

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :						
Product line		: Rolled Steel Standard Efficiency Three-Phase		Product code :	14797711	
				Catalog # :	.7518ES3E56C-S	
Frame	:	56C	Cooling method	:	IC411 - TEFC	
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>	:	10.7 kg	
Protection degree	:	IP55	Moment of inertia (J)	:	0.0027 kgm <sup>2</sup>	
Output [HP]		0.75			0.75	
Poles		4			4	
Frequency [Hz]		60			50	
Rated voltage [V]		208-230/460			190-220/380	
Rated current [A]		2.70-2.44/1.22			2.74-2.37/1.37	
L. R. Amperes [A]		18.6-16.8/8.42			15.3-13.3/7.67	
LRC [A]		6.9x(Code K)			5.6x(Code H)	
No load current [A]		1.55-1.80/0.900			1.71-1.48/0.856	
Rated speed [RPM]		1755			1440	
Slip [%]		2.50			4.00	
Rated torque [kgfm]		0.310			0.378	
Locked rotor torque [%]		240			170	
Breakdown torque [%]		300			229	
Service factor					1.15	
Temperature rise		80 K			80 K	
Locked rotor time		30s (cold) 17s (hot)			0s (cold) 0s (hot)	
Noise level <sup>2</sup>		52.0 dB(A)			49.0 dB(A)	
Efficiency (%)	25%	70.4			66.7	
	50%	72.0			68.6	
	75%	77.0			74.2	
	100%	78.5			76.1	
Power Factor	25%	0.26			0.27	
	50%	0.48			0.49	
	75%	0.61			0.62	
	100%	0.72			0.73	
Bearing type	:	<u>Drive end</u> 6203 ZZ	<u>Non drive end</u> 6202 ZZ	Foundation loads		
Sealing	:	V'Ring	Without Bearing Seal	Max. traction	: 29 kgf	
Lubrication interval	:	-	-	Max. compression	: 40 kgf	
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
Performed by						
Checked by					Page	Revision
Date	31/05/2023				1 / 16	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

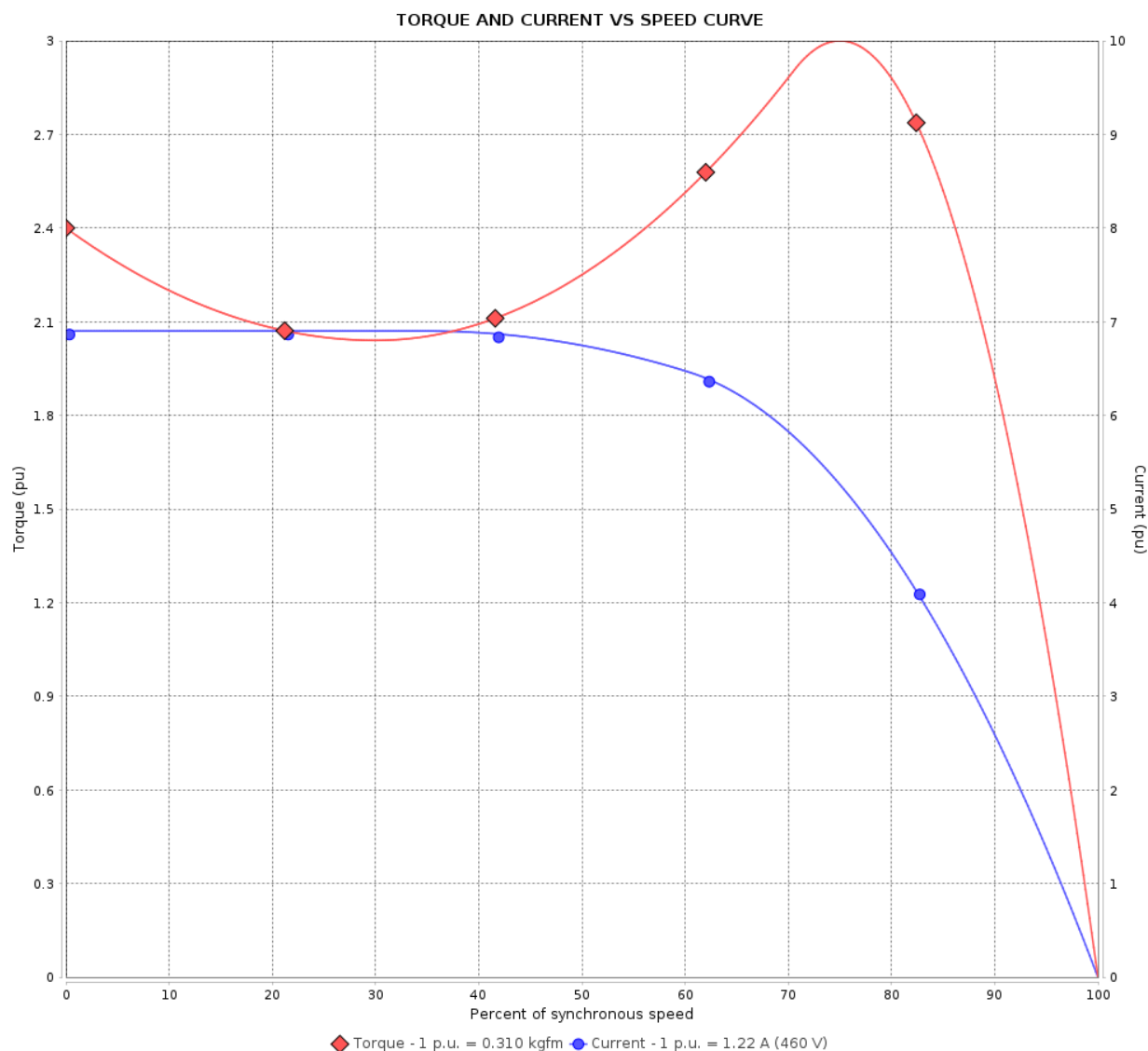


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 208-230/460 V 60 Hz 4P

Rated current	: 2.70-2.44/1.22 A	Moment of inertia (J)	: 0.0027 kgm <sup>2</sup>
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 0.310 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1755 rpm		

Locked rotor time : 30s (cold) 17s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	31/05/2023			

# TORQUE AND CURRENT VS SPEED CURVE



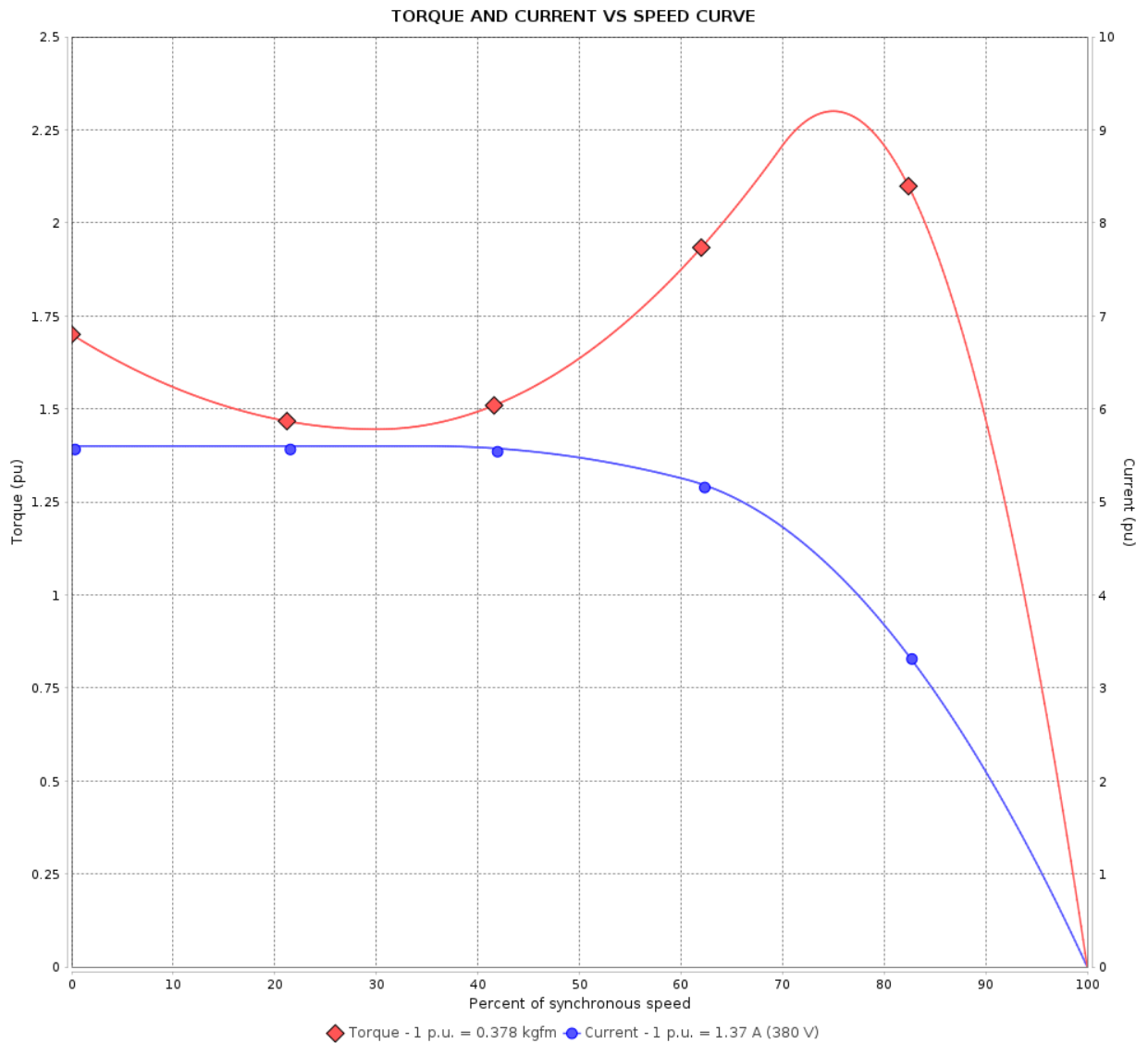
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 190-220/380 V 50 Hz 4P

Rated current	: 2.74-2.37/1.37 A	Moment of inertia (J)	: 0.0027 kgm <sup>2</sup>
LRC	: 5.6	Duty cycle	: Cont.(S1)
Rated torque	: 0.378 kgfm	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1440 rpm		

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	31/05/2023			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

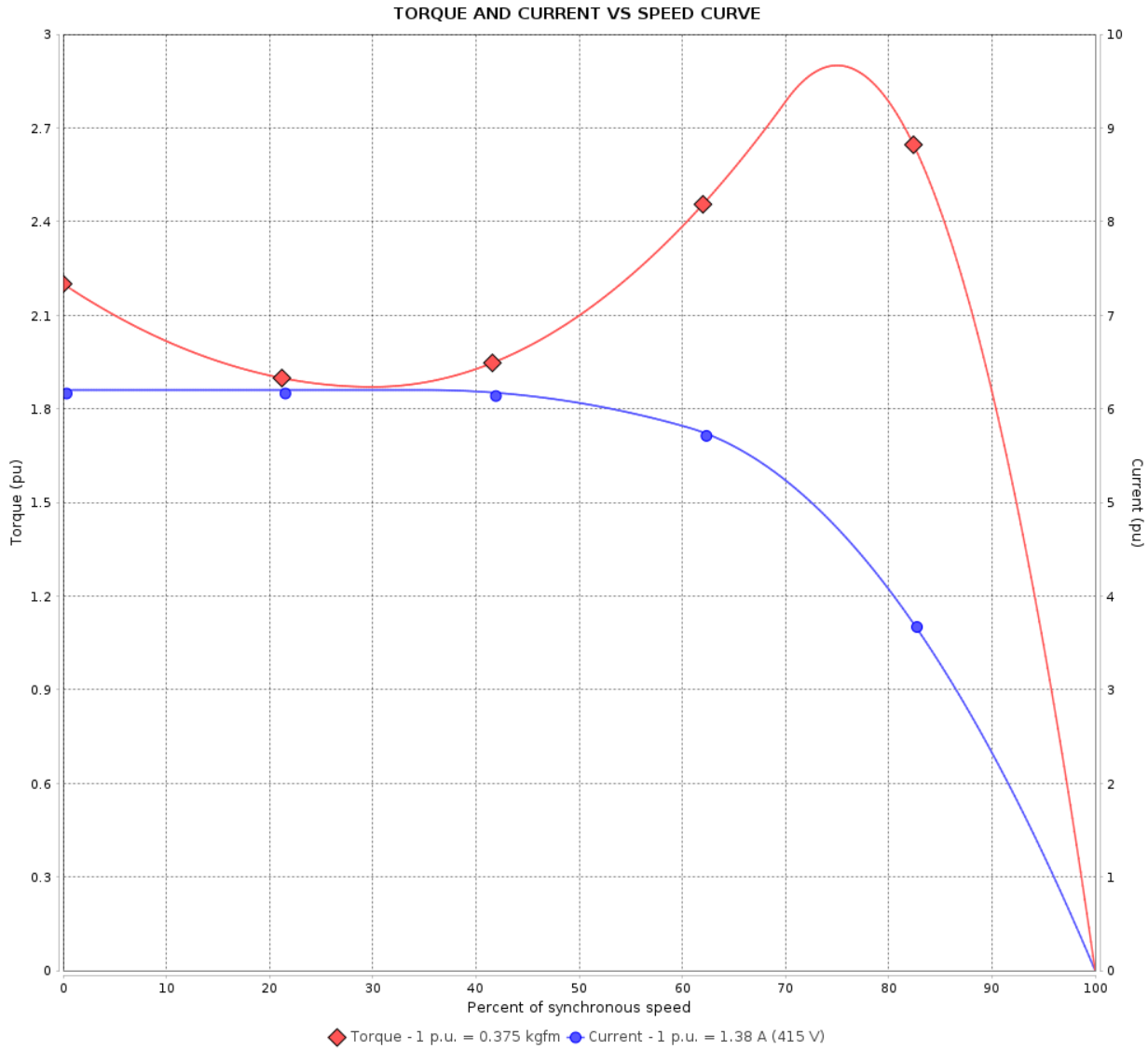


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 415 V 50 Hz 4P

Rated current	: 1.38 A	Moment of inertia (J)	: 0.0027 kgm <sup>2</sup>
LRC	: 6.2	Duty cycle	: Cont.(S1)
Rated torque	: 0.375 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm		

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	31/05/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

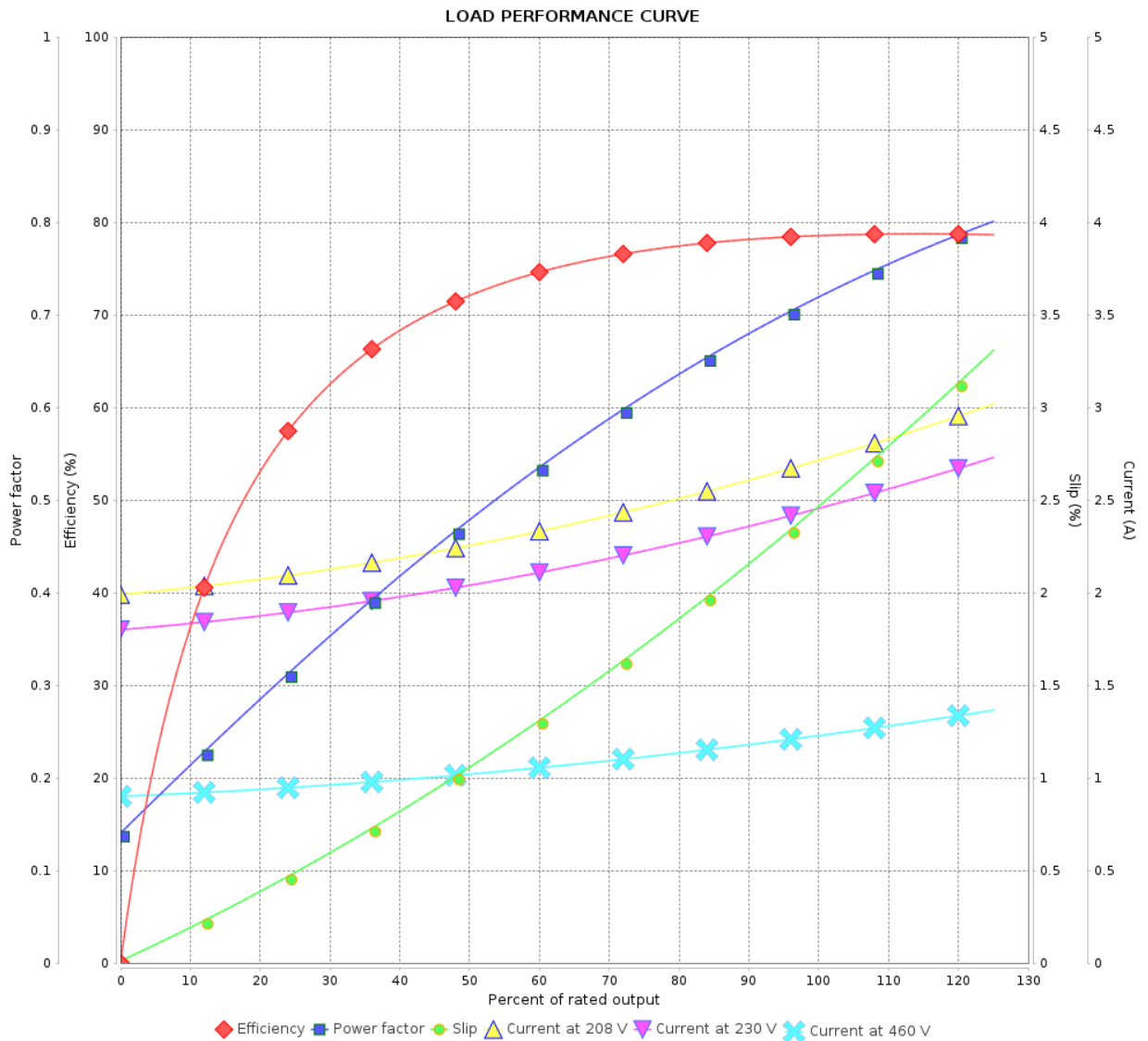


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 208-230/460 V 60 Hz 4P

Rated current : 2.70-2.44/1.22 A  
 LRC : 6.9  
 Rated torque : 0.310 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			5 / 16	
Date	31/05/2023			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

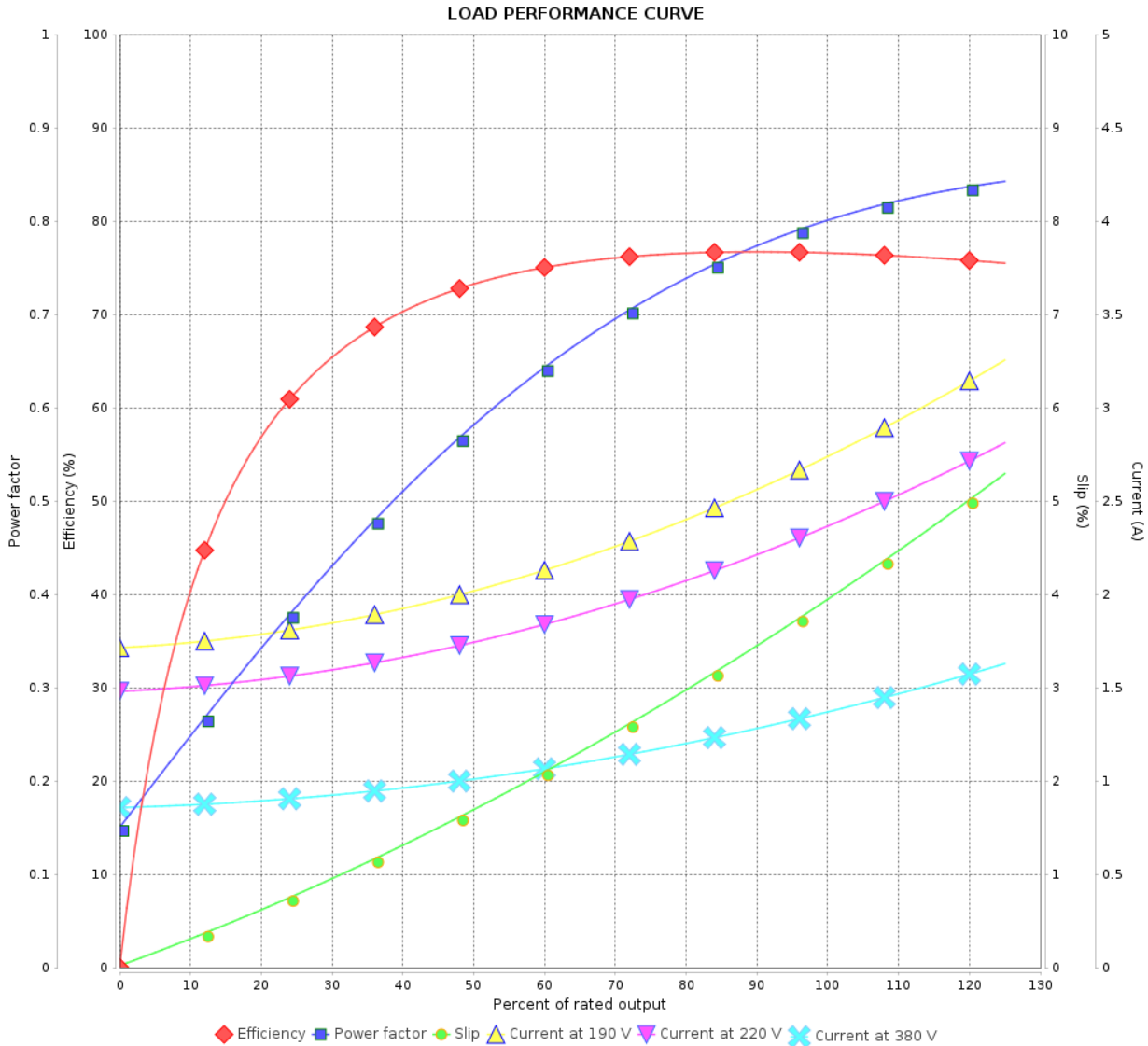


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 190-220/380 V 50 Hz 4P

Rated current : 2.74-2.37/1.37 A  
 LRC : 5.6  
 Rated torque : 0.378 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			6 / 16	
Date	31/05/2023			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

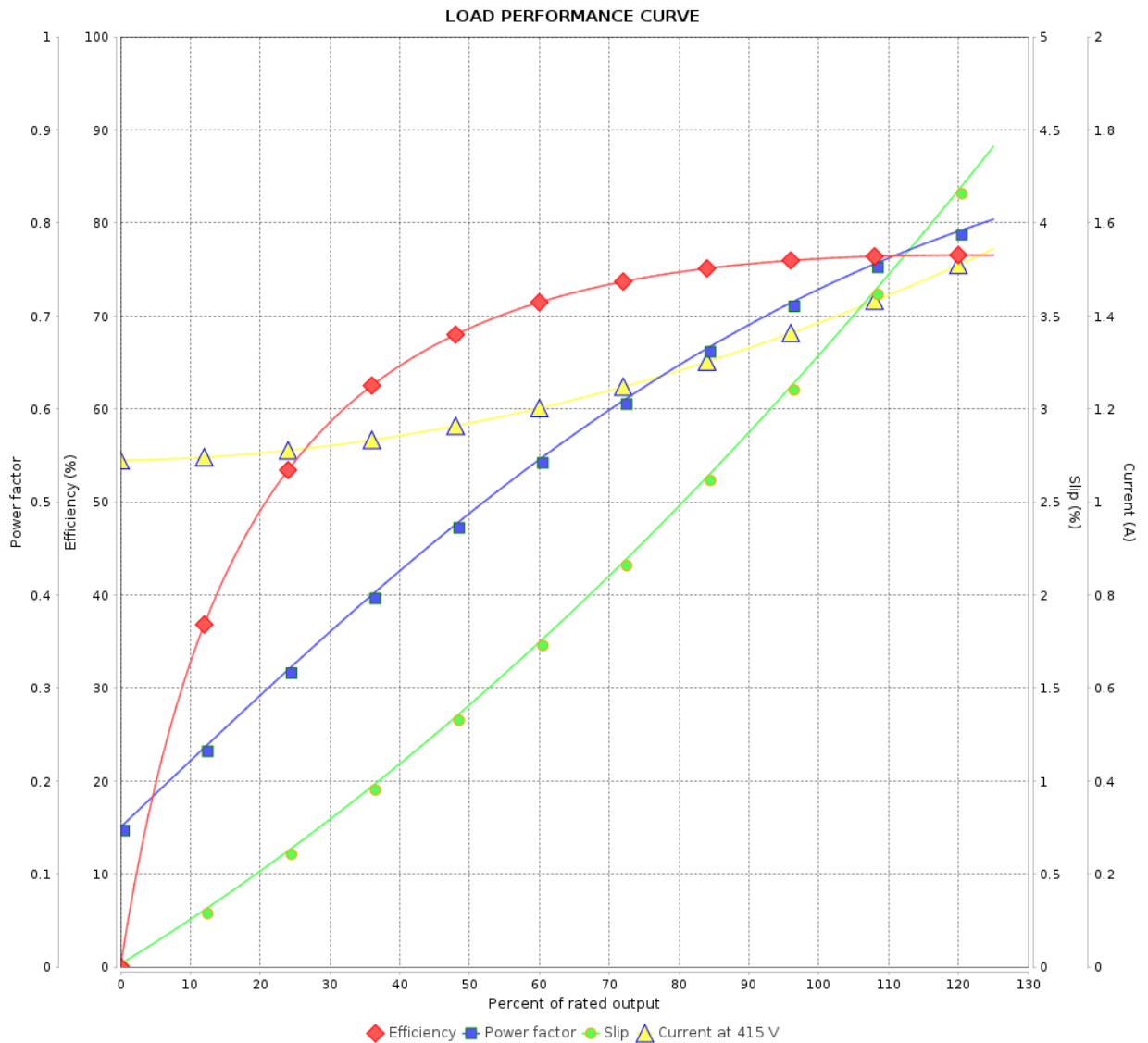


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 415 V 50 Hz 4P

Rated current : 1.38 A  
 LRC : 6.2  
 Rated torque : 0.375 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 16		
Date		31/05/2023		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S

Performance : 208-230/460 V 60 Hz 4P

Rated current : 2.70-2.44/1.22 A

LRC : 6.9

Rated torque : 0.310 kgfm

Locked rotor torque : 240 %

Breakdown torque : 300 %

Rated speed : 1755 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>

Duty cycle : Cont.(S1)

Insulation class : F

Service factor :

Temperature rise : 80 K

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	31/05/2023		8 / 16	

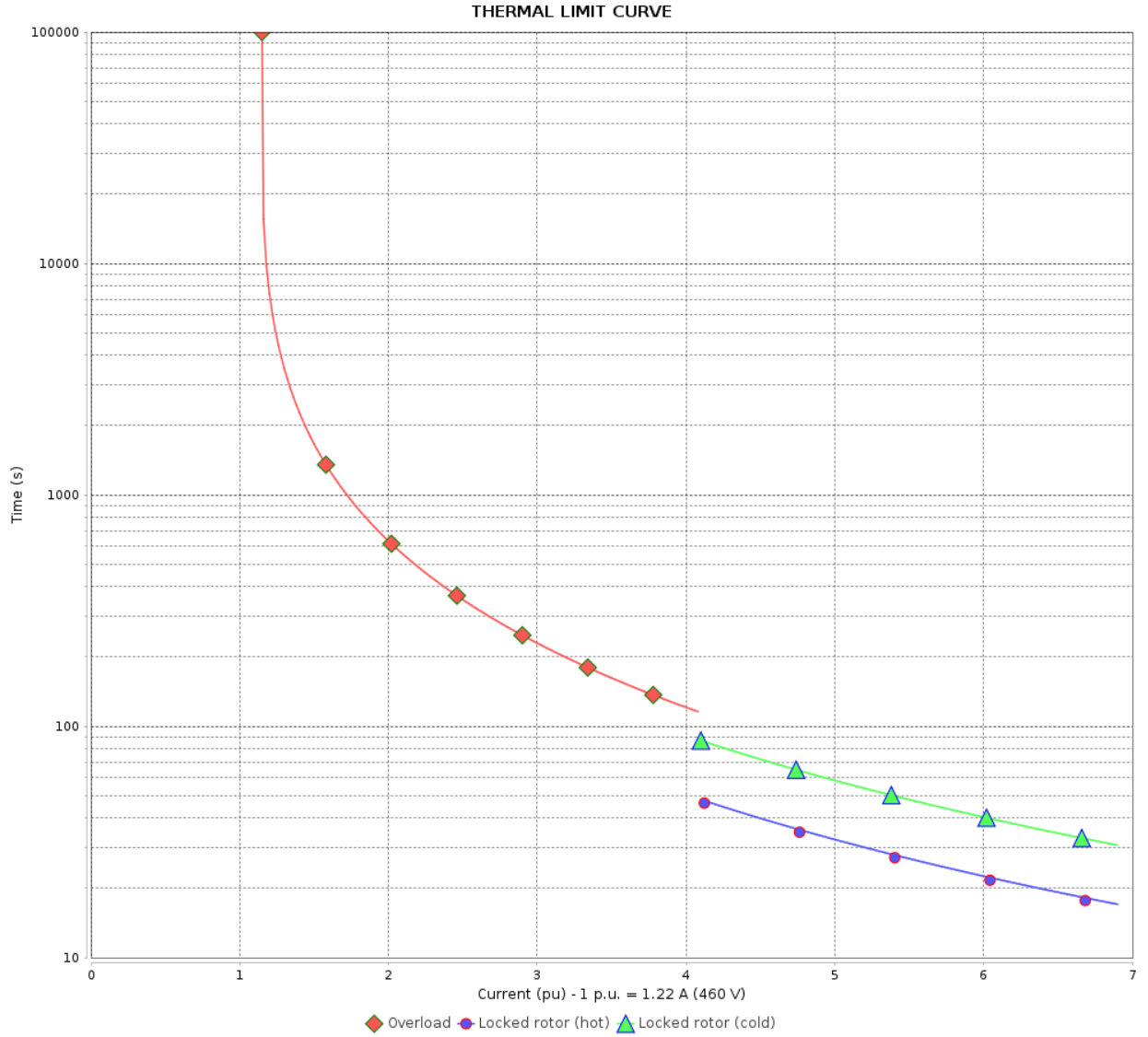


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			9 / 16	

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S

Performance : 190-220/380 V 50 Hz 4P

Rated current : 2.74-2.37/1.37 A

LRC : 5.6

Rated torque : 0.378 kgfm

Locked rotor torque : 170 %

Breakdown torque : 229 %

Rated speed : 1440 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>

Duty cycle : Cont.(S1)

Insulation class : F

Service factor : 1.15

Temperature rise : 80 K

Heating constant

Cooling constant

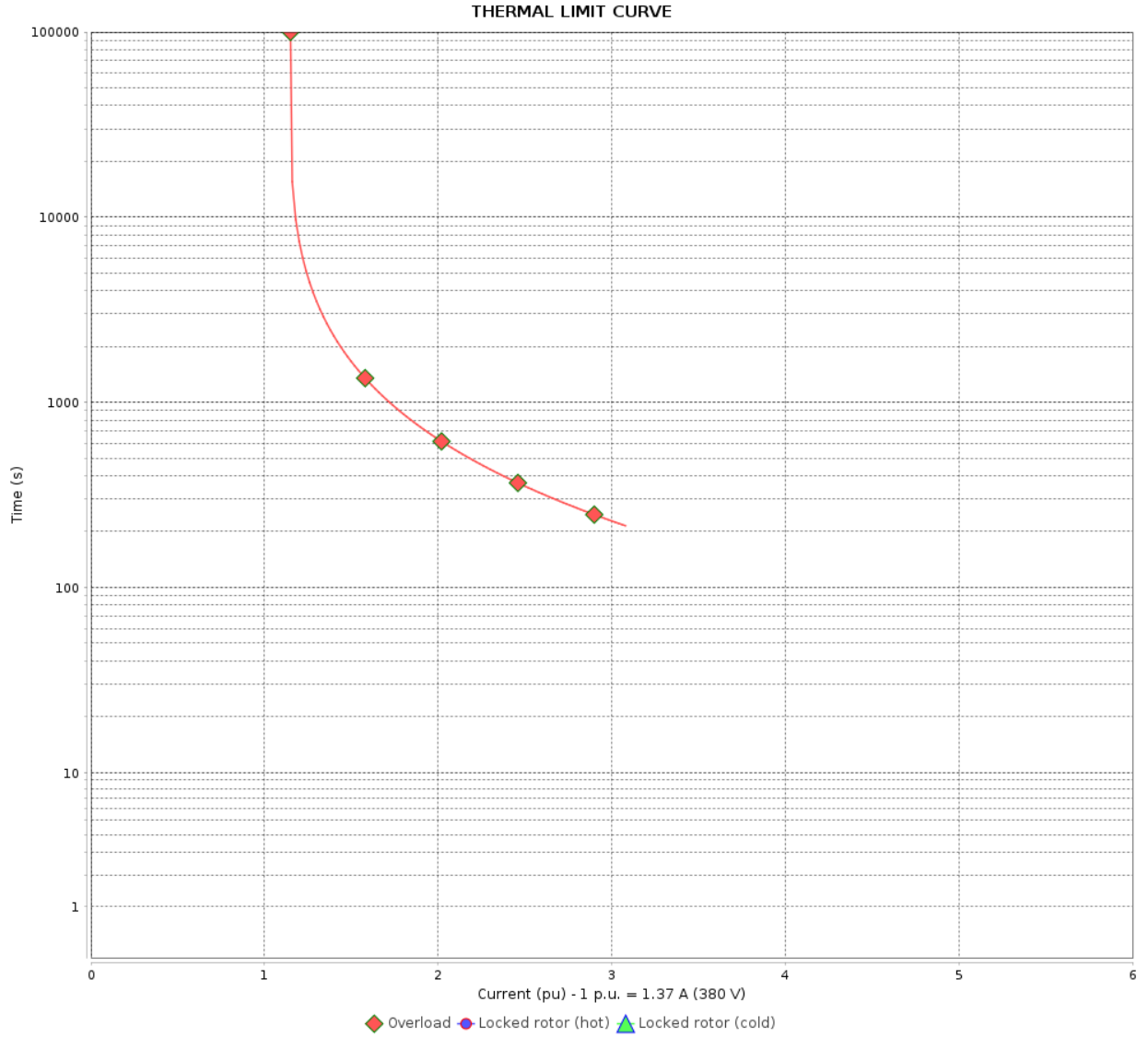
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	31/05/2023		10 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		11 / 16		
Date		31/05/2023		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S

Performance : 415 V 50 Hz 4P

Rated current : 1.38 A  
LRC : 6.2  
Rated torque : 0.375 kgfm  
Locked rotor torque : 220 %  
Breakdown torque : 290 %  
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K

Heating constant

Cooling constant

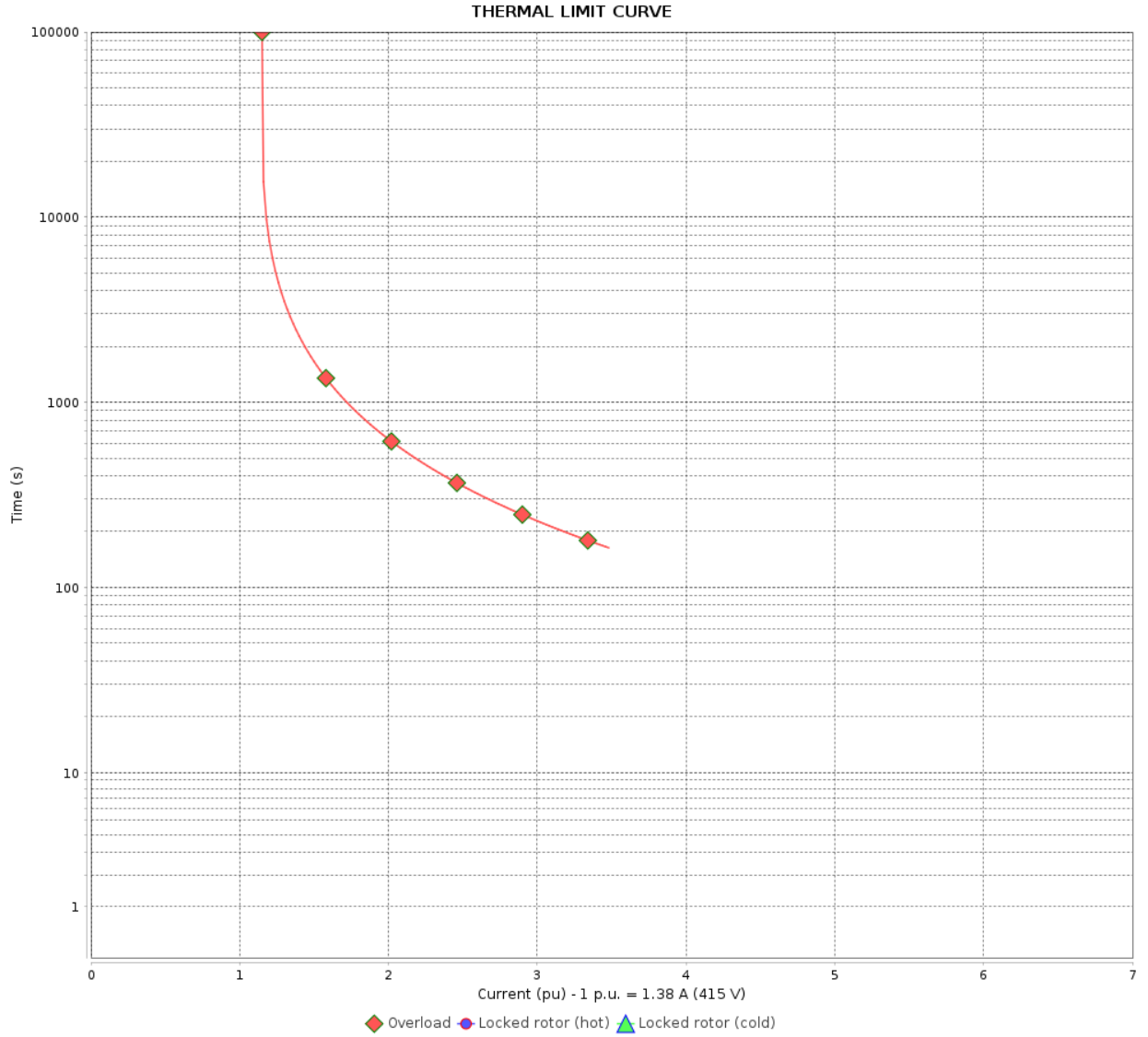
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	31/05/2023		12 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		31/05/2023		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

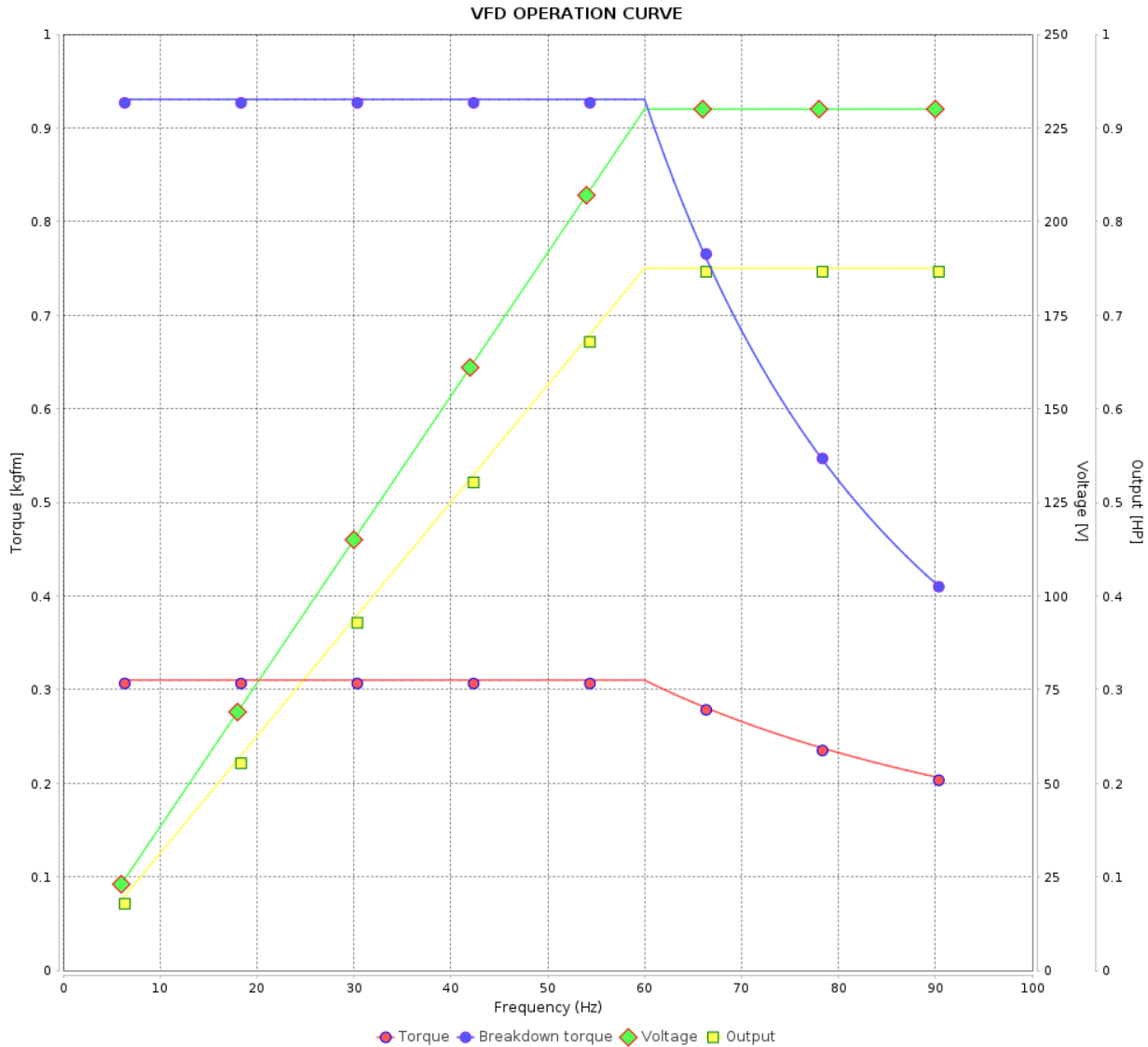


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 208-230/460 V 60 Hz 4P

Rated current : 2.70-2.44/1.22 A  
 LRC : 6.9  
 Rated torque : 0.310 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1755 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 16	Revision
Checked by				
Date	31/05/2023			

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

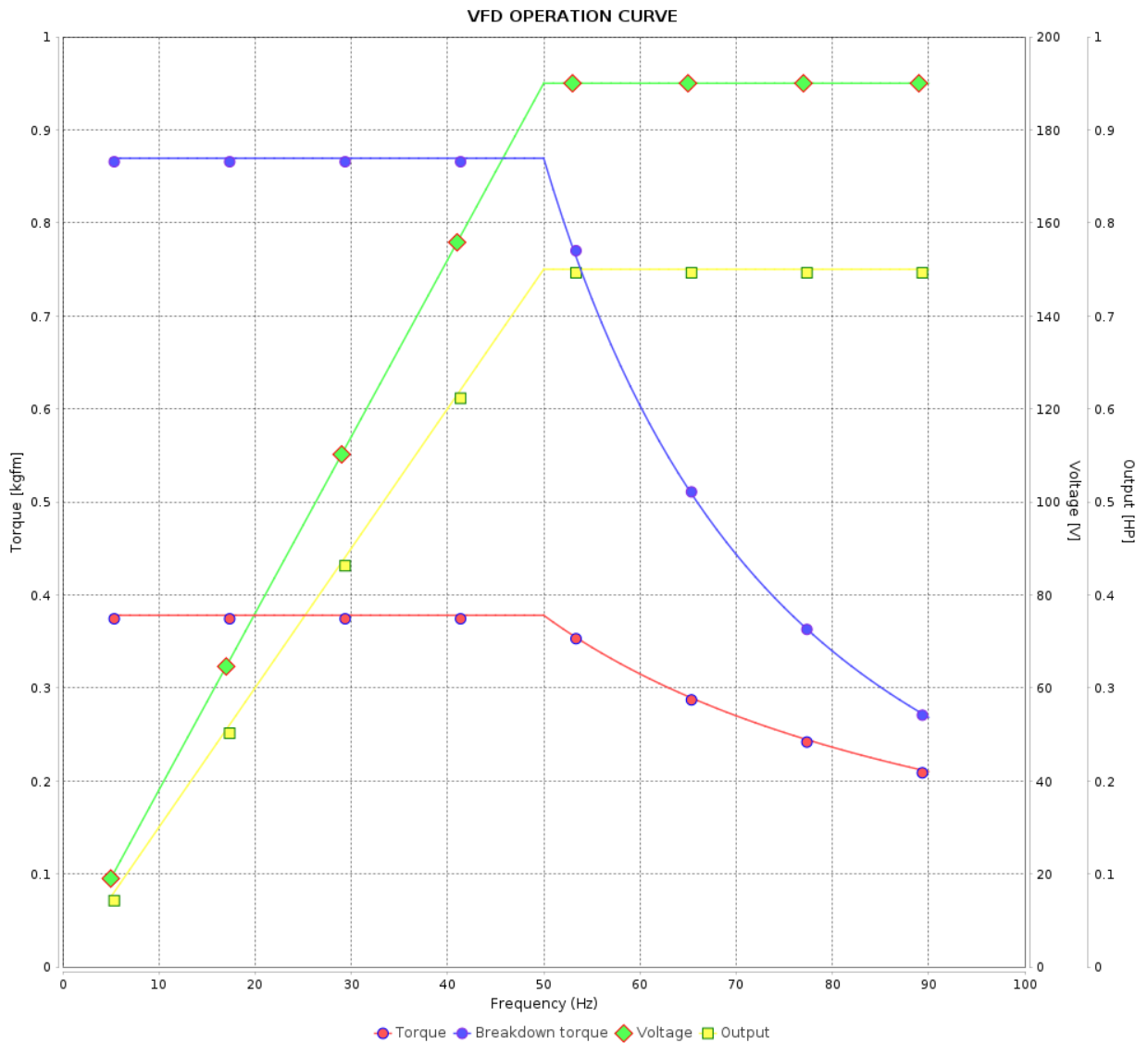


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 190-220/380 V 50 Hz 4P

Rated current : 2.74-2.37/1.37 A  
 LRC : 5.6  
 Rated torque : 0.378 kgfm  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1440 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		15 / 16		
Date		31/05/2023		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

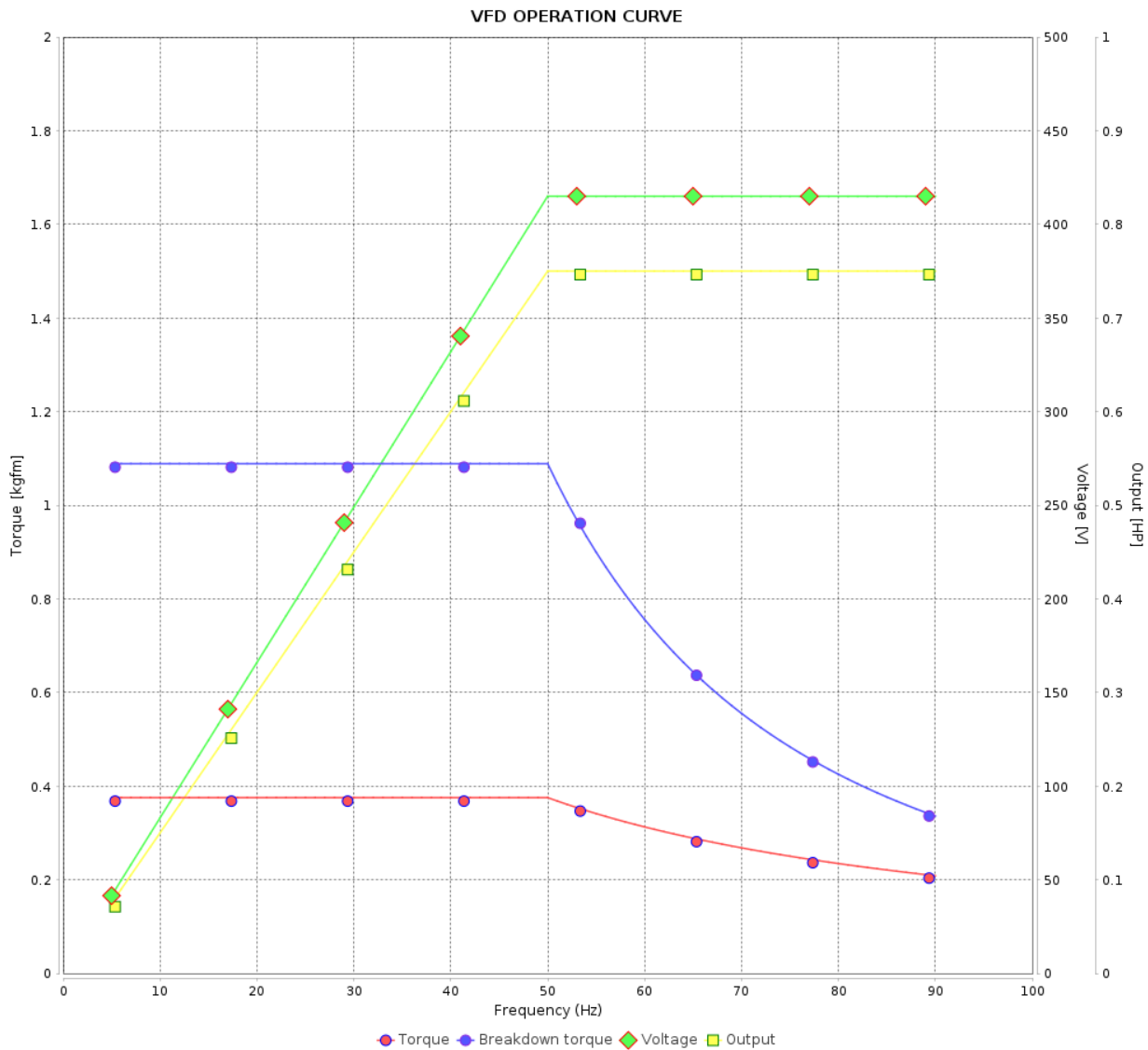


Customer :

Product line : Rolled Steel Standard Efficiency Three-Phase

Product code : 14797711

Catalog # : .7518ES3E56C-S



Performance : 415 V 50 Hz 4P

Rated current : 1.38 A  
 LRC : 6.2  
 Rated torque : 0.375 kgfm  
 Locked rotor torque : 220 %  
 Breakdown torque : 290 %  
 Rated speed : 1450 rpm

Moment of inertia (J) : 0.0027 kgm<sup>2</sup>  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	31/05/2023			







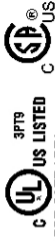
MADE IN BRAZIL

**MAT: 14797711**

**W01.TE0IC0X0X**

**MODEL 7518ES3E56C-S**

**11MAY2023 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 0.75
FR 56C		KW 0.55
DUTY CONT.		V 208-230/460
ALT 1000 m.a.s.l.		A 2.70-2.44/1.22
INS CL F AT 80K	IP55	SFA 2.70-2.81/1.40
AMB 40°C	DES -	SF 1.15
ENCL TEFC	CODE K	PF 0.72
USABLE @ 208V SF1.00		RPM 1755
		NEMA NOM. EFF 78.5%

ALTERNATE RATING: 0.75HP 50Hz 190-220/380-415V SF1.15
2.74-2.80/1.37-1.38A 1440RPM EFF 78.1% (IE1) 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-RED BRK

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.

