

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :				
Product line	: Premium Efficiency Three-Phase	Product code :	12812393	
		Catalog # :	00156OT3E56CFL-S	
Frame	: 56C	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	: 27.0 lb	
Design	: A	Moment of inertia (J)	: 0.0835 sq.ft.lb	
Output [HP]	1.5	1.5	1.5	
Poles	2	2	2	
Frequency [Hz]	60	50	50	
Rated voltage [V]	230/460	190/380	220/415	
Rated current [A]	3.70/1.85	4.42/2.21	4.02/2.13	
L. R. Amperes [A]	31.8/15.9	29.6/14.8	29.7/15.8	
LRC [A]	8.6x(Code K)	6.7x(Code H)	7.4x(Code J)	
No load current [A]	1.62/0.809	1.59/0.796	1.66/0.881	
Rated speed [RPM]	3510	2890	2900	
Slip [%]	2.50	3.67	3.33	
Rated torque [ft.lb]	2.24	2.73	2.72	
Locked rotor torque [%]	210	180	200	
Breakdown torque [%]	330	250	280	
Service factor		1.15	1.15	
Temperature rise	80 K	80 K	80 K	
Locked rotor time	36s (cold) 20s (hot)	36s (cold) 20s (hot)	34s (cold) 19s (hot)	
Noise level ²	62.0 dB(A)	60.0 dB(A)	60.0 dB(A)	
Efficiency (%)	25%	81.1	83.5	82.1
	50%	81.5	82.7	81.9
	75%	84.0	83.6	83.5
	100%	84.0	82.3	82.9
Power Factor	25%	0.45	0.51	0.47
	50%	0.73	0.79	0.75
	75%	0.83	0.88	0.85
	100%	0.89	0.92	0.90
Bearing type	: Drive end 6204 ZZ Non drive end 6202 ZZ	Foundation loads		
Sealing	: Without Without Bearing Seal Bearing Seal	Max. traction	: 61 lb	
		Max. compression	: 88 lb	
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Notes				
USABLE @208V 4.09A SF 1.00 SFA 4.09A				
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
Performed by				
Checked by			Page	Revision
Date	14/04/2022		1 /	

TORQUE AND CURRENT VS SPEED CURVE

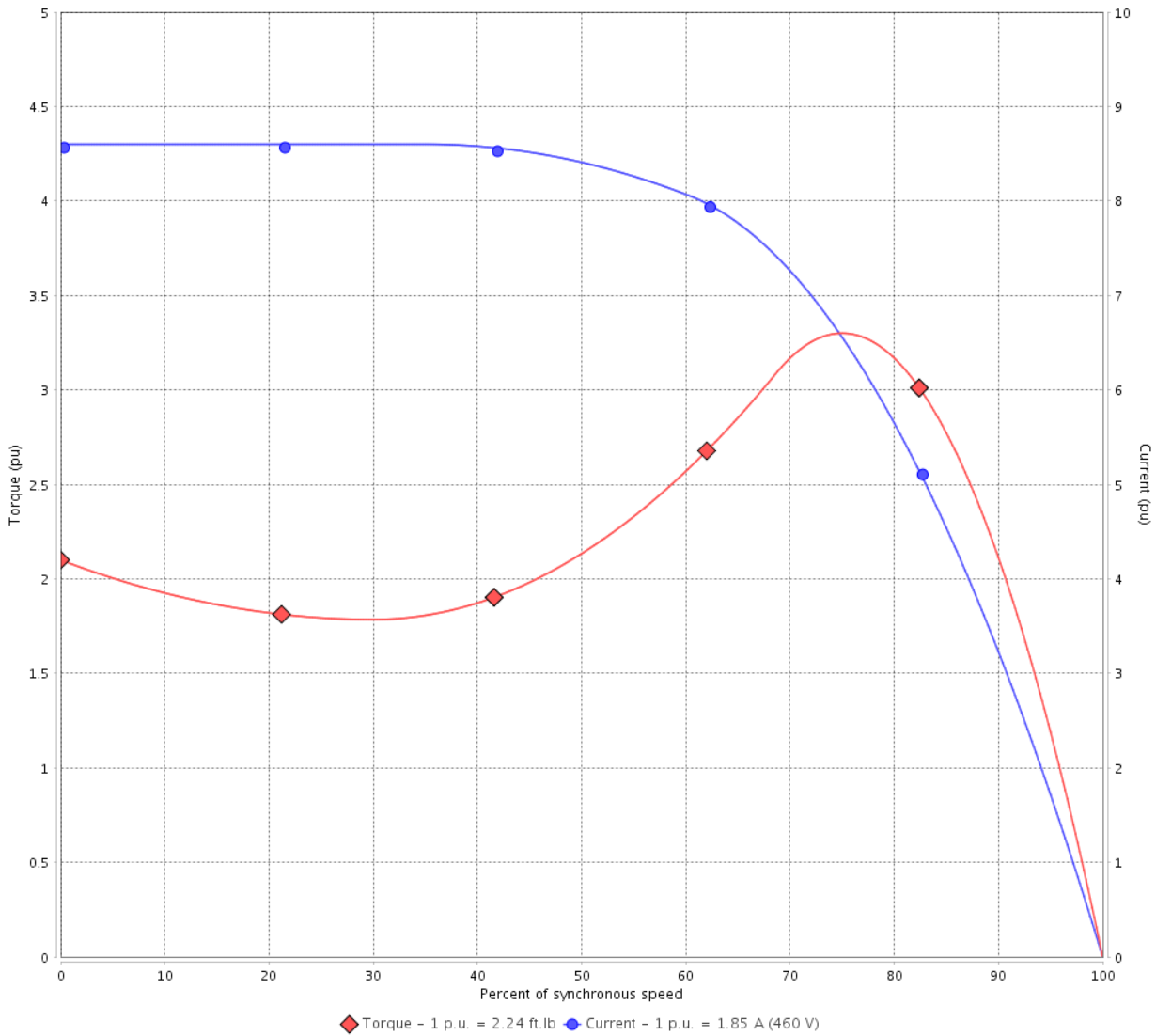
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 00156OT3E56CFL-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 2P

Rated current	: 3.70/1.85 A	Moment of inertia (J)	: 0.0835 sq.ft.lb
LRC	: 8.6	Duty cycle	: Cont.(S1)
Rated torque	: 2.24 ft.lb	Insulation class	: F
Locked rotor torque	: 210 %	Service factor	:
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 3510 rpm	Design	: A

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		2 /		
Date	14/04/2022			

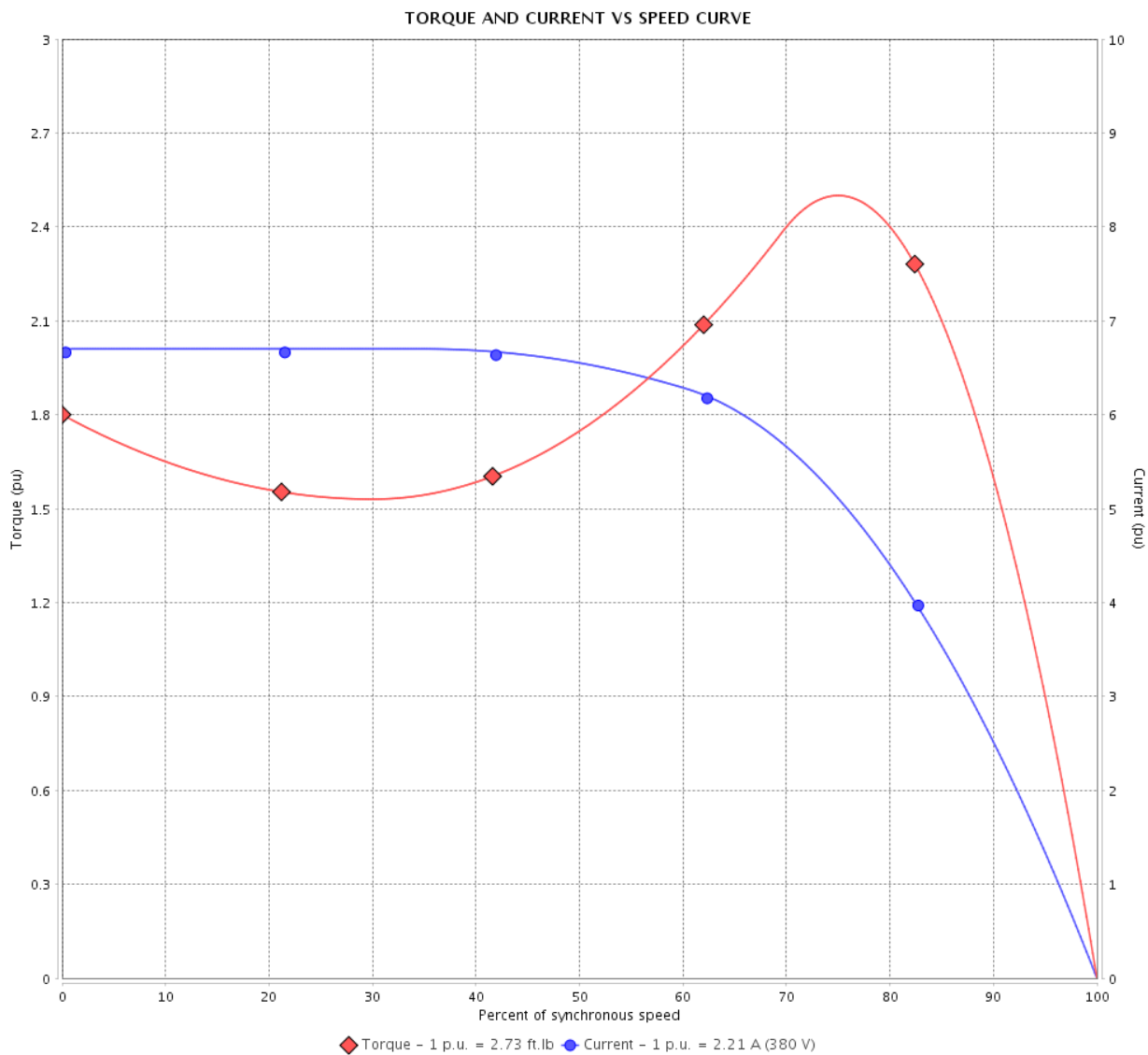
TORQUE AND CURRENT VS SPEED CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 00156OT3E56CFL-S



Performance : 190/380 V 50 Hz 2P

Rated current	: 4.42/2.21 A	Moment of inertia (J)	: 0.0835 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 2.73 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2890 rpm	Design	: A

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 /		
Date	14/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

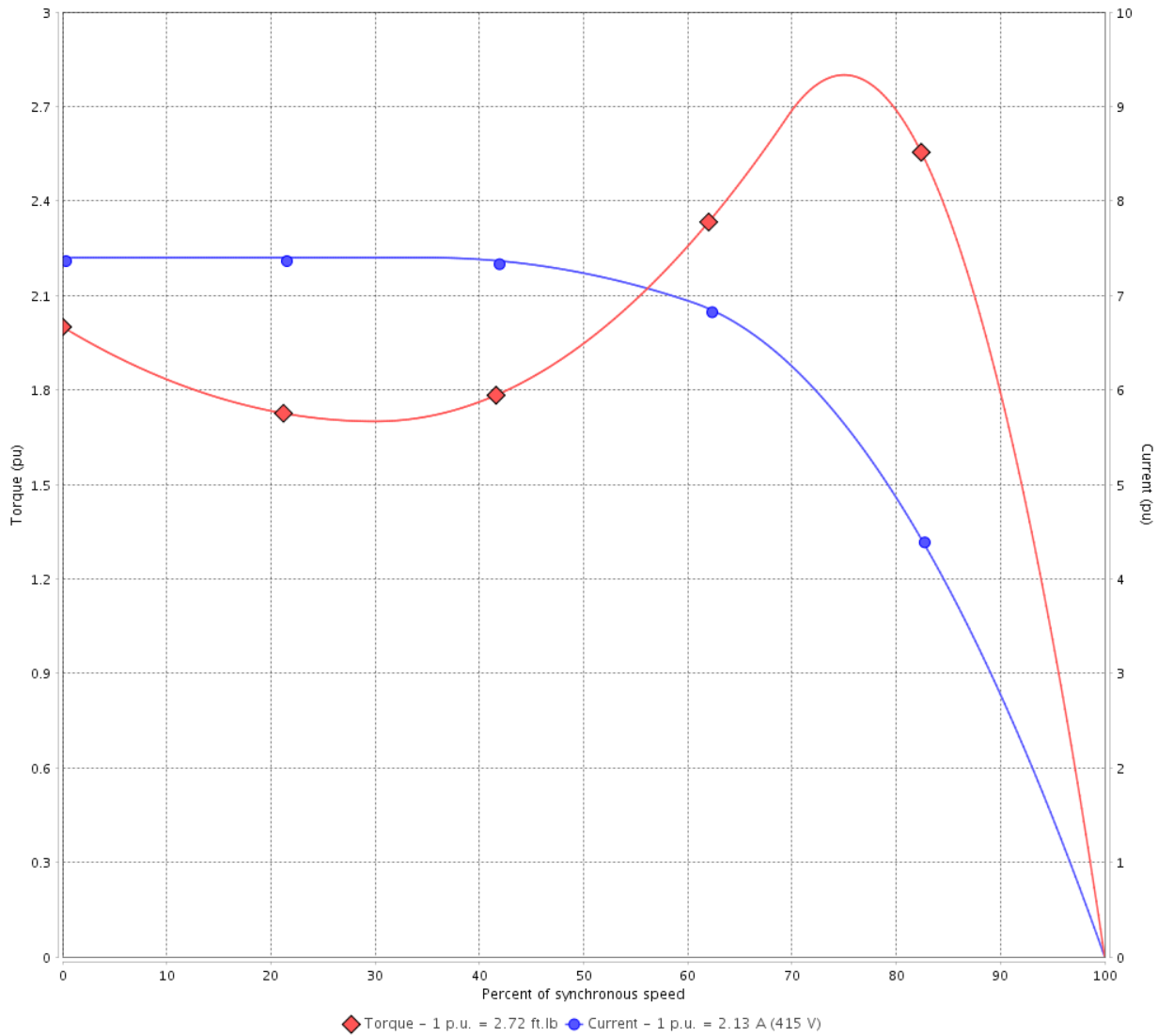
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 001560T3E56CFL-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 4.02/2.13 A	Moment of inertia (J)	: 0.0835 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 2.72 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 2900 rpm	Design	: A

Locked rotor time : 34s (cold) 19s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		4 /		
Date	14/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

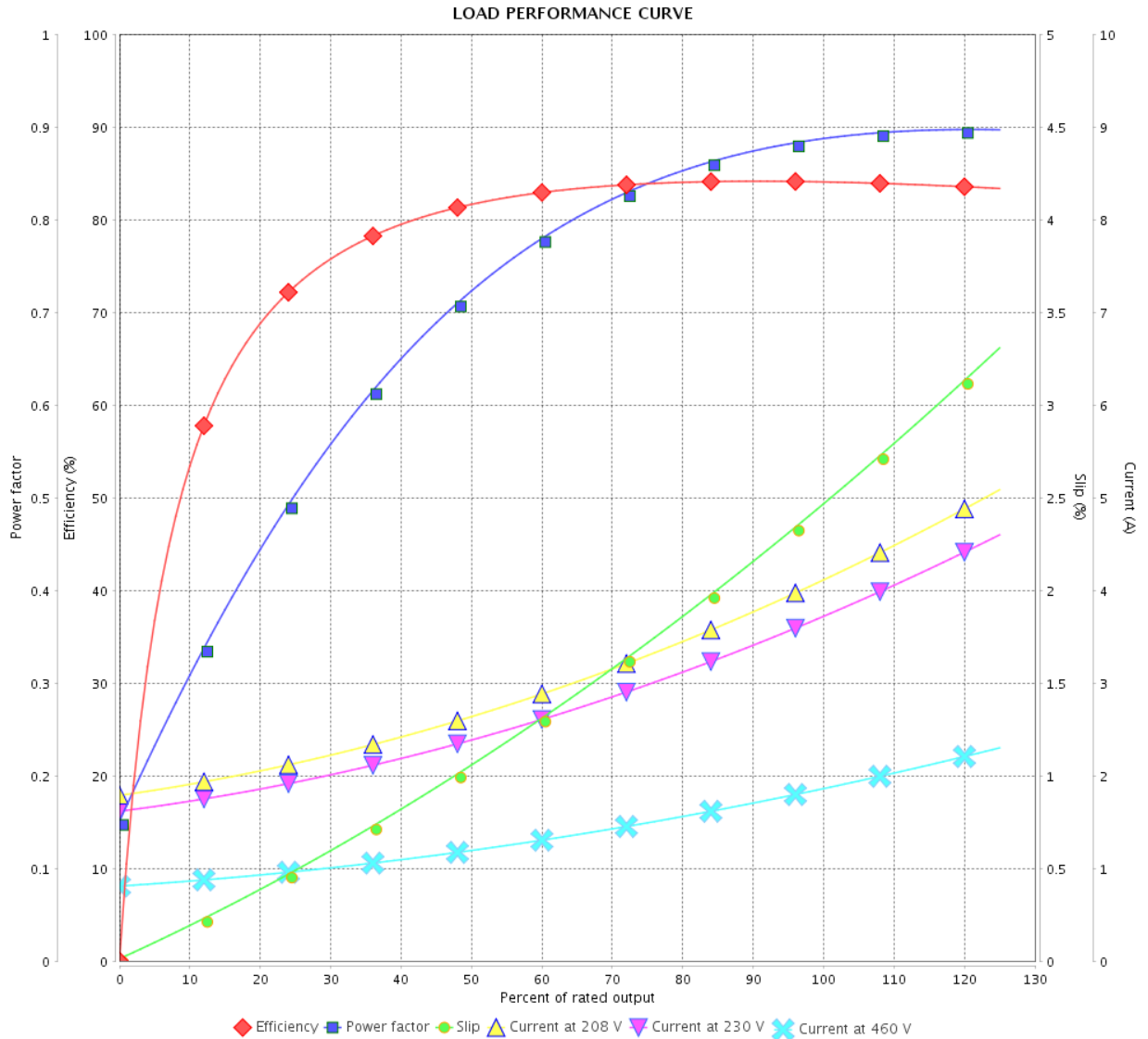
Product line : Premium Efficiency Three-Phase

Product code :

12812393

Catalog # :

00156OT3E56CFL-S



Performance : 230/460 V 60 Hz 2P

Rated current : 3.70/1.85 A
 LRC : 8.6
 Rated torque : 2.24 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 330 %
 Rated speed : 3510 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 /		
Date		14/04/2022		

LOAD PERFORMANCE CURVE

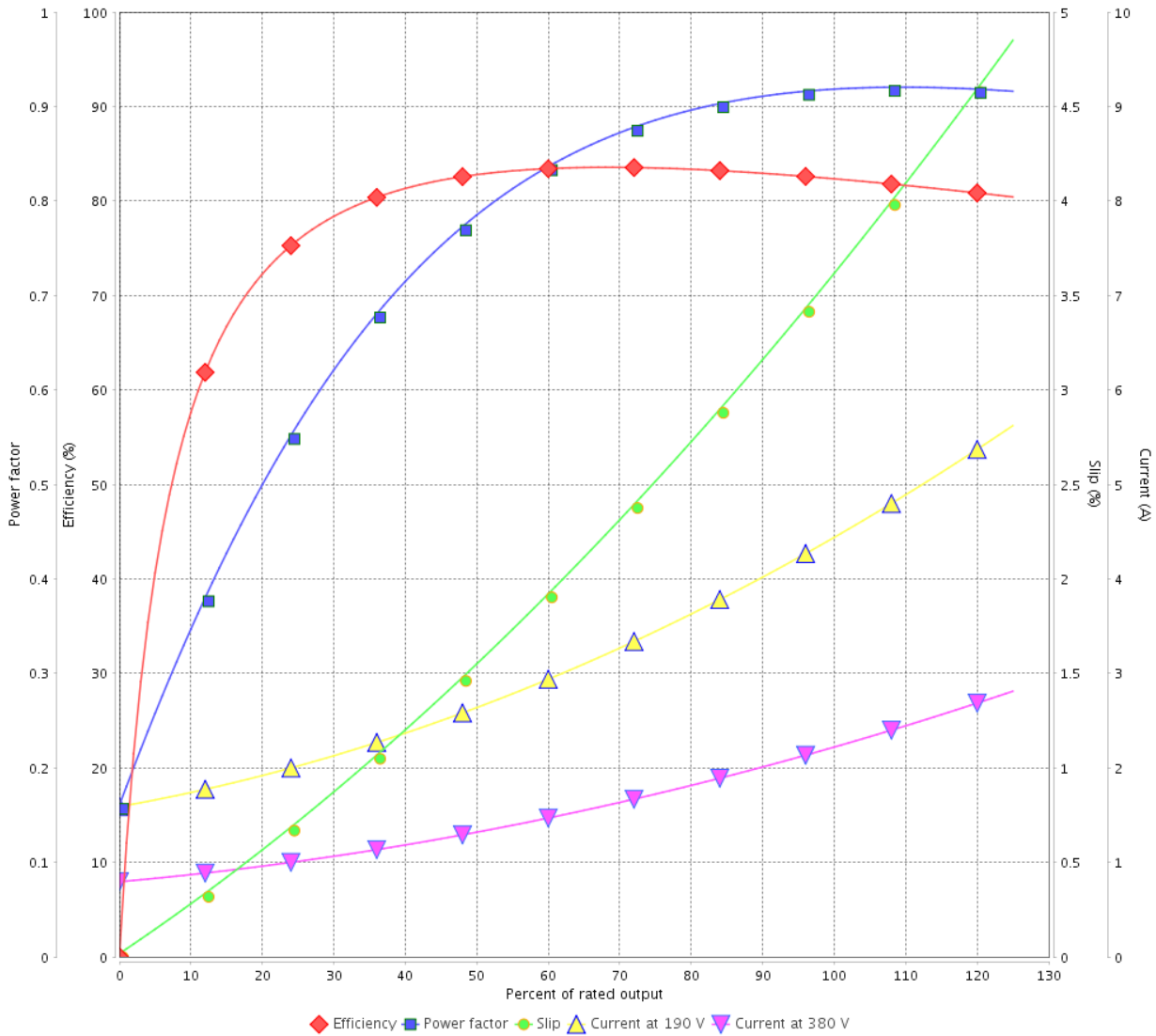
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 00156OT3E56CFL-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 4.42/2.21 A
 LRC : 6.7
 Rated torque : 2.73 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 250 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				

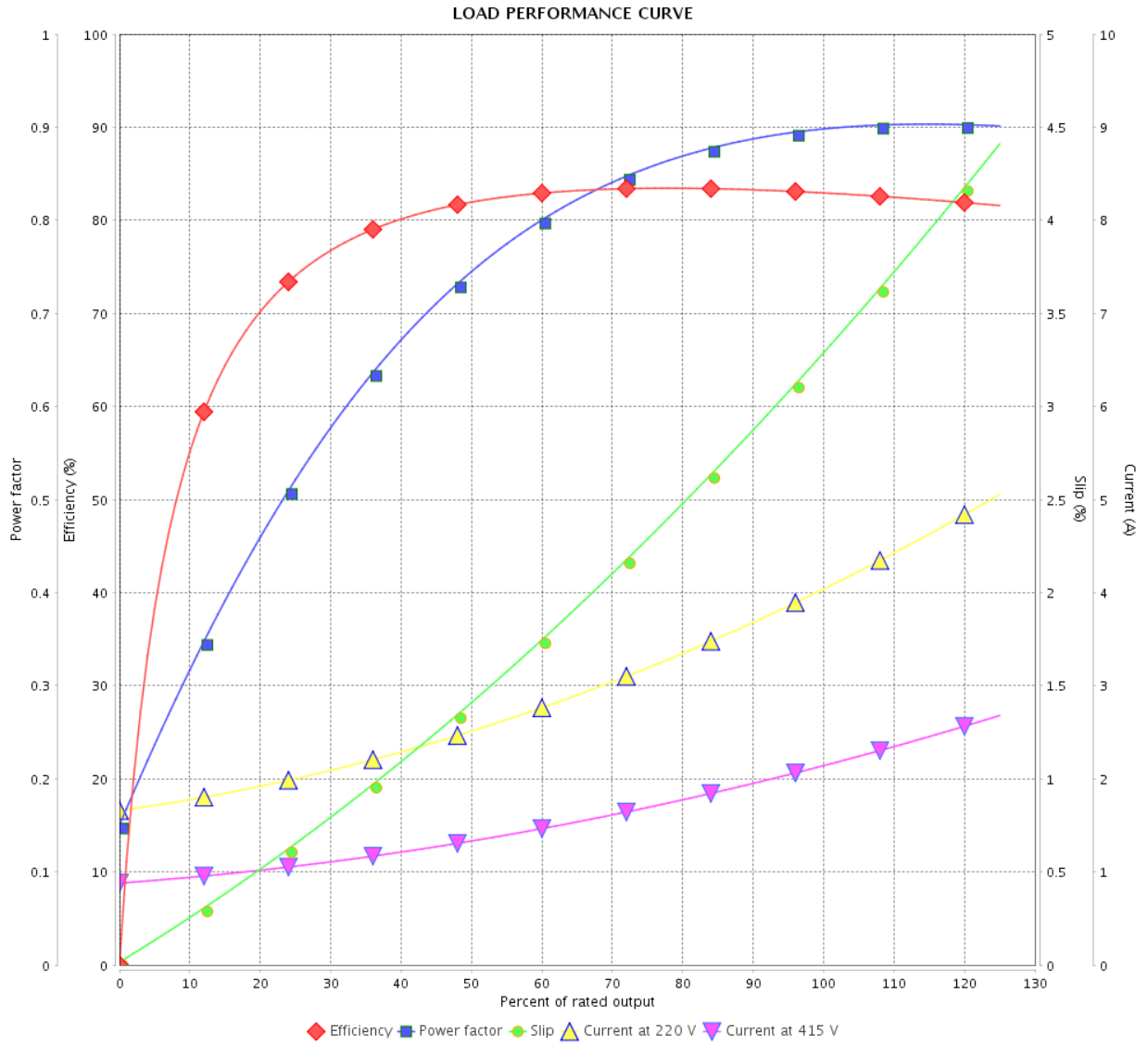
LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 00156OT3E56CFL-S



Performance : 220/415 V 50 Hz 2P

Rated current : 4.02/2.13 A
 LRC : 7.4
 Rated torque : 2.72 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 /		
Date		14/04/2022		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Premium Efficiency Three-Phase

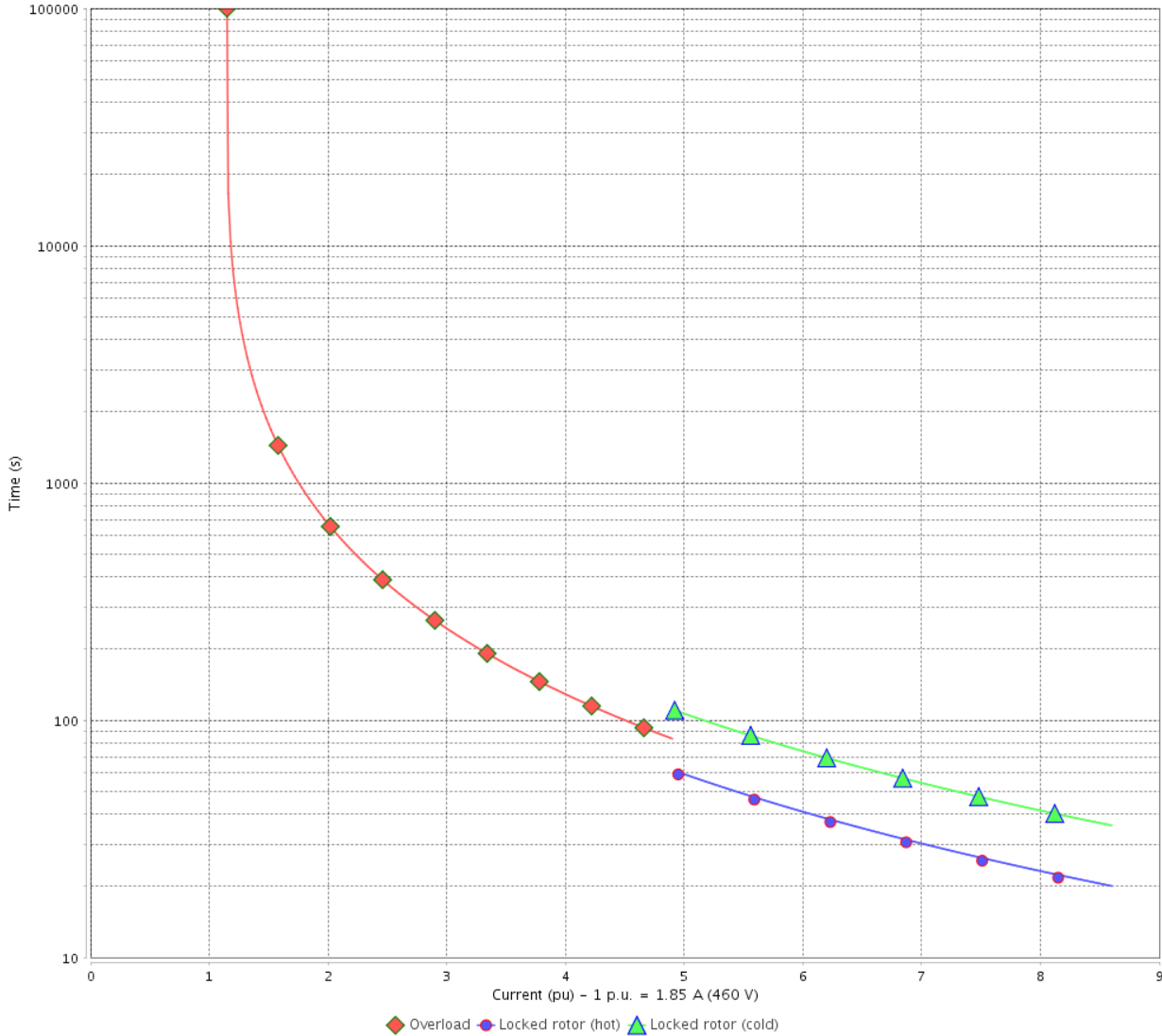
Product code :

12812393

Catalog # :

00156OT3E56CFL-S

THERMAL LIMIT CURVE



Performance : 230/460 V 60 Hz 2P

Rated current : 3.70/1.85 A
 LRC : 8.6
 Rated torque : 2.24 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 330 %
 Rated speed : 3510 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				
			8 /	

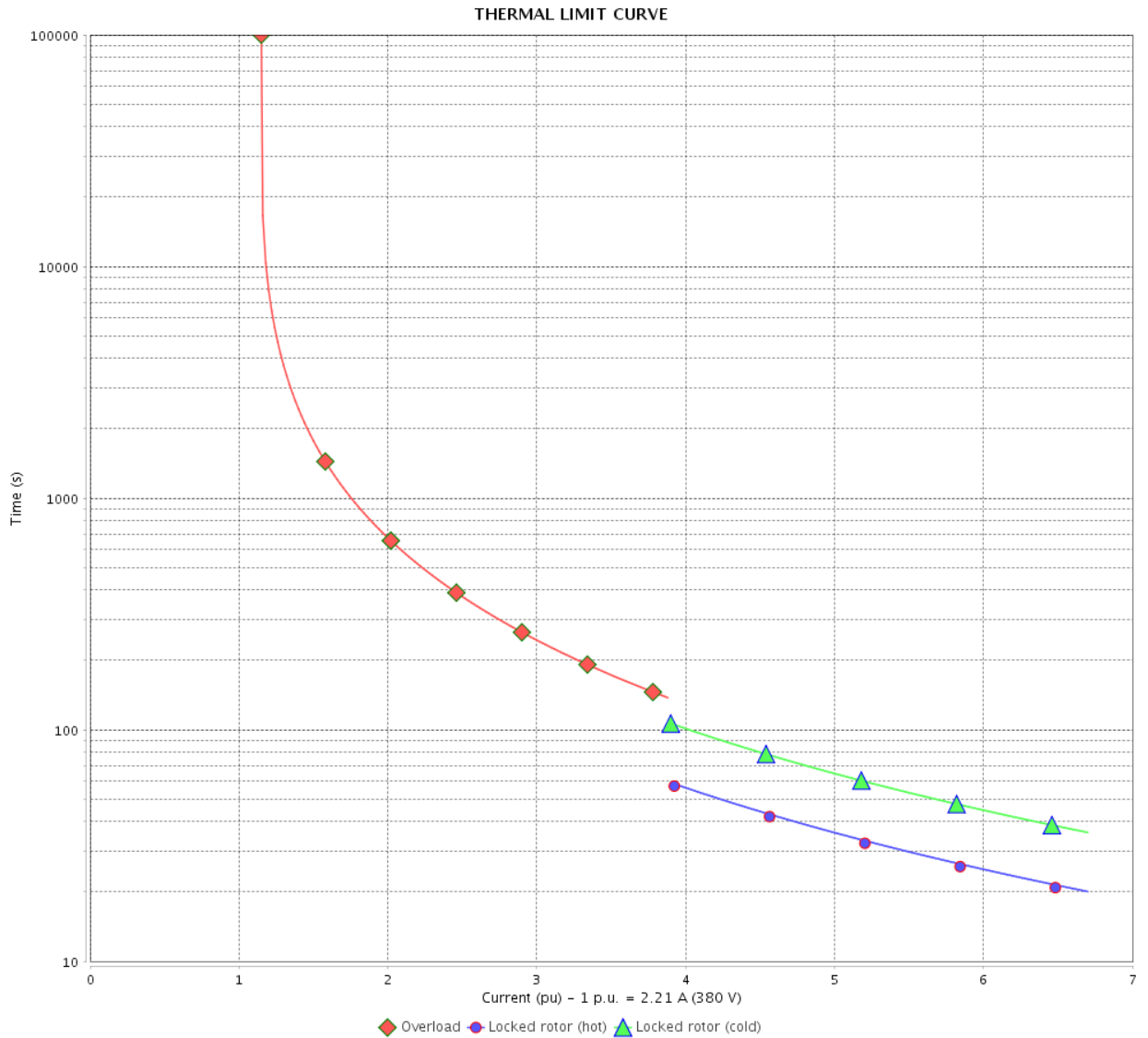
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : 00156OT3E56CFL-S



Performance : 190/380 V 50 Hz 2P

Rated current : 4.42/2.21 A
 LRC : 6.7
 Rated torque : 2.73 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 250 %
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Heating constant
 Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		9 /		
Date		14/04/2022		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

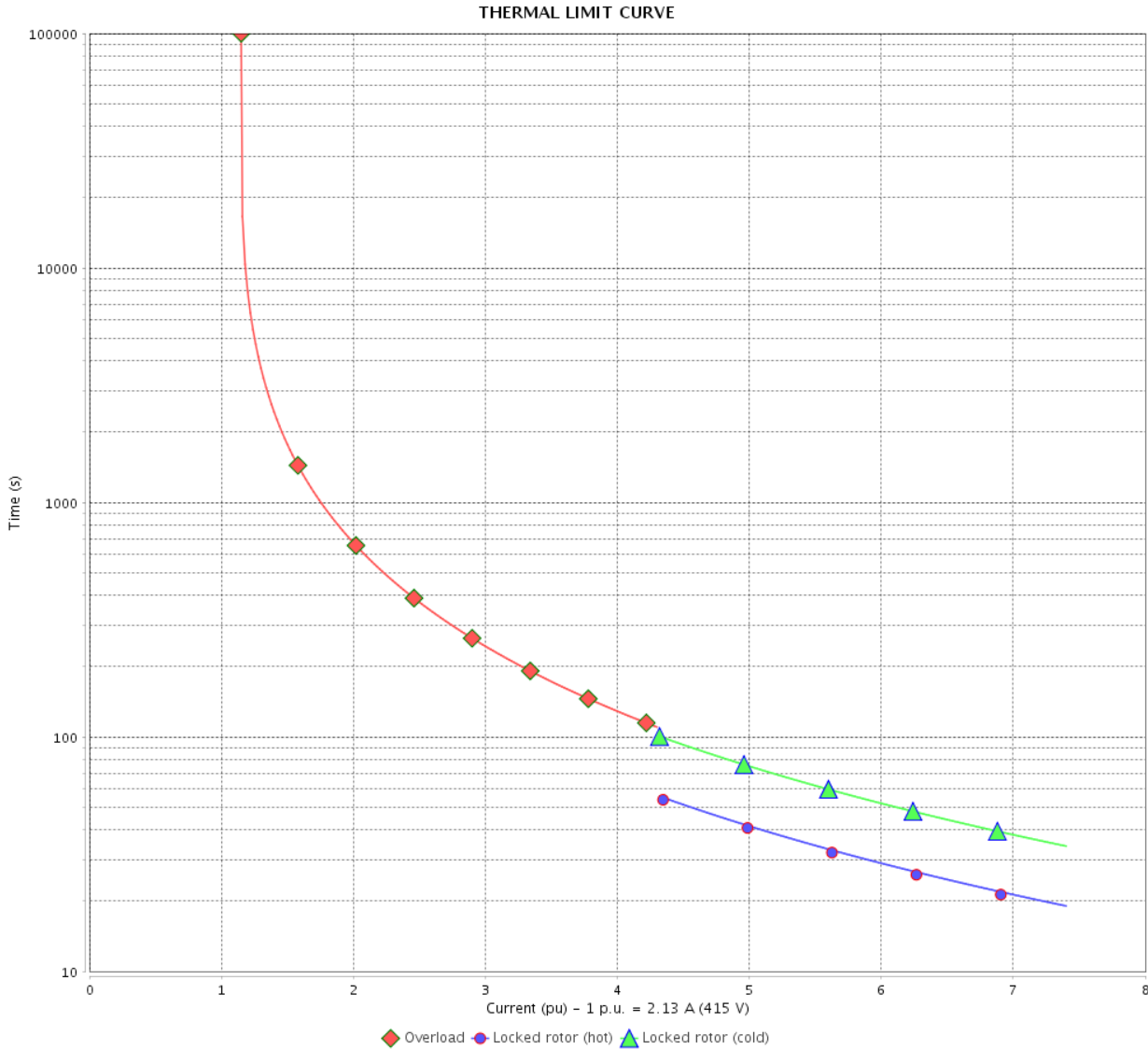
Product line : Premium Efficiency Three-Phase

Product code :

12812393

Catalog # :

00156OT3E56CFL-S



Performance : 220/415 V 50 Hz 2P

Rated current : 4.02/2.13 A
 LRC : 7.4
 Rated torque : 2.72 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 280 %
 Rated speed : 2900 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 /	Revision
Checked by				
Date	14/04/2022			

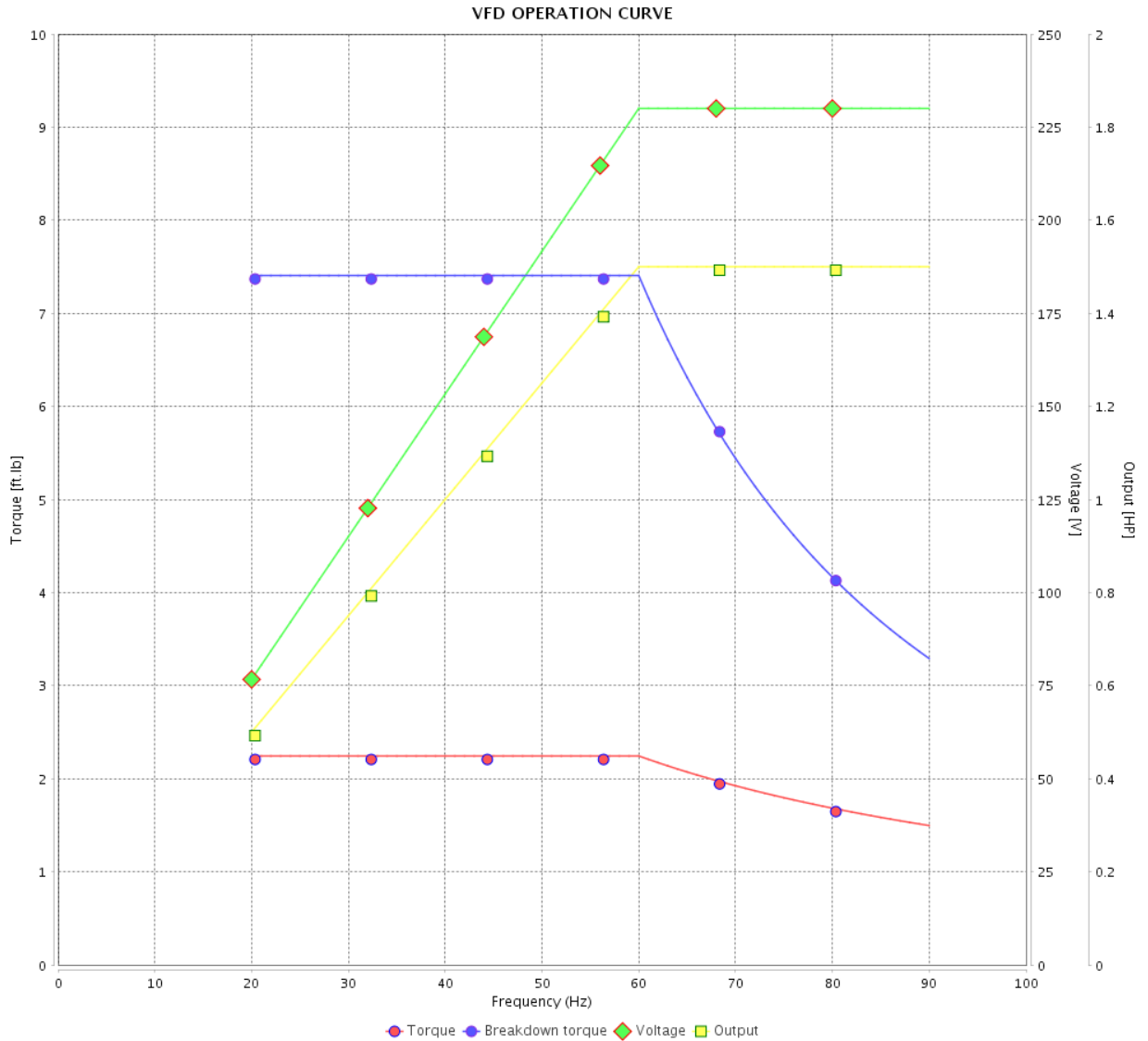
VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : Premium Efficiency Three-Phase Product code : 12812393
 Catalog # : _____ Catalog # : 00156OT3E56CFL-S



Performance : 230/460 V 60 Hz 2P

Rated current : 3.70/1.85 A
 LRC : 8.6
 Rated torque : 2.24 ft.lb
 Locked rotor torque : 210 %
 Breakdown torque : 330 %
 Rated speed : 3510 rpm

Moment of inertia (J) : 0.0835 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor :
 Temperature rise : 80 K
 Design : A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 11 /
Checked by				
Date	14/04/2022			
				Revision

1 2 3 4 5 6

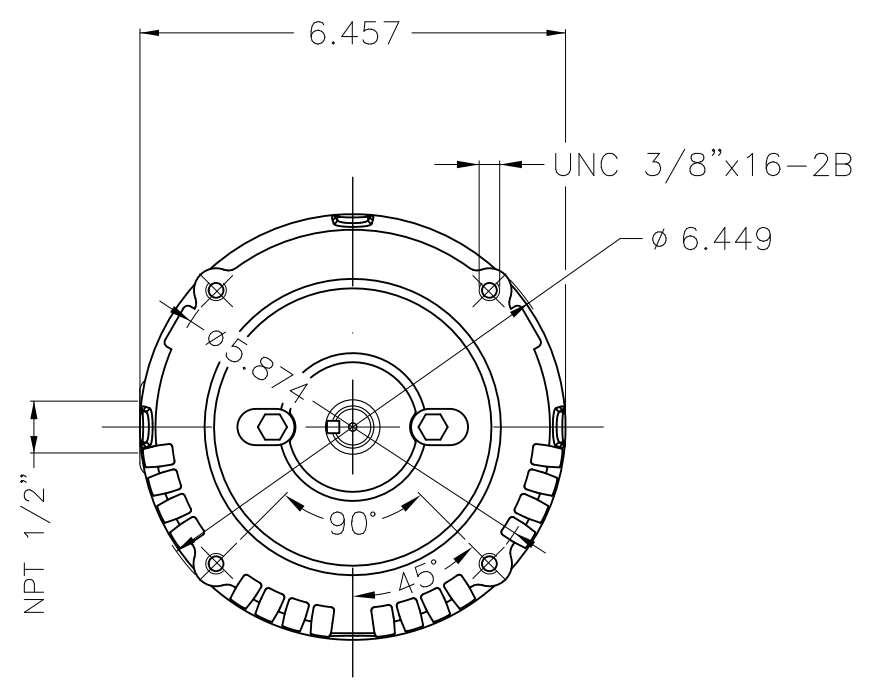
A

B

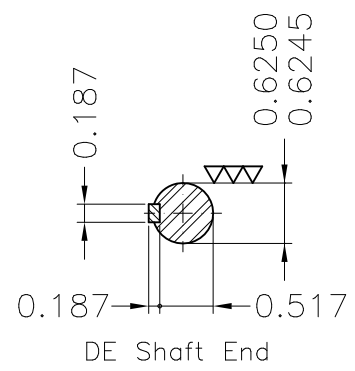
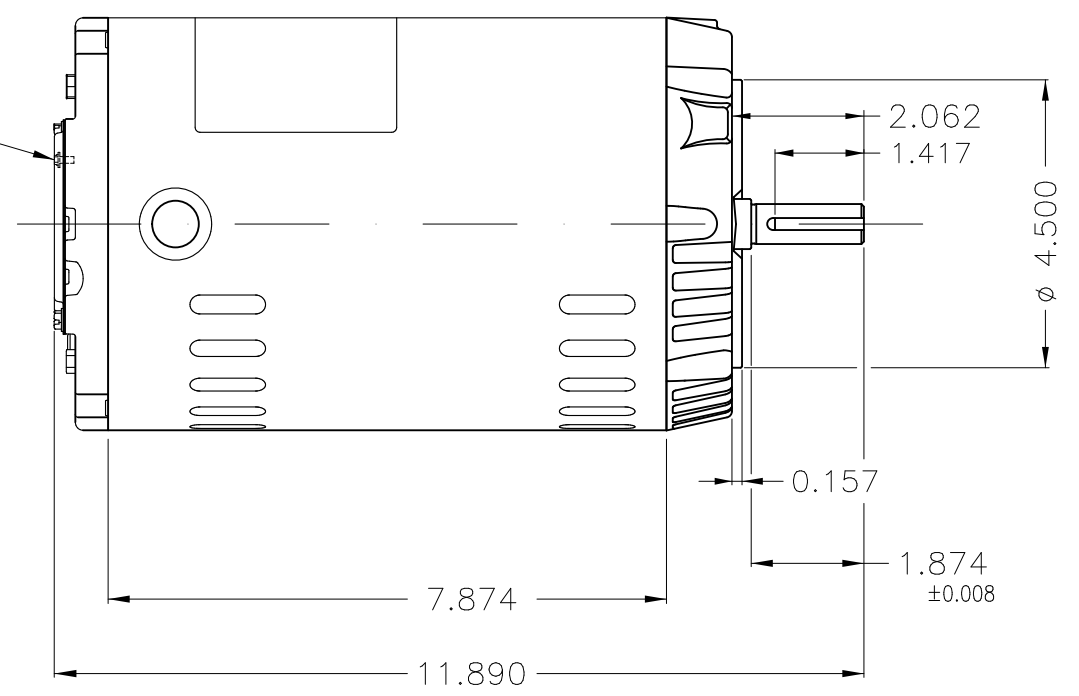
C

D

E



Grounding



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.				PREVIEW		WDD		
CHECKED		FRAME 56C IP21 ODP								
RELEASED										
REL DT.		WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1				

1.5 HP 02 Poles 60 Hz

A

Dimensions in inches XME A3



NEMA
Premium



3PT9



Energy Verified

MADE IN MEXICO

MAT: 12812393

W01.T00IC0X0X

MODEL 00156OT3E56CFL-S

29MAR2022 B/N:

PH 3	Hz 60	HP 1.5
FR 56C		KW 1.1
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 3.70/1.85
INS CL F AT 80K		SFA 4.25/2.13
AMB 40°C	DES A	SF 1.15
ENCL ODP	CODE K	PF 0.89
USABLE @ 208V 4.09A		RPM 3510
SF1.00		NEMA NOM. EFF 84.0%

ALTERNATE RATING: 1.5HP 50Hz 190-220/380-415V SF1.15
4.42-3.94/2.21-2.09A 2890RPM EFF 82.3% (IE2) IEC 60034-1

Inverter duty motor For 80Hz use on VPWM 1000:1 VT, 3:1 CT

DE 6204-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.

