

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :		
Product line	: NEMA Premium Efficiency Three-Phase	
Product code :	12898024	
Catalog # :	00712ET3ER254TC-S	
Frame	: 254/6TC	
Insulation class	: F	
Duty cycle	: Cont.(S1)	
Ambient temperature	: -20°C to +40°C	
Altitude	: 1000 m.a.s.l.	
Protection degree	: IP55	
Design	: B	
Cooling method	: IC411 - TEFC	
Mounting	: W-6	
Rotation ¹	: Both (CW and CCW)	
Starting method	: Direct On Line	
Approx. weight ²	: 227 lb	
Moment of inertia (J)	: 2.34 sq.ft.lb	
Output [HP]	7.5	
Poles	6	
Frequency [Hz]	60	
Rated voltage [V]	230/460	
Rated current [A]	20.0/9.98	
L. R. Amperes [A]	108/53.9	
LRC [A]	5.4x(Code G)	
No load current [A]	10.1/5.03	
Rated speed [RPM]	1175	
Slip [%]	2.08	
Rated torque [ft.lb]	33.5	
Locked rotor torque [%]	200	
Breakdown torque [%]	229	
Service factor	1.15	
Temperature rise	80 K	
Locked rotor time	75s (cold) 42s (hot)	
Noise level ²	59.0 dB(A)	
Efficiency (%)	25%	88.1
	50%	89.5
	75%	89.5
	100%	91.0
Power Factor	25%	0.35
	50%	0.58
	75%	0.70
	100%	0.76
Bearing type	: <u>Drive end</u> 6309 Z C3 <u>Non drive end</u> 6208 Z C3	
Sealing	: V'Ring Without Bearing Seal	
Lubrication interval	: 19702 h 20000 h	
Lubricant amount	: 13 g 8 g	
Lubricant type	: Mobil Polyrex EM	
Foundation loads	Max. traction : 276 lb	
	Max. compression : 503 lb	
Notes USABLE @208V 22.1A SF 1.00 SFA 22.1A		
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 by	Performed	
Checked by	Checked	
Date	13/04/2022	
Page	1 / 16	
Revision		

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



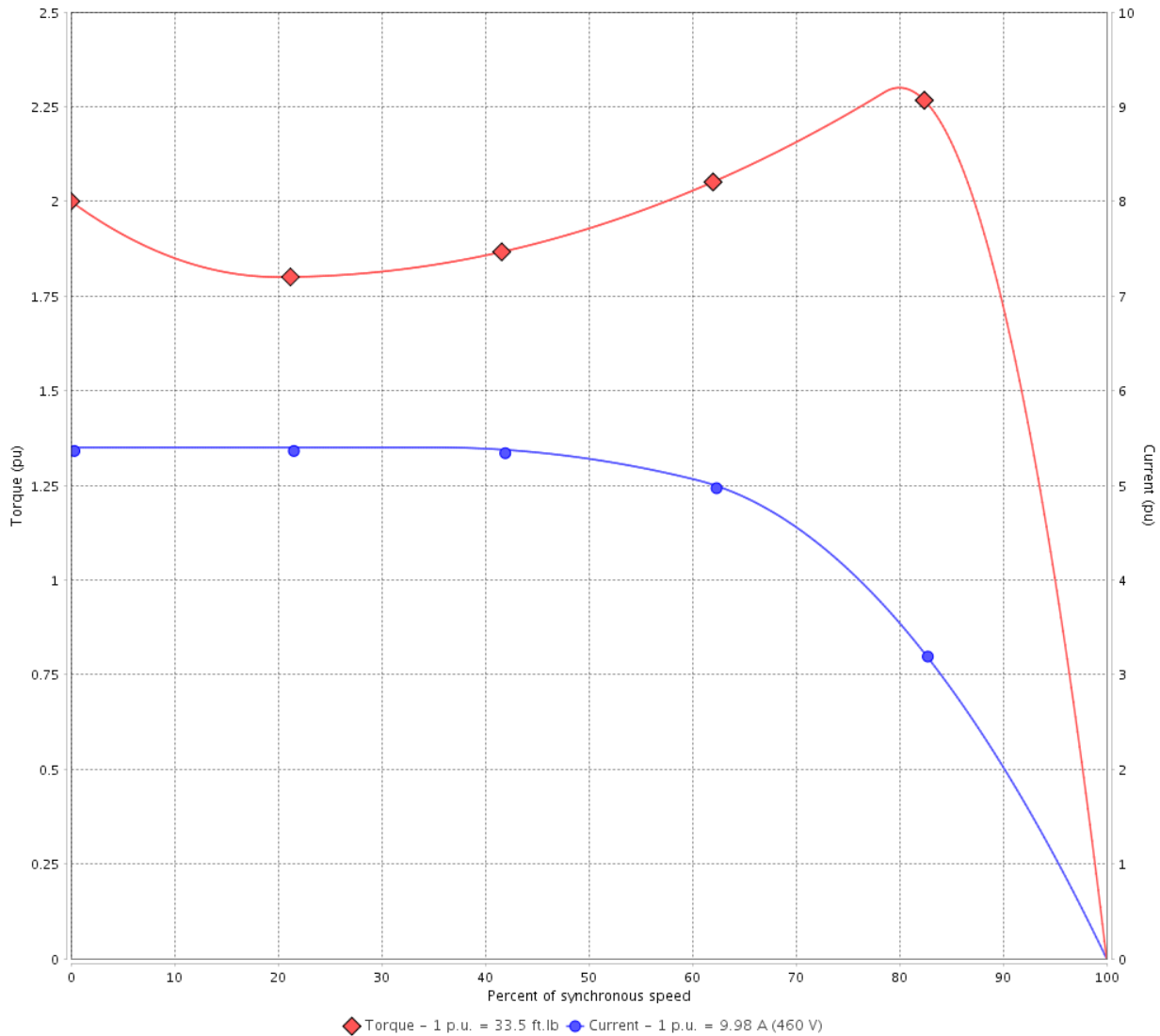
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A
 LRC : 5.4
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 75s (cold) 42s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE



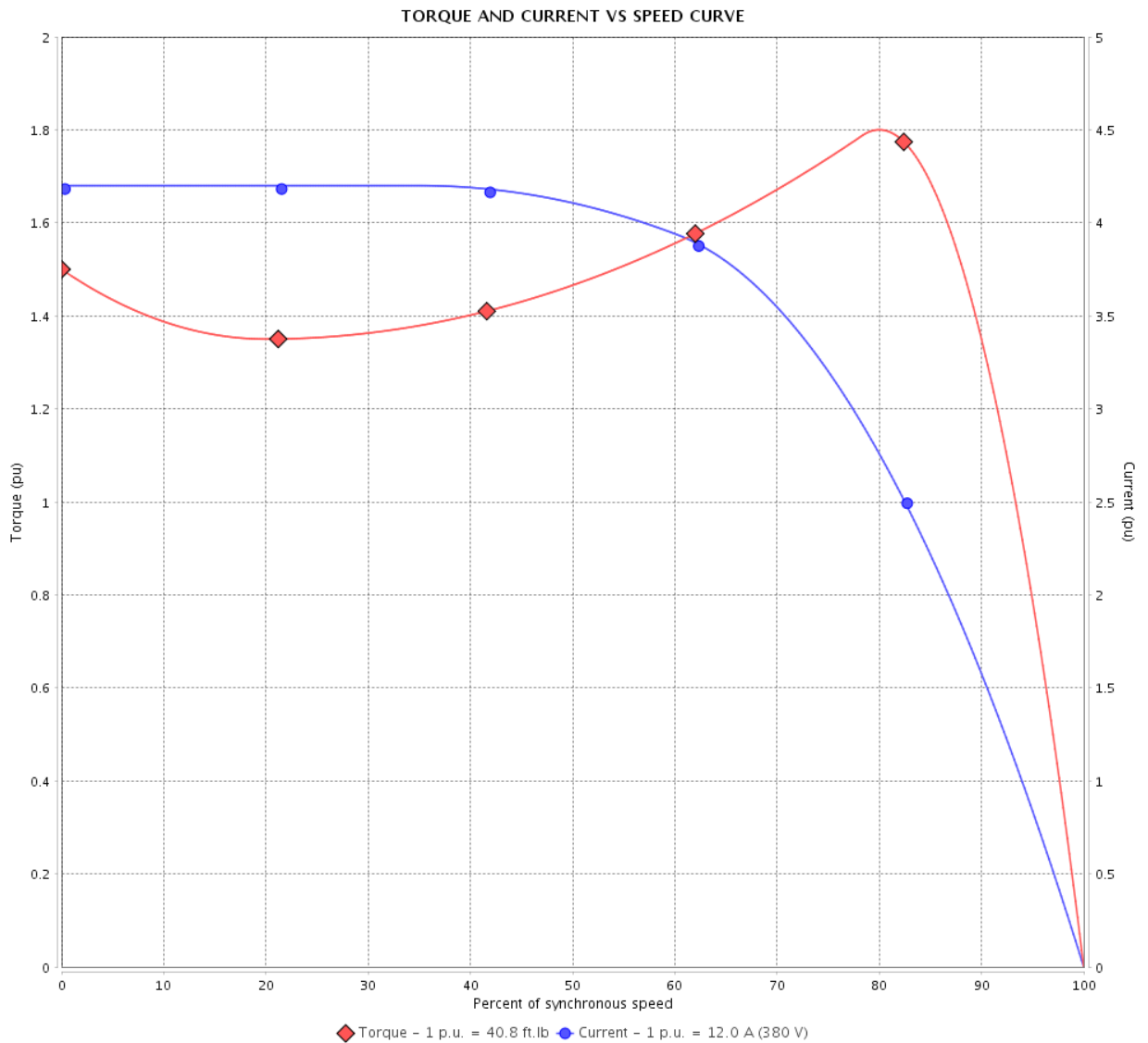
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S



Performance : 190/380 V 50 Hz 6P

Rated current	: 24.0/12.0 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.2	Duty cycle	: Cont.(S1)
Rated torque	: 40.8 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 180 %	Temperature rise	: 105 K
Rated speed	: 965 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		3 / 16		
Date	13/04/2022			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



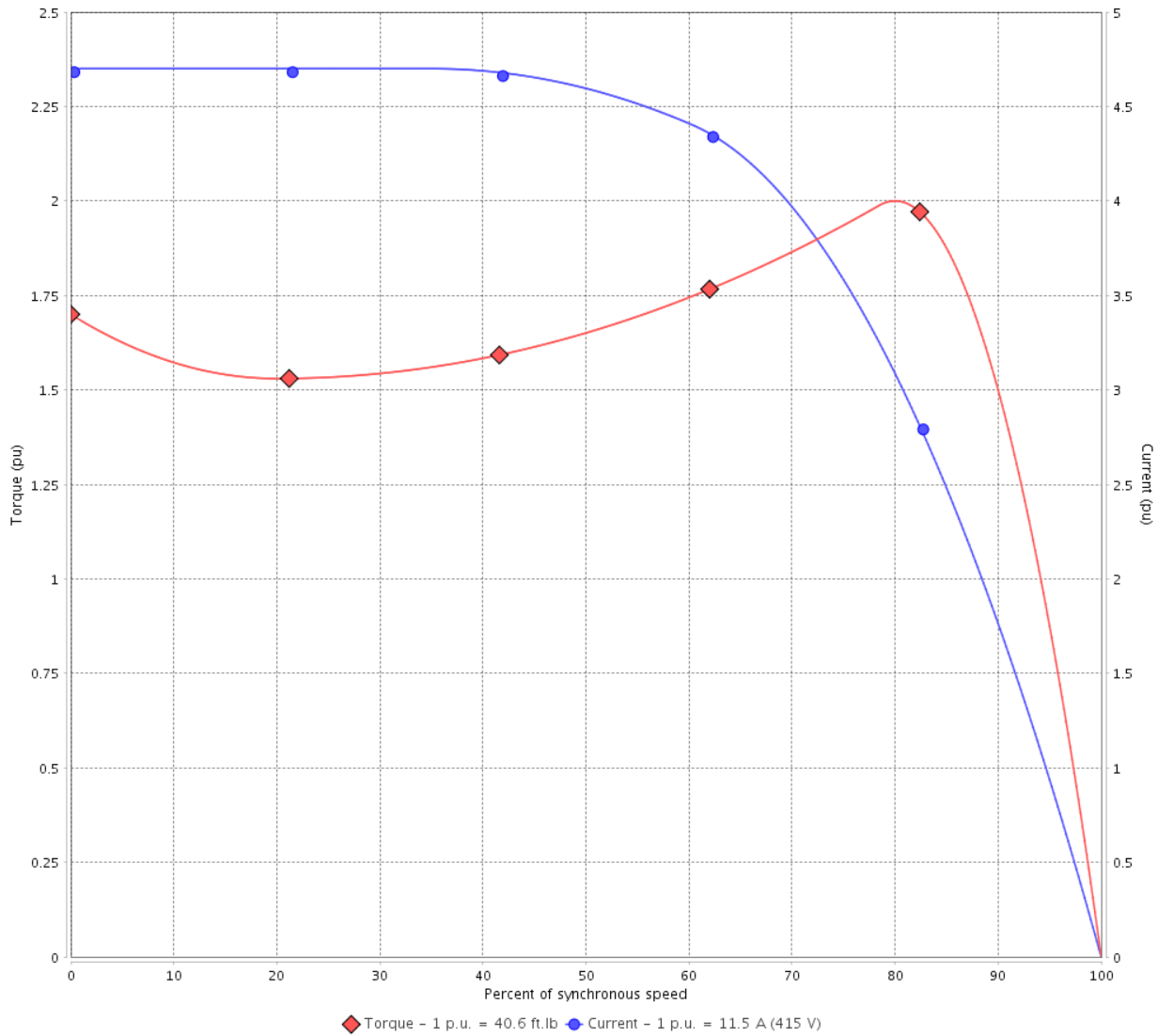
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 6P

Rated current	: 21.7/11.5 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 4.7	Duty cycle	: Cont.(S1)
Rated torque	: 40.6 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.00
Breakdown torque	: 200 %	Temperature rise	: 105 K
Rated speed	: 970 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		4 / 16		
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

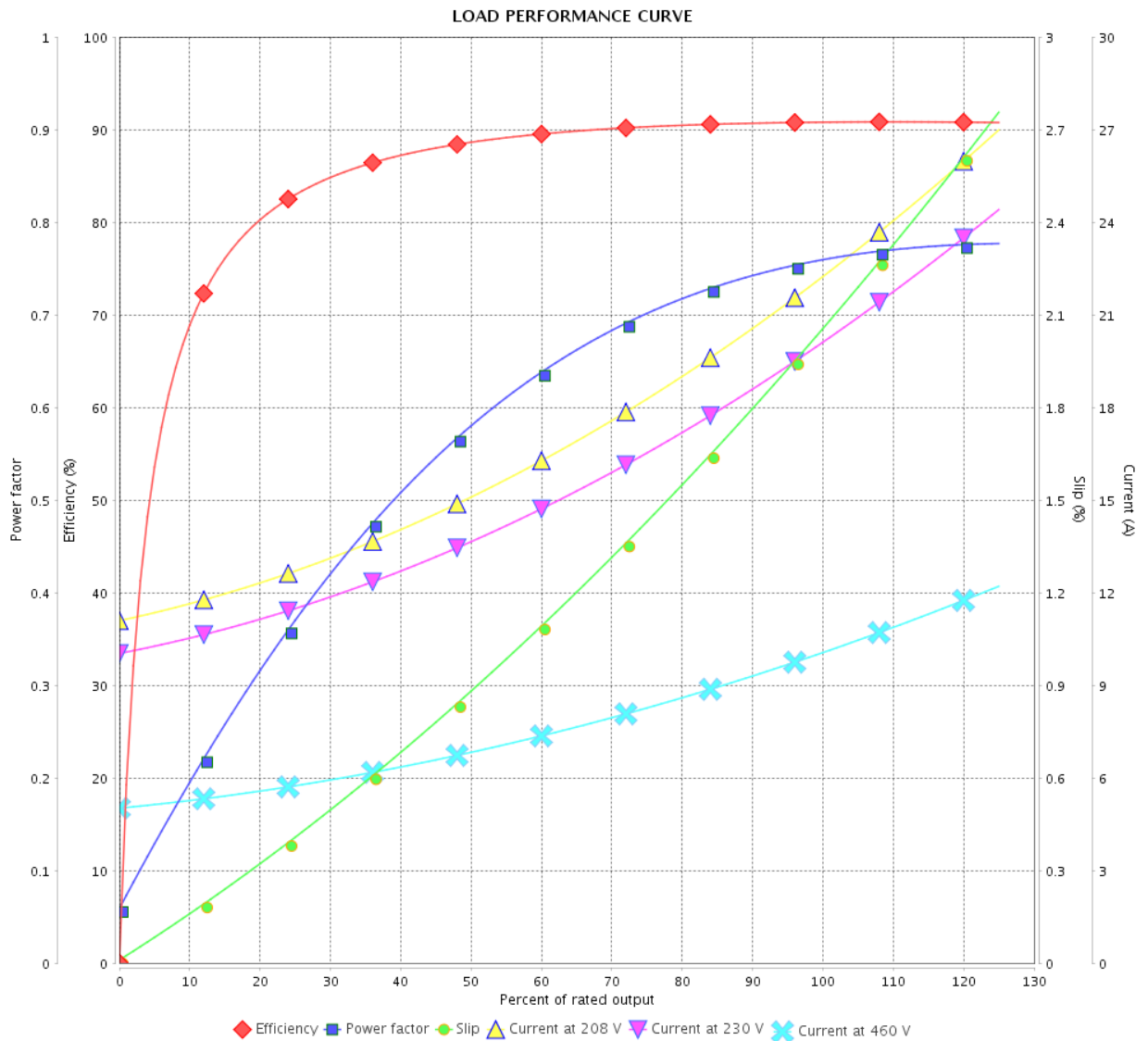


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A
 LRC : 5.4
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		5 / 16		
Date		13/04/2022		

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



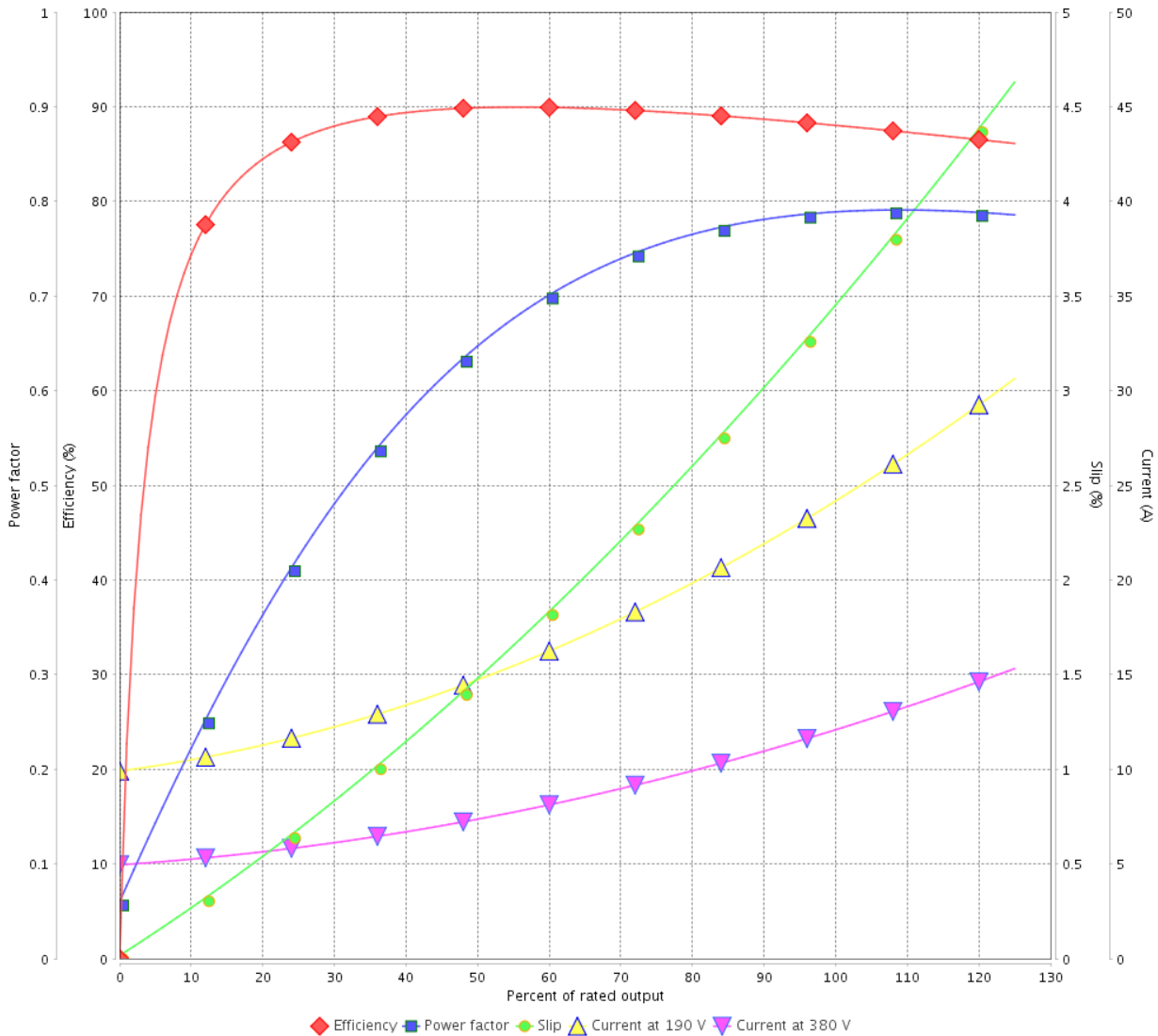
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 6P

Rated current : 24.0/12.0 A
 LRC : 4.2
 Rated torque : 40.8 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 180 %
 Rated speed : 965 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 16	Revision
Checked by				
Date	13/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

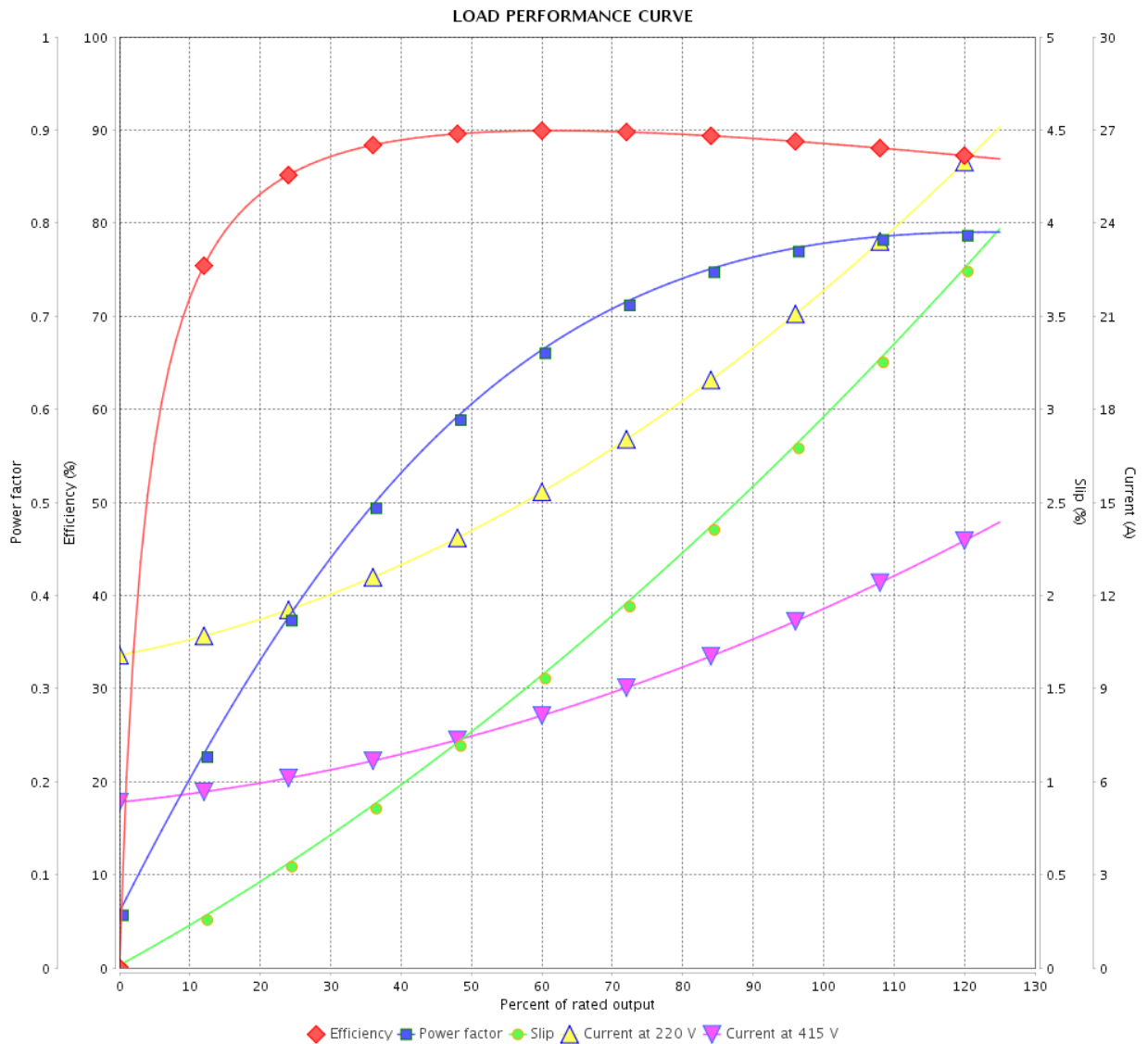


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S



Performance : 220/415 V 50 Hz 6P

Rated current : 21.7/11.5 A
 LRC : 4.7
 Rated torque : 40.6 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 200 %
 Rated speed : 970 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 16		
Date		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
Product code : 12898024
Catalog # : 00712ET3ER254TC-S

Performance : 230/460 V 60 Hz 6P

Rated current	: 20.0/9.98 A	Moment of inertia (J)	: 2.34 sq.ft.lb
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Heating constant

Cooling constant

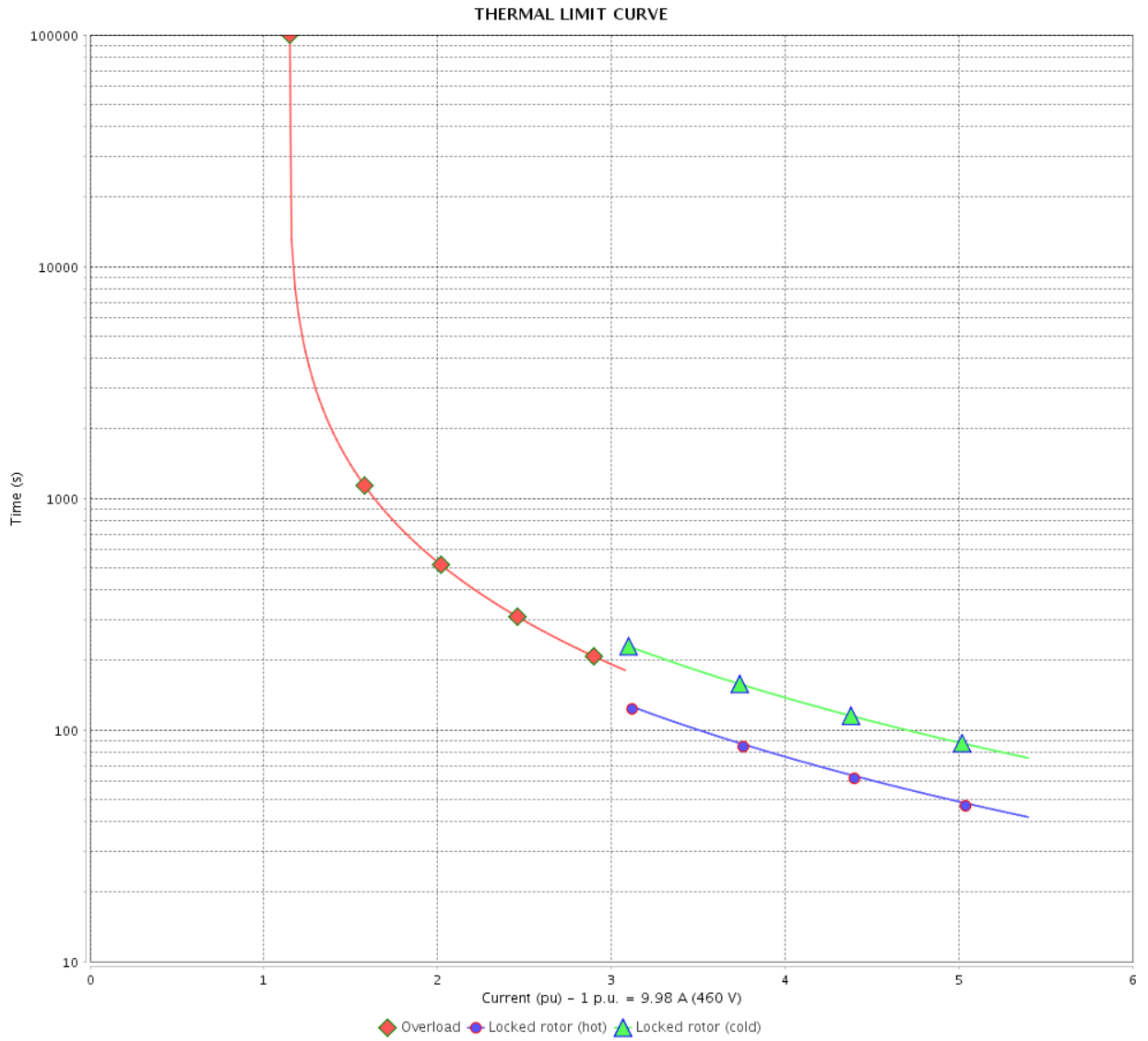
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		8 / 16	

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12898024
 Catalog # : 00712ET3ER254TC-S

Performance : 190/380 V 50 Hz 6P

Rated current : 24.0/12.0 A	Moment of inertia (J) : 2.34 sq.ft.lb
LRC : 4.2	Duty cycle : Cont.(S1)
Rated torque : 40.8 ft.lb	Insulation class : F
Locked rotor torque : 150 %	Service factor : 1.00
Breakdown torque : 180 %	Temperature rise : 105 K
Rated speed : 965 rpm	Design : B

Heating constant

Cooling constant

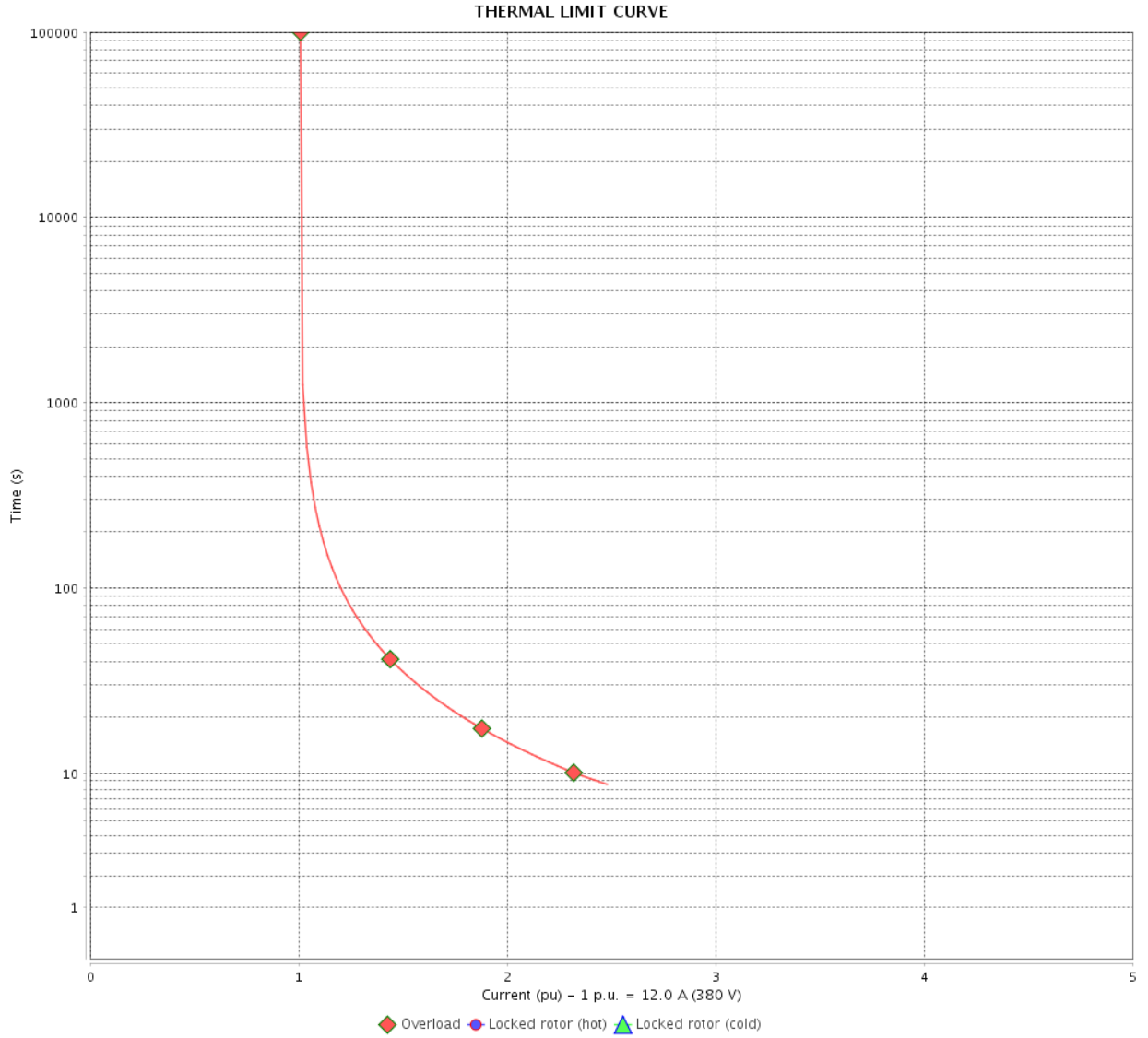
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 16	Revision
Checked by				
Date	13/04/2022			

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		13/04/2022		

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 12898024
 Catalog # : 00712ET3ER254TC-S

Performance : 220/415 V 50 Hz 6P

Rated current : 21.7/11.5 A	Moment of inertia (J) : 2.34 sq.ft.lb
LRC : 4.7	Duty cycle : Cont.(S1)
Rated torque : 40.6 ft.lb	Insulation class : F
Locked rotor torque : 170 %	Service factor : 1.00
Breakdown torque : 200 %	Temperature rise : 105 K
Rated speed : 970 rpm	Design : B

Heating constant

Cooling constant

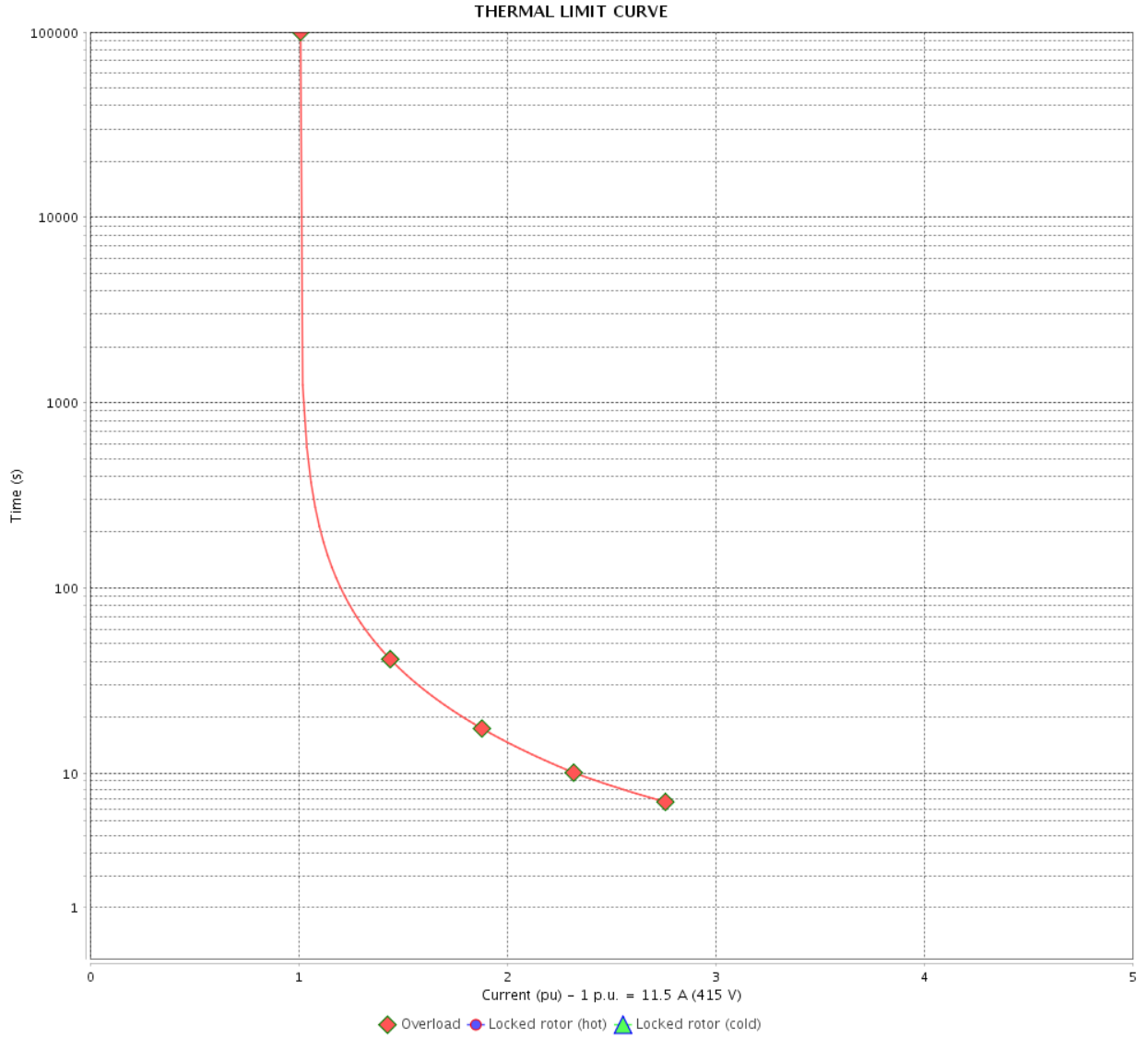
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 12 / 16	Revision
Checked by				
Date	13/04/2022			

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		13/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



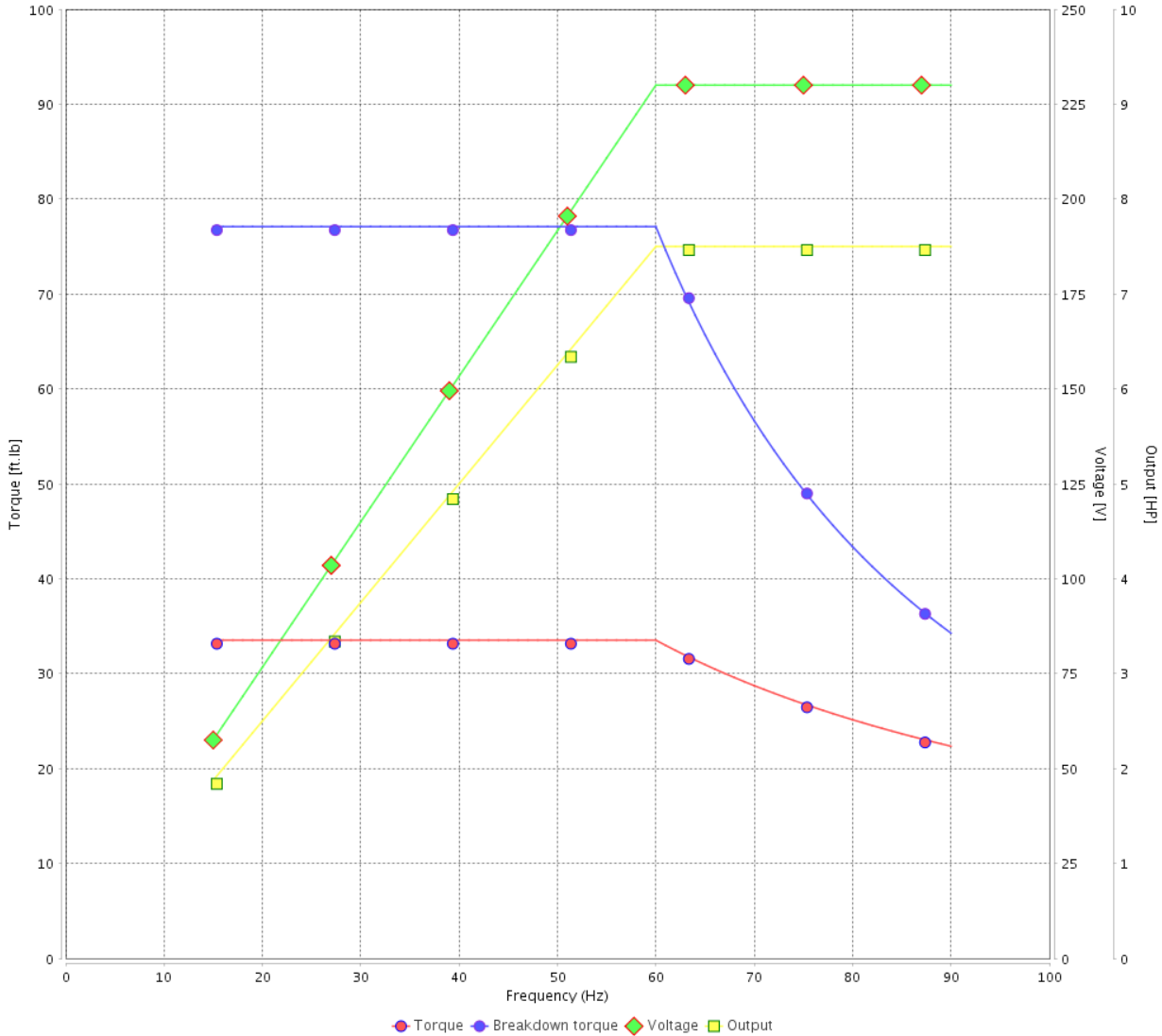
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 20.0/9.98 A
 LRC : 5.4
 Rated torque : 33.5 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 229 %
 Rated speed : 1175 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 16	Revision
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

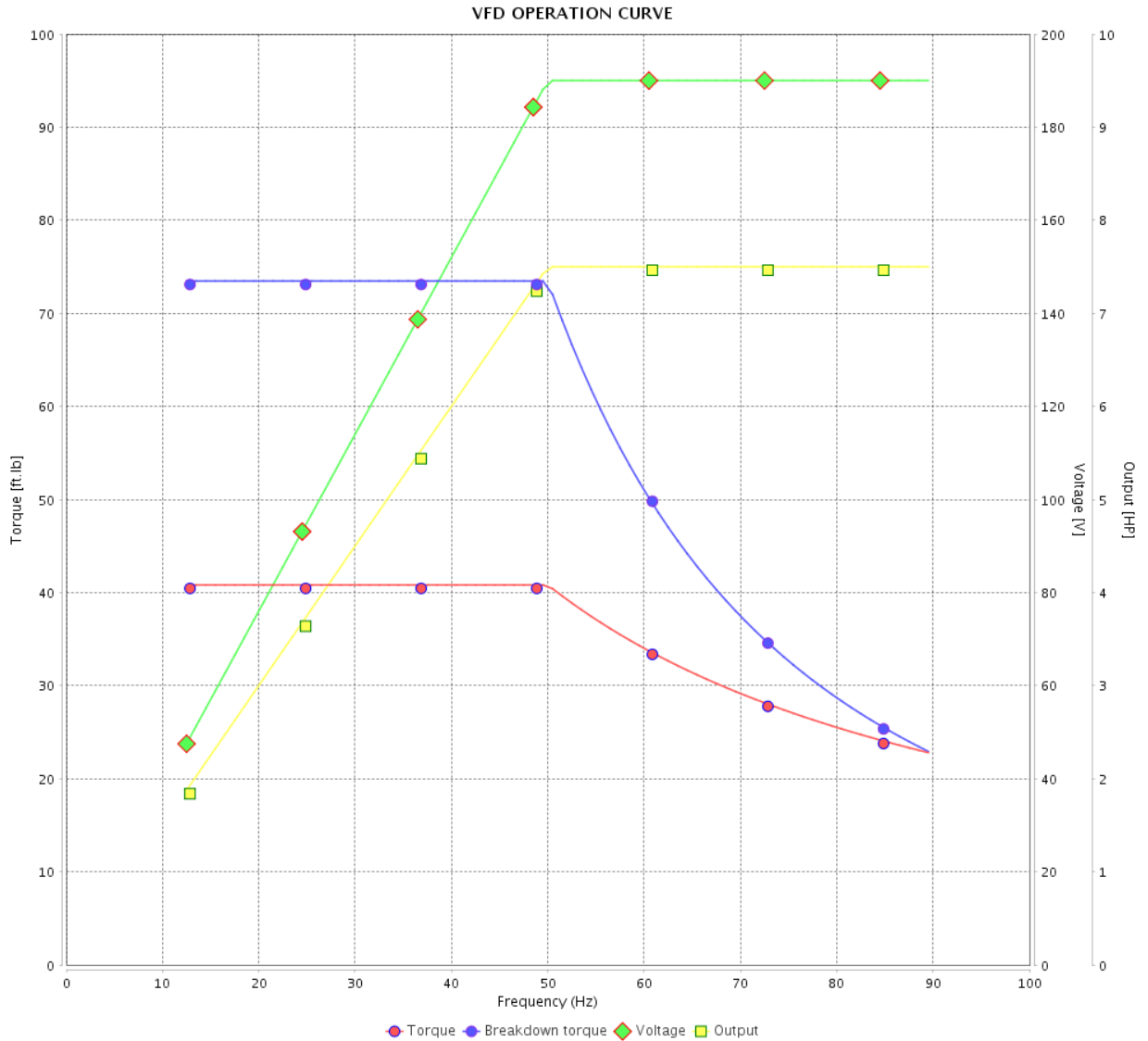


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S



Performance : 190/380 V 50 Hz 6P

Rated current : 24.0/12.0 A
 LRC : 4.2
 Rated torque : 40.8 ft.lb
 Locked rotor torque : 150 %
 Breakdown torque : 180 %
 Rated speed : 965 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 15 / 16
Checked by				
Date	13/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



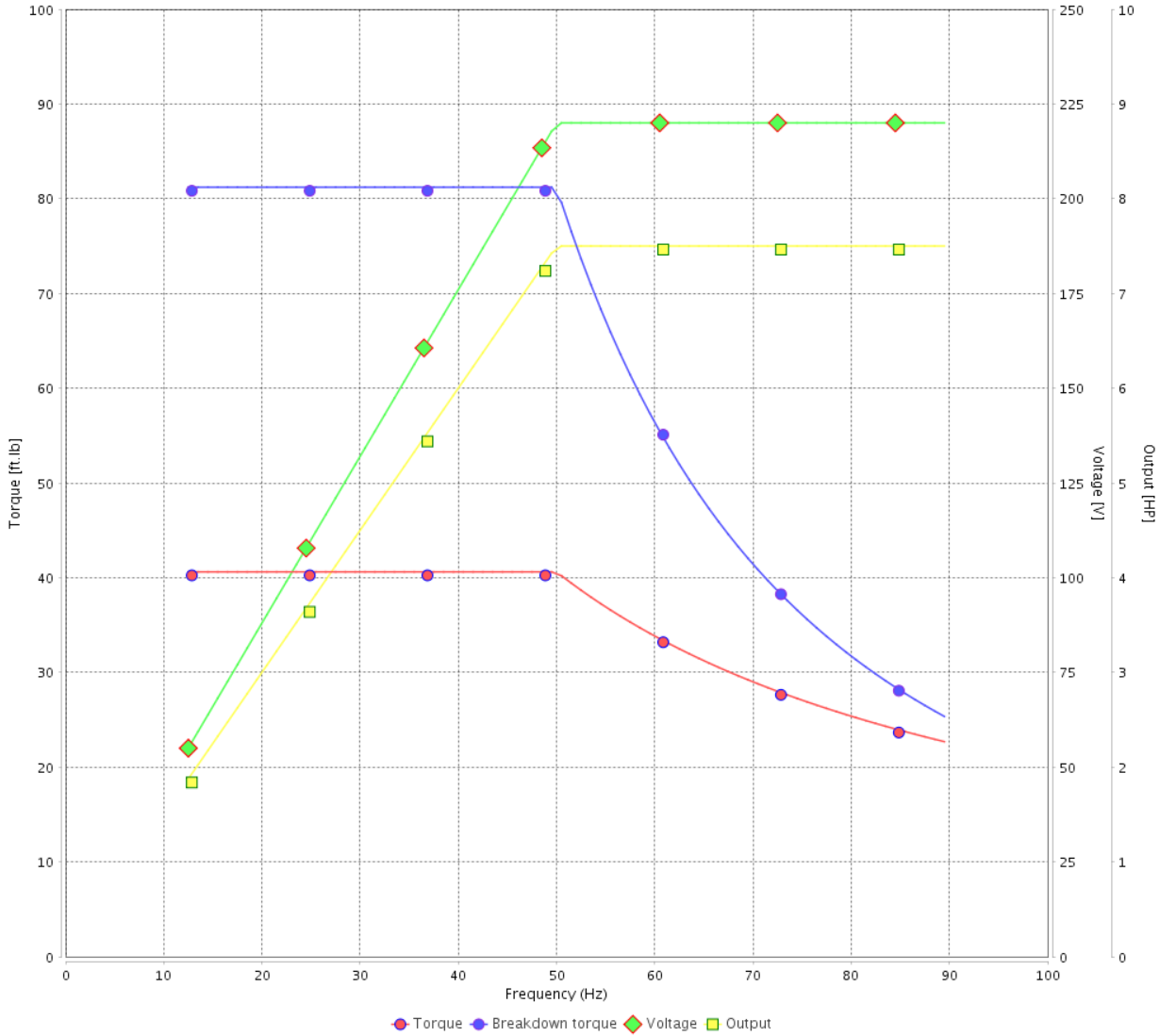
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12898024

Catalog # : 00712ET3ER254TC-S

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 6P

Rated current : 21.7/11.5 A
 LRC : 4.7
 Rated torque : 40.6 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 200 %
 Rated speed : 970 rpm

Moment of inertia (J) : 2.34 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 16	Revision
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

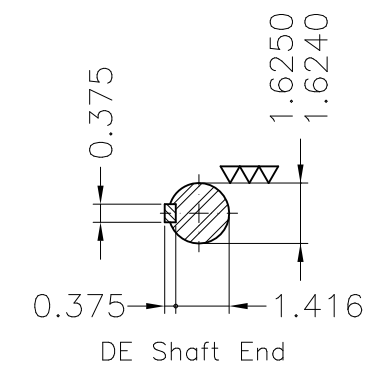
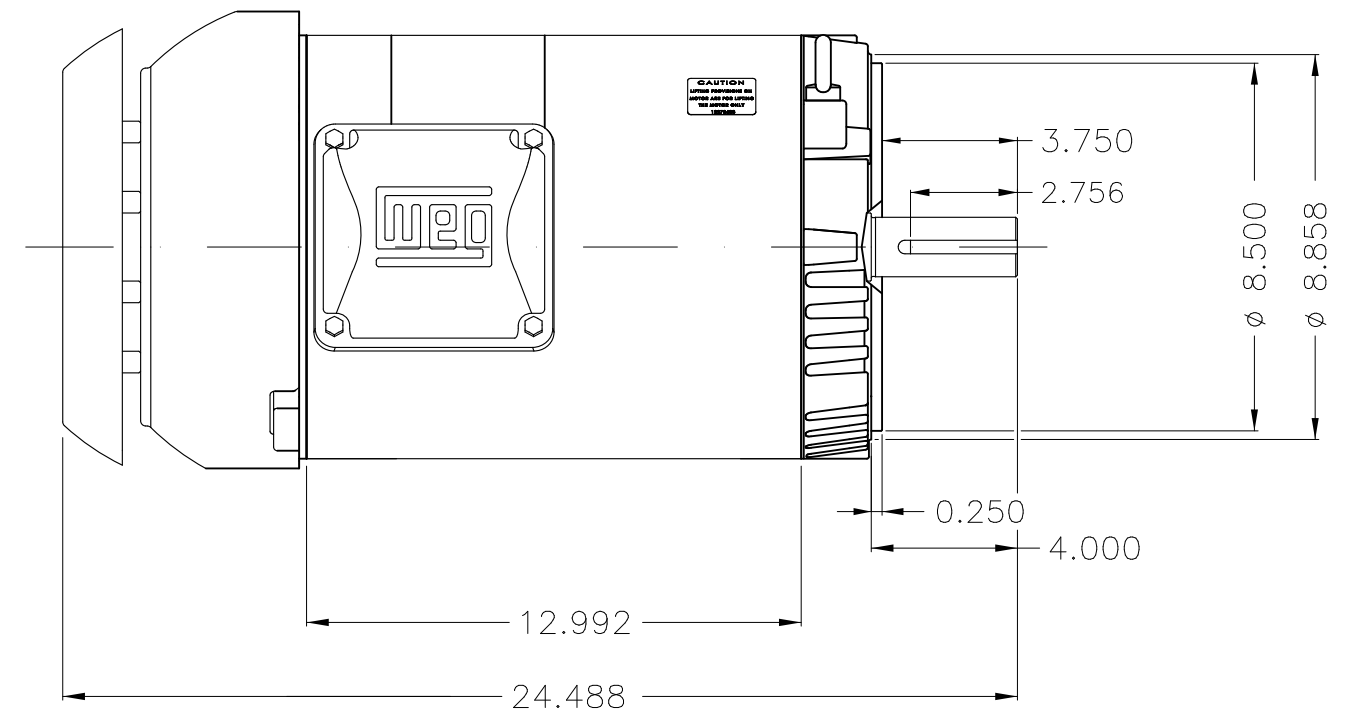
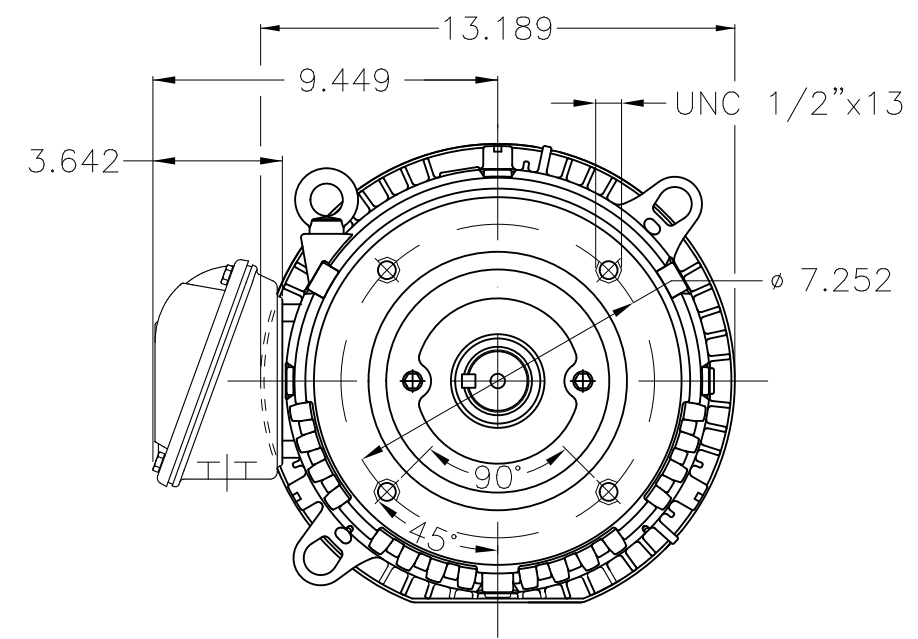
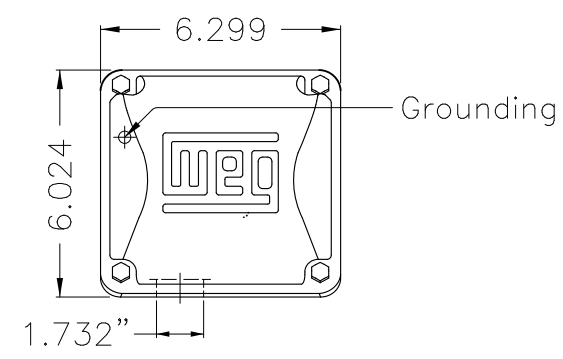
A

B


C

D

E



Dimensions in inches

Color Munsell N 1 matte black									
Painting plan 207N									
Mounting W-6/V18R(D)									
ECM	LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.			PREVIEW	WDD	SHEET	1 / 1	
CHECKED		FRAME 254/6TC IP55 TEFC							
RELEASED									
REL DT.		WMO	Jaragua do Sul	Product Engineering					

7.5 HP 06 Poles 60 Hz



NEMA
Premium



3PT9



Energy Verified

MADE IN MEXICO

MAT: 12898024 CC029A

W01.TE0IC0X0N

MODEL 00712ET3ER254TC-S

15DEZ2020 S/N:

For 60Hz: Class I, Zone 2, IIC
Class I, Div.2, Gr. A,B,C,D - T3

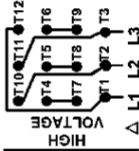
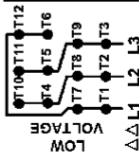
Div 2 Inverter Duty (SF1.00)
CT 2:1/VT 1000:1

PH 3	Hz 60	HP 7.5
FR 254/6TC		KW 5.5
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 20.0/9.98
INS CL F AT 80K	IP55	SFA 23.0/11.5
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE G	PF 0.76
USABLE @ 208V 22.1A		RPM 1175
SF1.00		NEMA NOM. EFF 91.0%

ALTERNATE RATING: 7.5HP	50Hz	190-220/380-415V	SF1.00
24.0-21.3/12.0-11.3A	965RPM	EFF 88.0%	(IE3) IEC 60034-1

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 4:1 CT

DE 6309-Z-C3	ODE 6208-Z-C3	MOBIL POLYREX EM	19702h
--------------	---------------	------------------	--------



T1-BLU T2-WHT
 T3-ORG T4-YEL
 T5-BLK T6-GRY
 T7-PNK T8-RED
 T9-BRK RED
 T10-CURRY
 T11-GRN T12-VLT

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.

