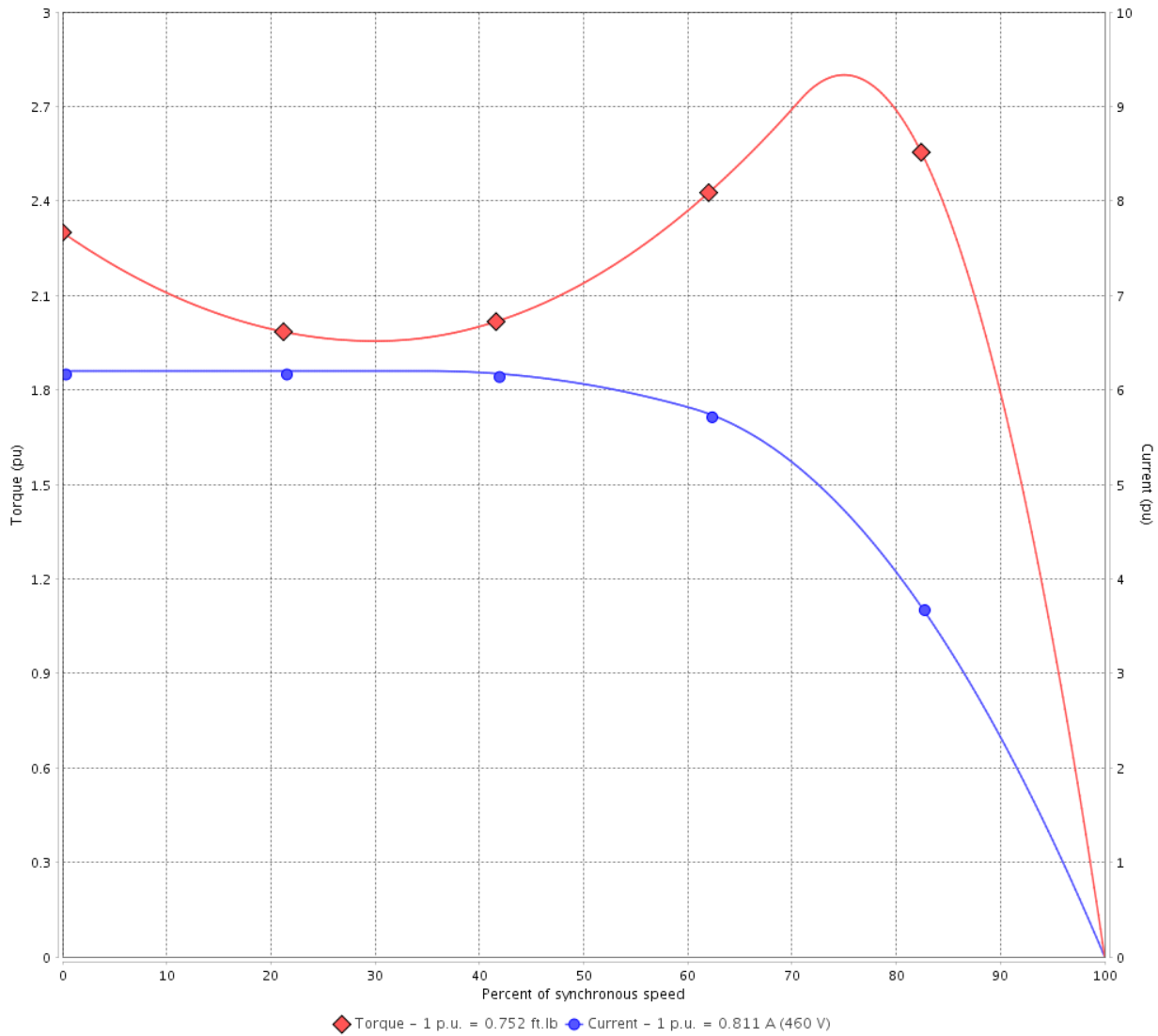
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809248  
 Catalog # : .5036OT3E56CFL-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 208-230/460 V 60 Hz 2P

Rated current	: 1.79-1.62/0.811 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.752 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	:
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 3490 rpm		

Locked rotor time : 70s (cold) 39s (hot)

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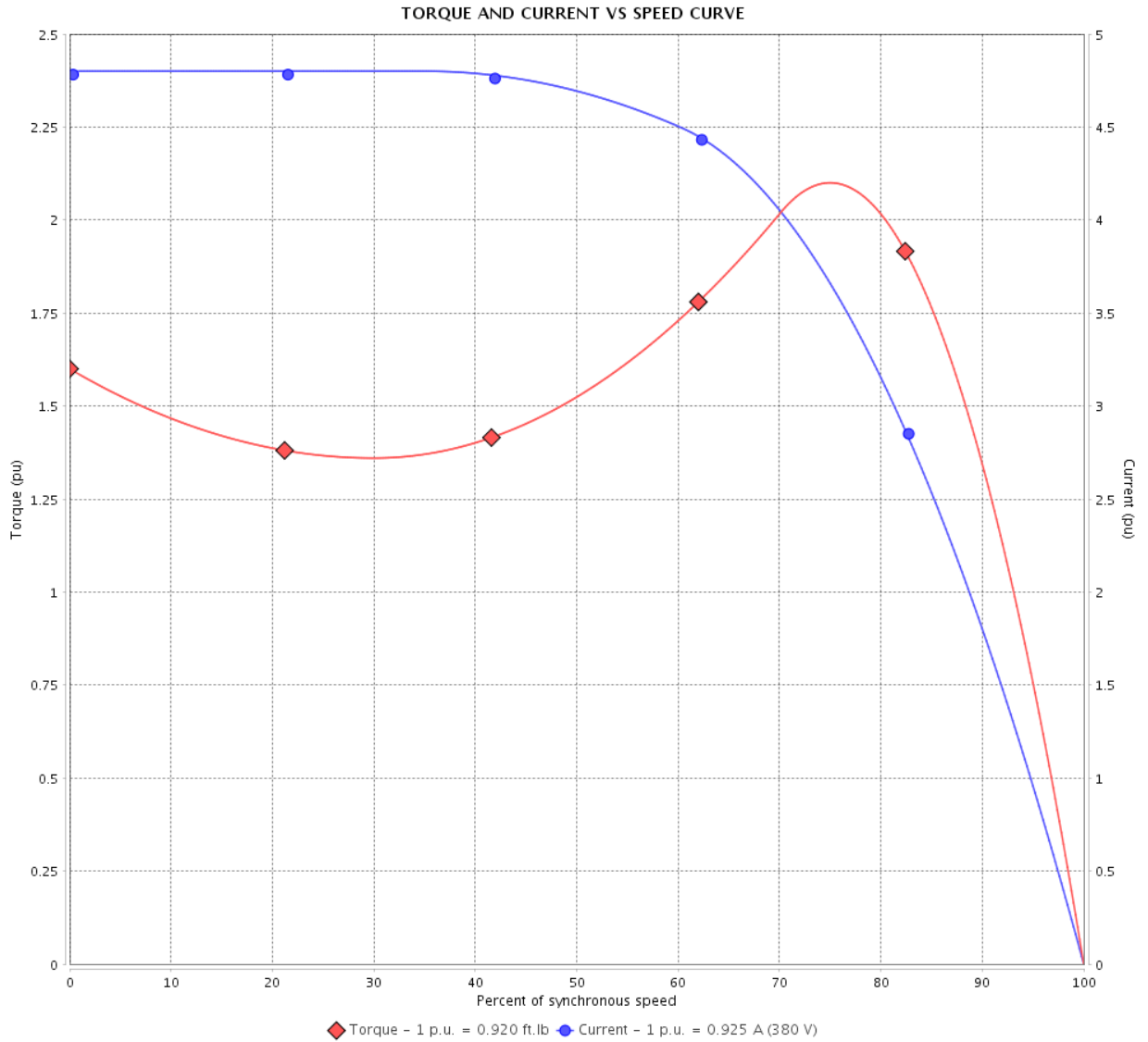
# TORQUE AND CURRENT VS SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809248  
 Catalog # : .5036OT3E56CFL-S



Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A	Moment of inertia (J) : 0.0389 sq.ft.lb
LRC : 4.8	Duty cycle : Cont.(S1)
Rated torque : 0.920 ft.lb	Insulation class : F
Locked rotor torque : 160 %	Service factor : 1.25
Breakdown torque : 210 %	Temperature rise : 80 K
Rated speed : 2855 rpm	

Locked rotor time : 81s (cold) 45s (hot)

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# TORQUE AND CURRENT VS SPEED CURVE

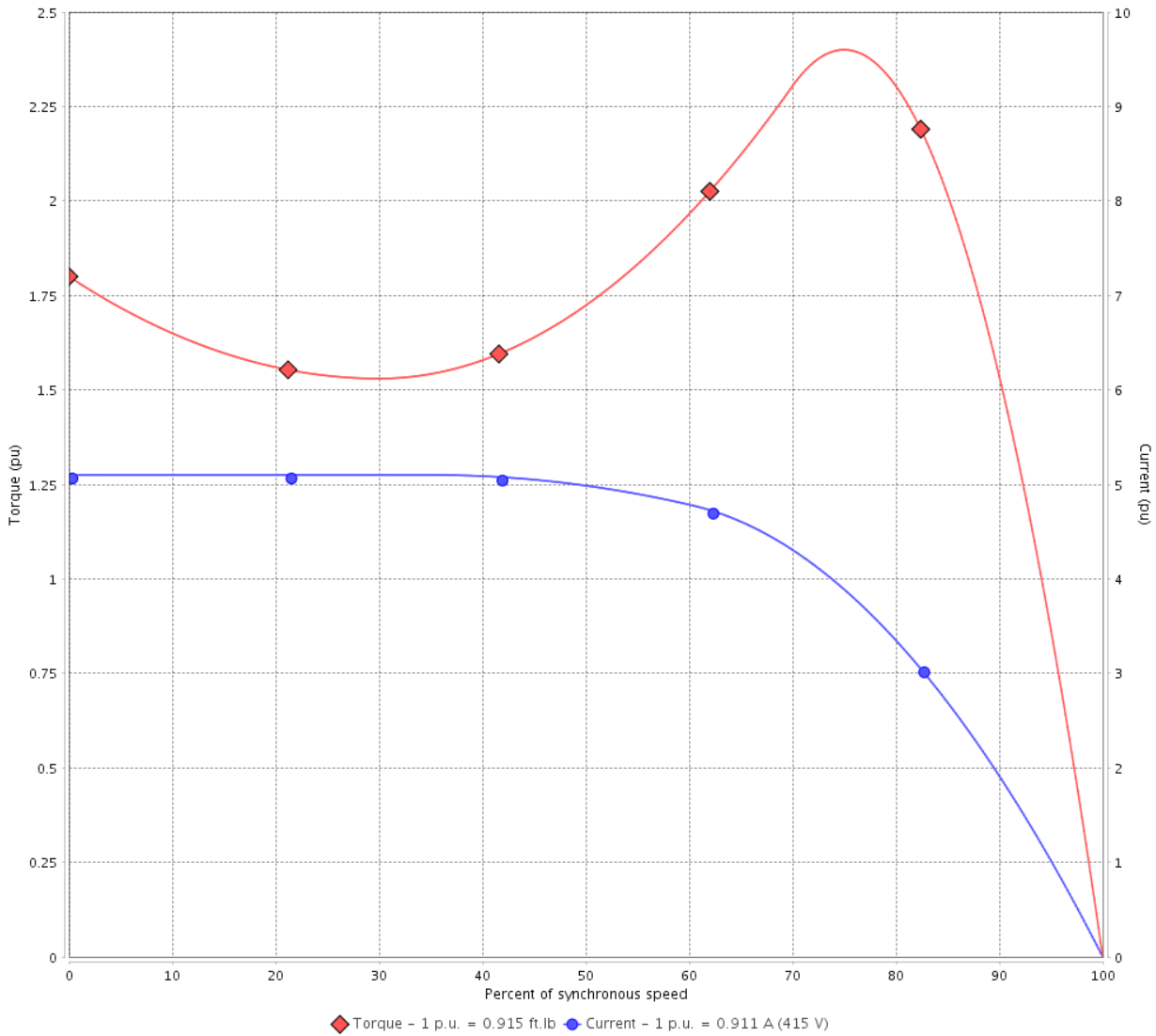
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase      Product code : 12809248  
 Catalog # : .5036OT3E56CFL-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 1.72/0.911 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 5.1	Duty cycle	: Cont.(S1)
Rated torque	: 0.915 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2870 rpm		

Locked rotor time : 73s (cold) 41s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

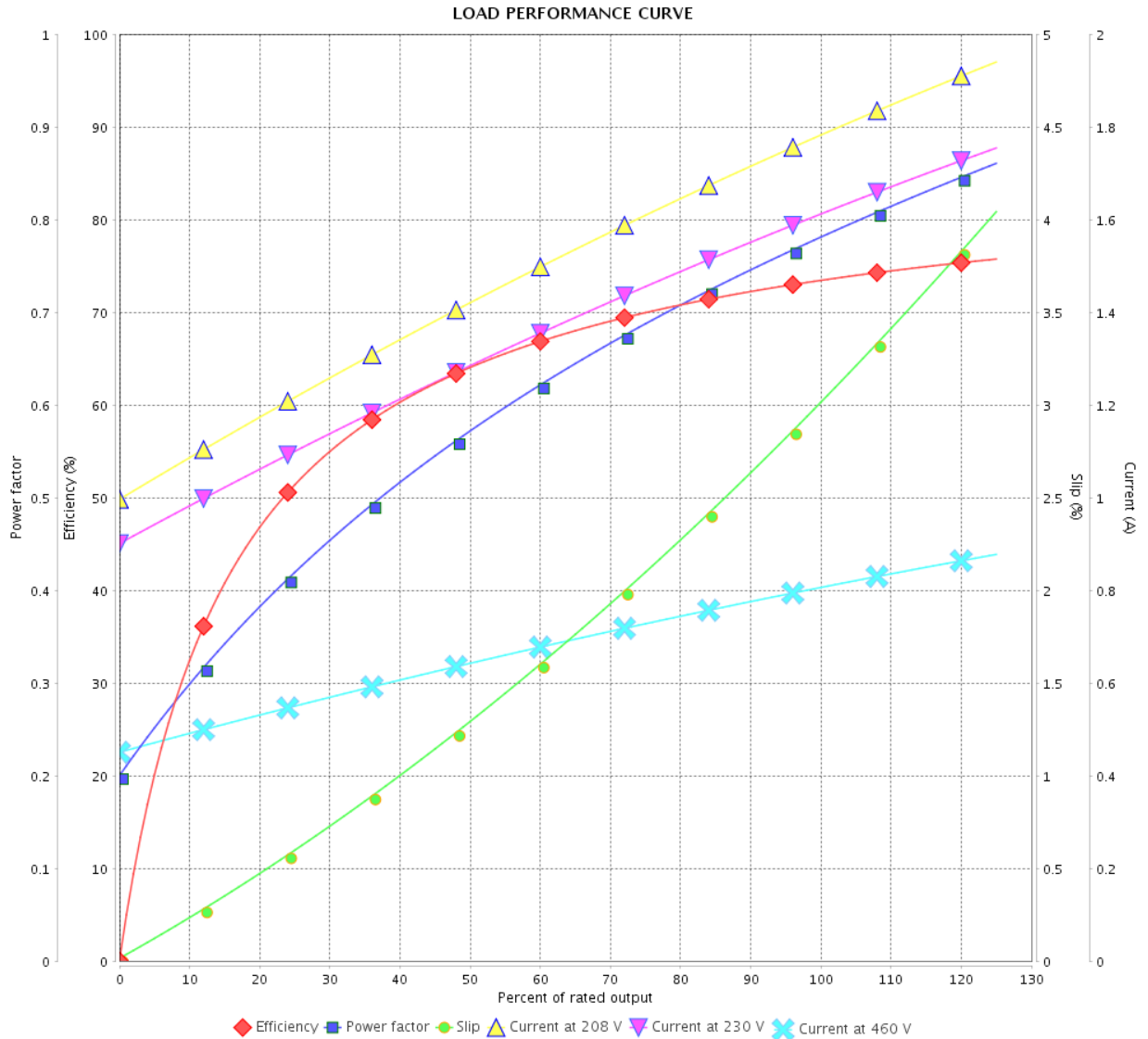
Product line : Premium Efficiency Three-Phase

Product code :

12809248

Catalog # :

.5036OT3E56CFL-S



Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

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# LOAD PERFORMANCE CURVE

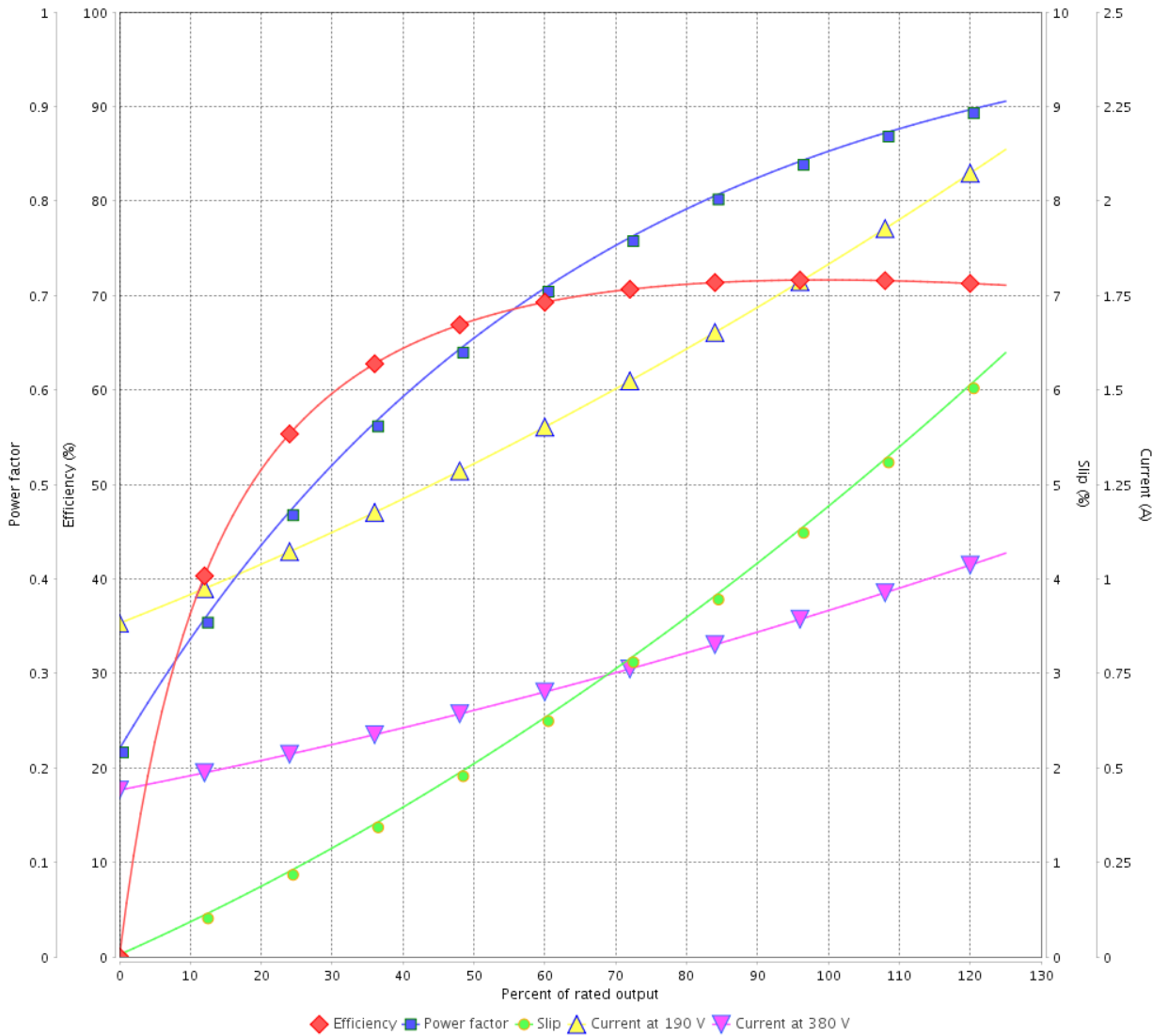
Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : Premium Efficiency Three-Phase      Product code : 12809248  
 Catalog # : .5036OT3E56CFL-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A  
 LRC : 4.8  
 Rated torque : 0.920 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 210 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

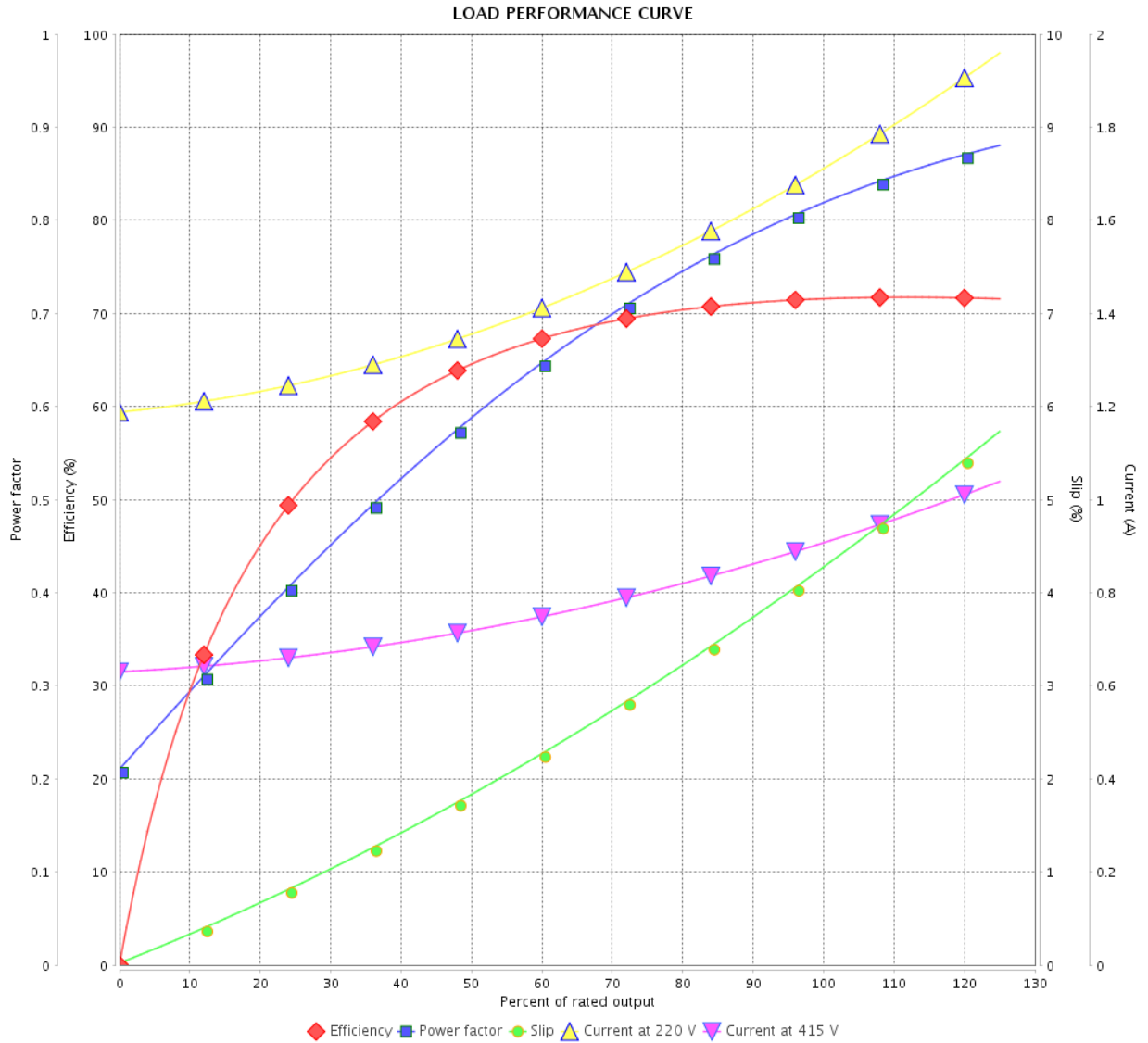
Product line : Premium Efficiency Three-Phase

Product code :

12809248

Catalog # :

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Performance : 220/415 V 50 Hz 2P

Rated current : 1.72/0.911 A  
 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

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Date				

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

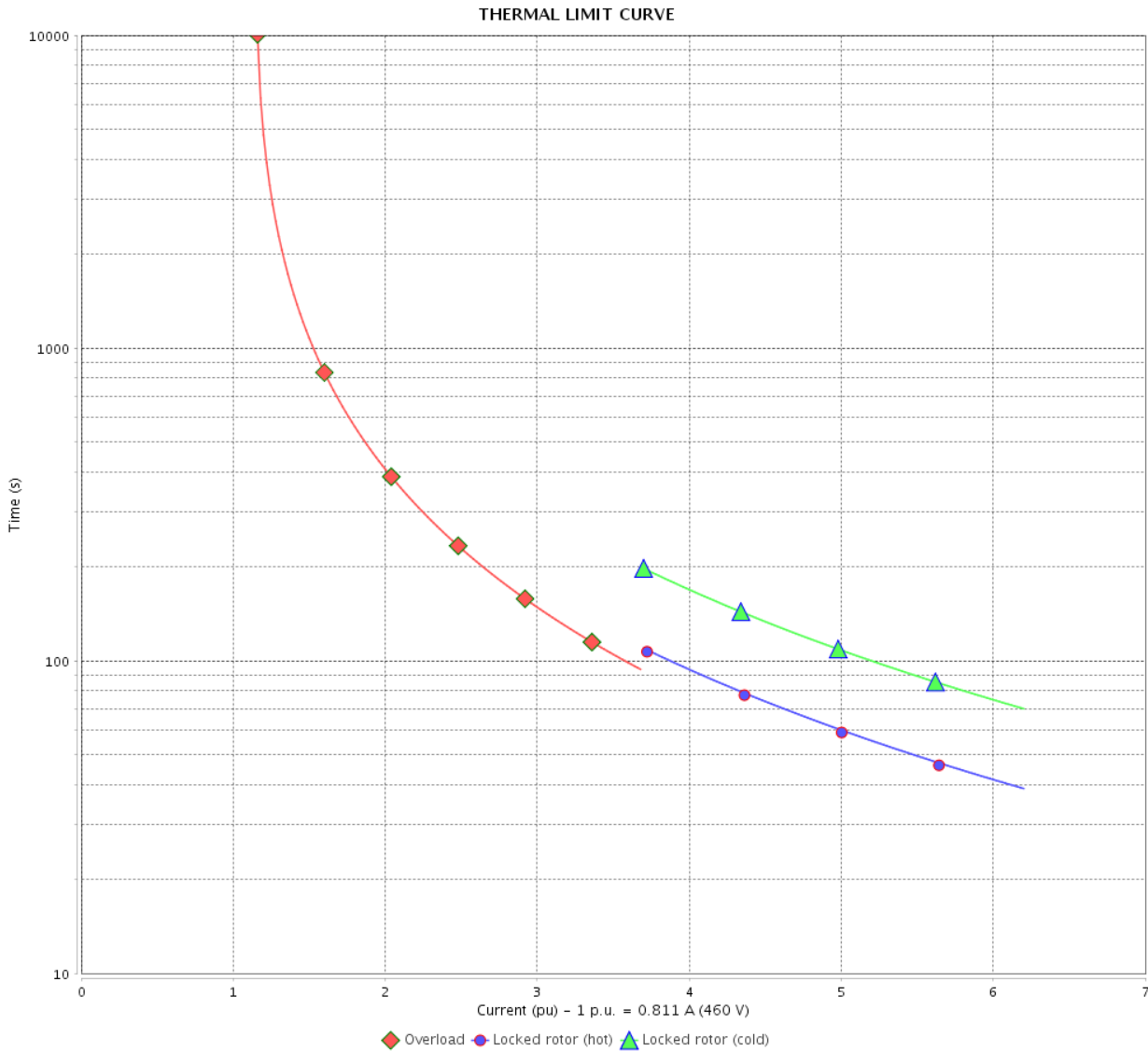
Product line : Premium Efficiency Three-Phase

Product code :

12809248

Catalog # :

.5036OT3E56CFL-S



Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Heating constant

Cooling constant

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Date				



# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

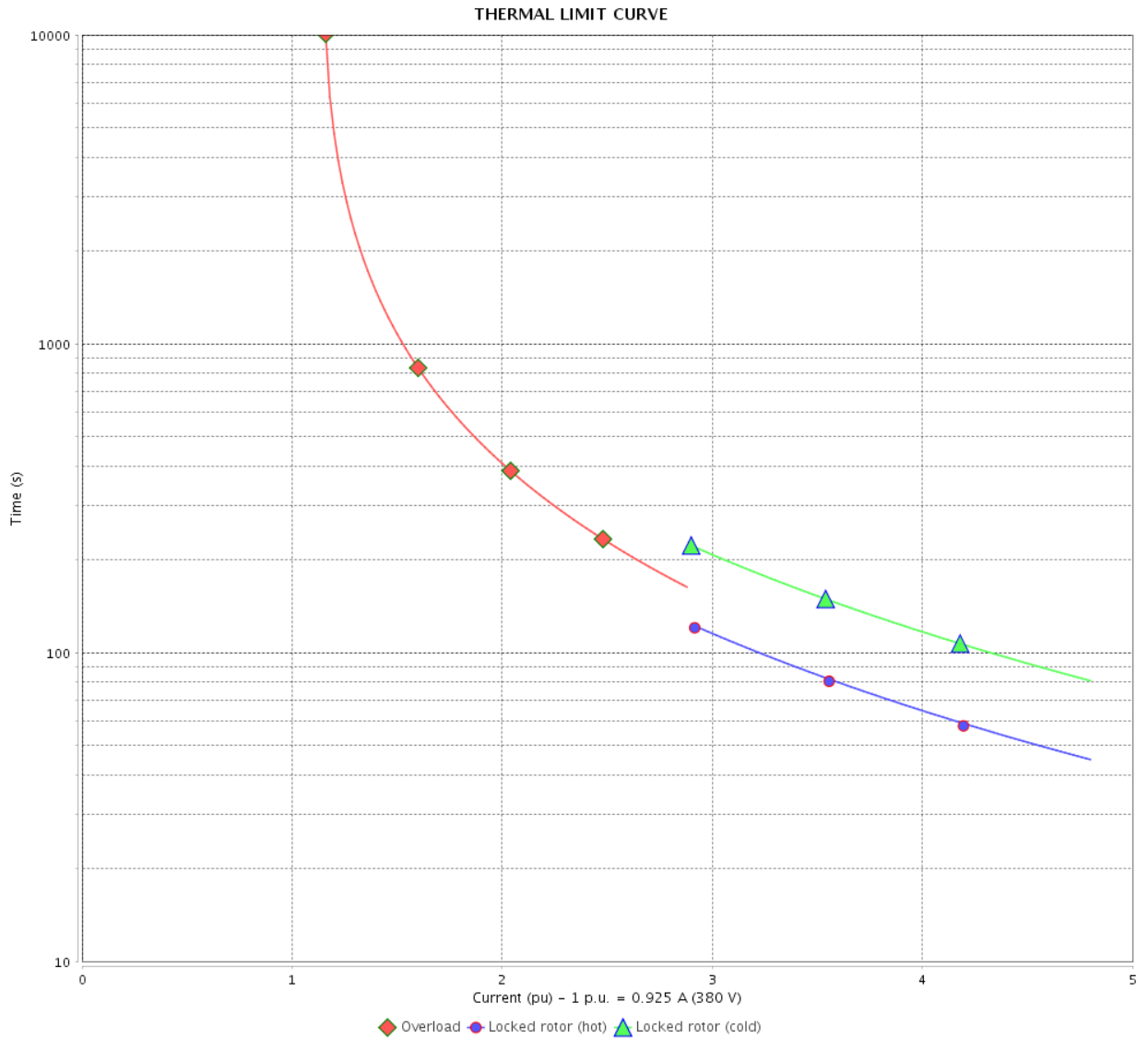
Product line : Premium Efficiency Three-Phase

Product code :

12809248

Catalog # :

.5036OT3E56CFL-S



Performance : 190/380 V 50 Hz 2P

Rated current : 1.85/0.925 A  
 LRC : 4.8  
 Rated torque : 0.920 ft.lb  
 Locked rotor torque : 160 %  
 Breakdown torque : 210 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Heating constant

Cooling constant

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

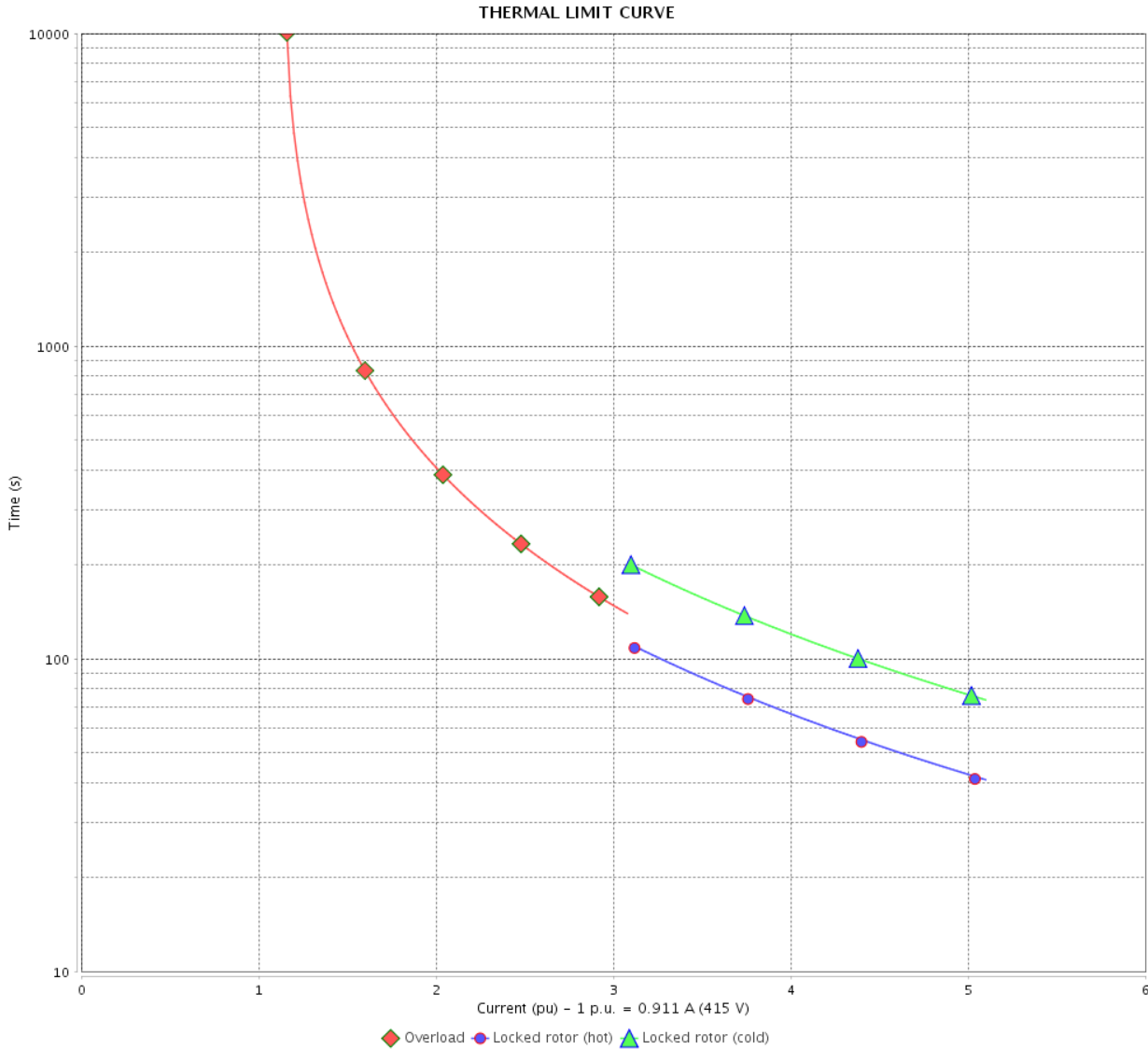
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Product code :

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Catalog # :

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Performance : 220/415 V 50 Hz 2P

Rated current : 1.72/0.911 A  
 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

Heating constant

Cooling constant

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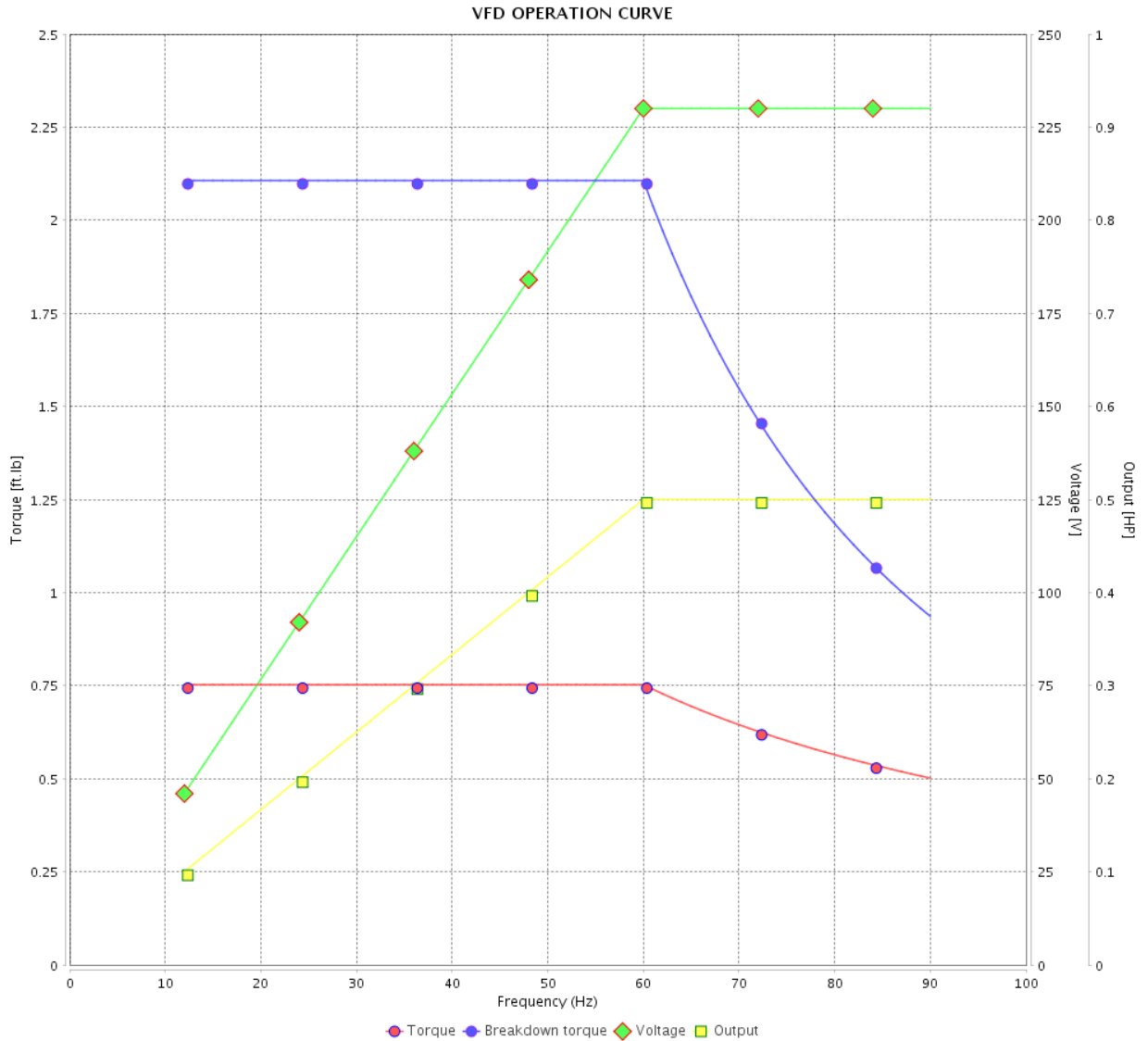
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

Product line : Premium Efficiency Three-Phase      Product code : 12809248  
 Catalog # : .5036OT3E56CFL-S



Performance : 208-230/460 V 60 Hz 2P

Rated current : 1.79-1.62/0.811 A  
 LRC : 6.2  
 Rated torque : 0.752 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 3490 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

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				Revision

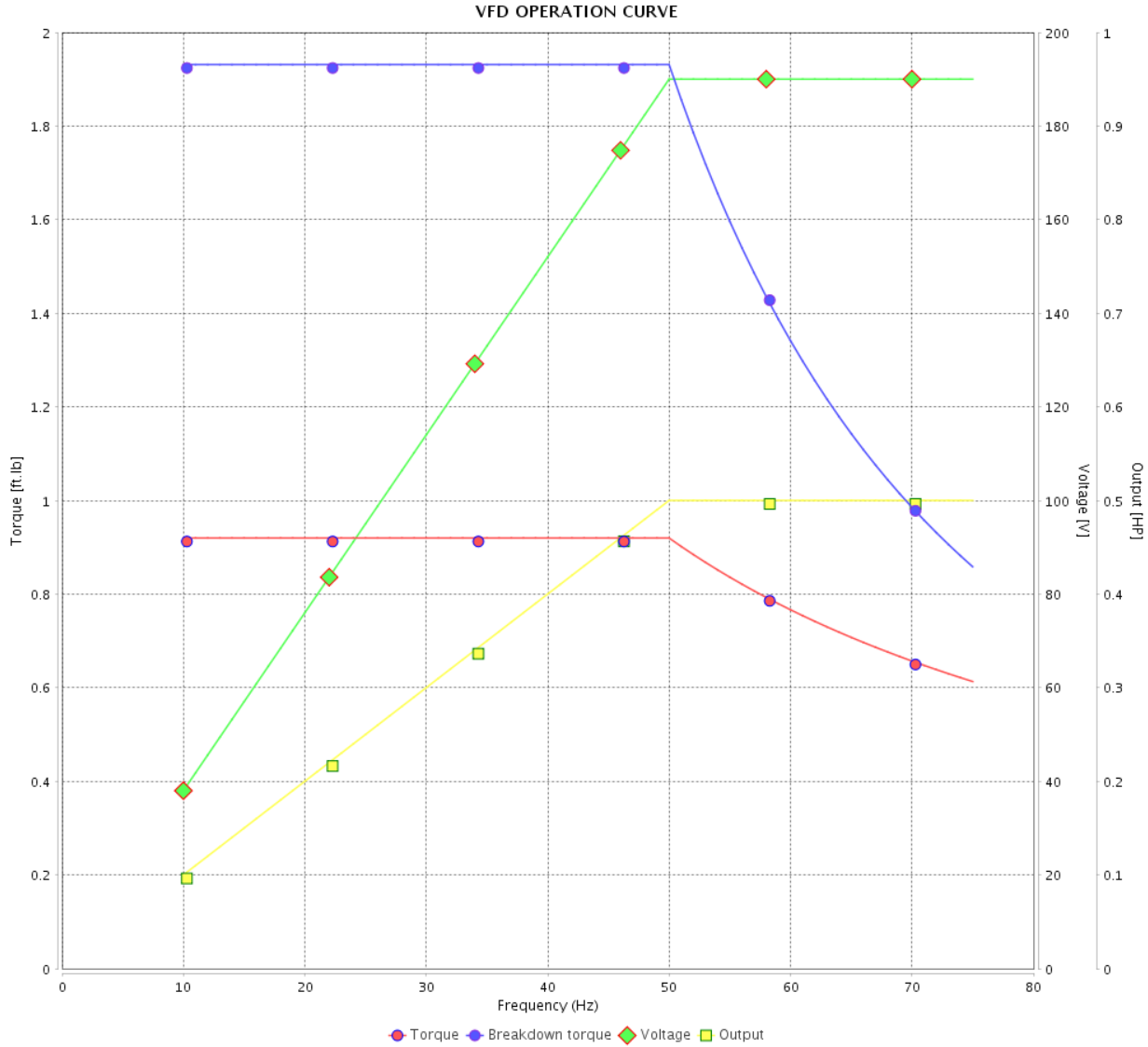
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Three Phase Induction Motor - Squirrel Cage



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Product line : Premium Efficiency Three-Phase      Product code : 12809248  
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Performance : 190/380 V 50 Hz 2P

Rated current	: 1.85/0.925 A	Moment of inertia (J)	: 0.0389 sq.ft.lb
LRC	: 4.8	Duty cycle	: Cont.(S1)
Rated torque	: 0.920 ft.lb	Insulation class	: F
Locked rotor torque	: 160 %	Service factor	: 1.25
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 2855 rpm		

Rev.	Changes Summary	Performed	Checked	Date
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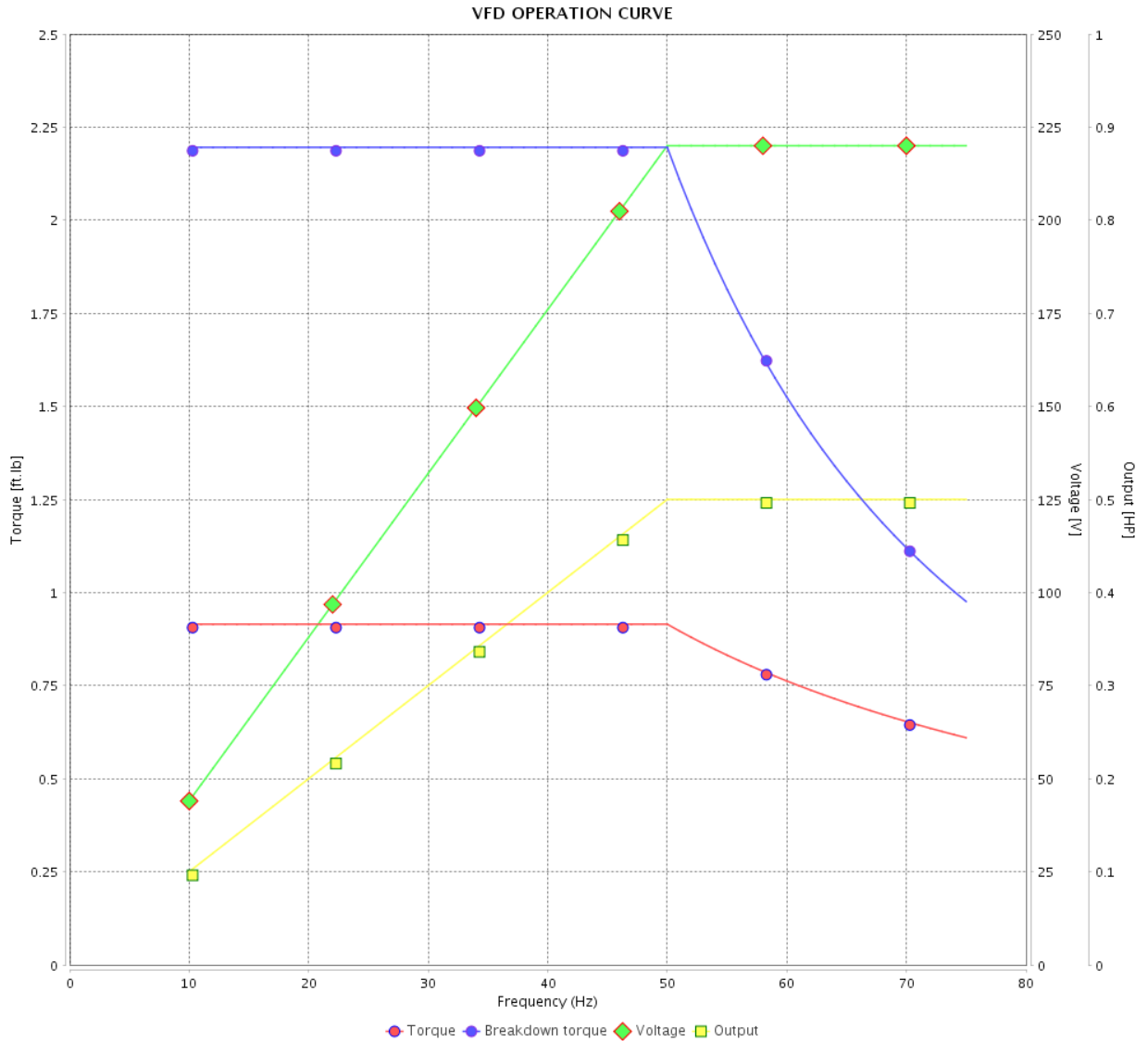
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## Three Phase Induction Motor - Squirrel Cage



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Performance : 220/415 V 50 Hz 2P

Rated current : 1.72/0.911 A  
 LRC : 5.1  
 Rated torque : 0.915 ft.lb  
 Locked rotor torque : 180 %  
 Breakdown torque : 240 %  
 Rated speed : 2870 rpm

Moment of inertia (J) : 0.0389 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K

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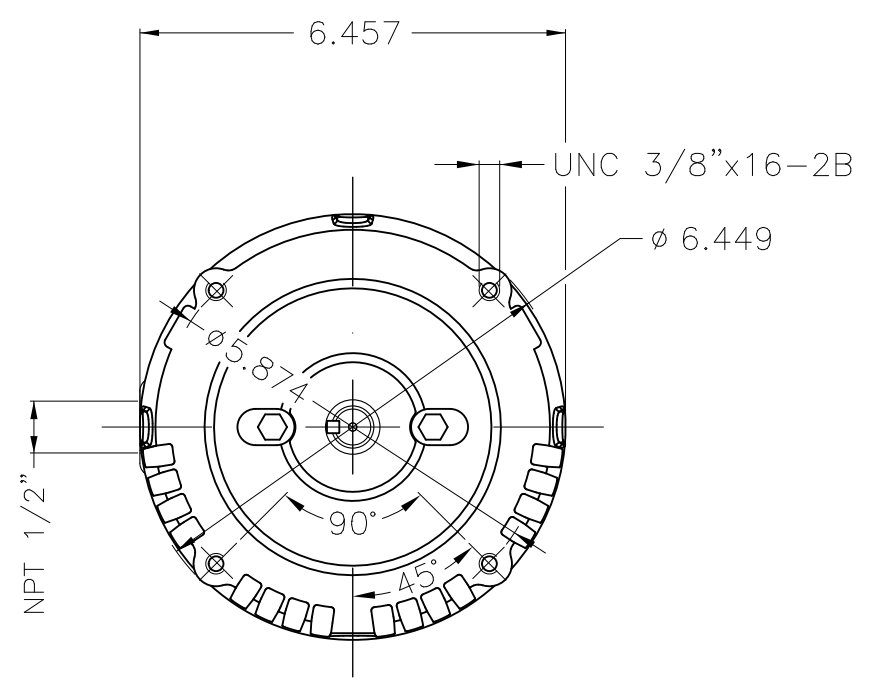
A

B

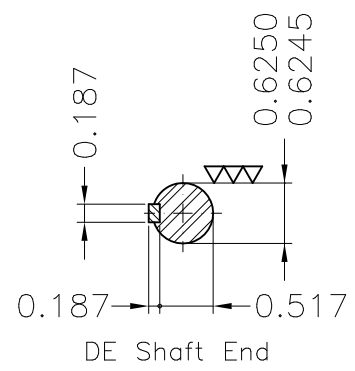
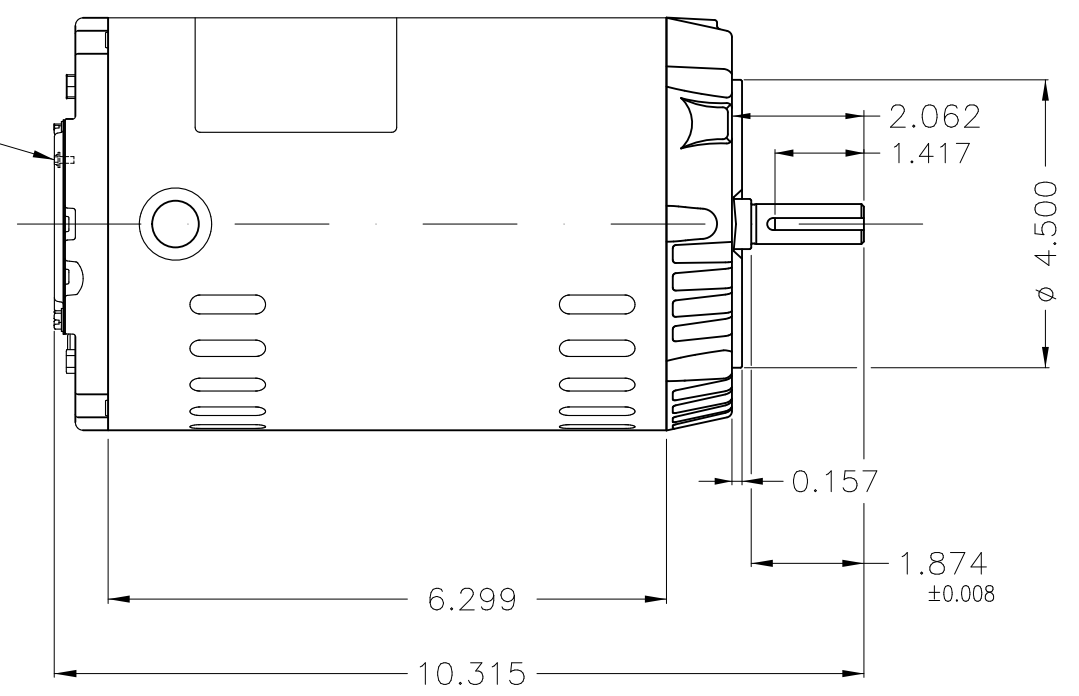
C

D

E



Grounding



Dimensions in inches

Without coating										
Mounting F-1/B14R(D)										
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					<b>PREVIEW</b> WDD			
CHECKED		FRAME 56C IP21 ODP								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

0.5 HP 02 Poles 60 Hz

A



**NEMA**  
**Premium**



3PT9



Energy Verified

MADE IN MEXICO

**MAT: 12809248**

**W01.T00IC0X0X**

**MODEL 50360T3E56CFL-S**

**14MAR2022 B/N:**



PH 3	Hz 60	HP 0.50
FR 56C		KW 0.37
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 1.62/0.811
INS CL F AT 80K		SFA 2.03/1.01
AMB 40°C	DES -	SF 1.25
ENCL ODP	CODE K	PF 0.78
USABLE @ 208V 1.79A		RPM 3490
SF1.00		AVG.F.L. 73.4% EFF.

**ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.25**  
**1.85-1.78/0.925-0.932A 2855RPM EFF 70.8% (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.

