

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	14407764																		
Catalog # :	00712XT3H254T																		
Frame : 254T Output : 7.5 HP (5.5 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 575 V Rated current : 7.78 A L. R. Amperes : 54.5 A LRC : 7.0x(Code J) No load current : 4.16 A Rated speed : 1175 rpm Slip : 2.08 % Rated torque : 33.5 ft.lb Locked rotor torque : 270 % Breakdown torque : 320 % Insulation class : F Service factor : 1.15 Moment of inertia (J) : 3.32 sq.ft.lb Design : B	Locked rotor time : 45s (cold) 25s (hot) Temperature rise : 80 K Duty cycle : Cont.(S1) Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : F-1 Rotation <sup>1</sup> : Both (CW and CCW) Noise level <sup>2</sup> : 59.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 322 lb																		
Output	25%    50%    75%    100%																		
Efficiency (%)	87.5    88.5    90.2    91.0																		
Power Factor	0.34    0.58    0.71    0.78																		
Foundation loads																			
Max. traction : 353 lb																			
Max. compression : 675 lb																			
	<table border="0" style="width:100%;"> <tr> <td></td> <td style="text-align: center;"><u>Drive end</u></td> <td style="text-align: center;"><u>Non drive end</u></td> </tr> <tr> <td>Bearing type :</td> <td style="text-align: center;">6309 C3</td> <td style="text-align: center;">6209 C3</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">Oil Seal</td> <td style="text-align: center;">Lip Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">20000 h</td> <td style="text-align: center;">20000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">13 g</td> <td style="text-align: center;">9 g</td> </tr> <tr> <td>Lubricant type :</td> <td colspan="2" style="text-align: center;">Mobil Polyrex EM</td> </tr> </table>		<u>Drive end</u>	<u>Non drive end</u>	Bearing type :	6309 C3	6209 C3	Sealing :	Oil Seal	Lip Seal	Lubrication interval :	20000 h	20000 h	Lubricant amount :	13 g	9 g	Lubricant type :	Mobil Polyrex EM	
	<u>Drive end</u>	<u>Non drive end</u>																	
Bearing type :	6309 C3	6209 C3																	
Sealing :	Oil Seal	Lip Seal																	
Lubrication interval :	20000 h	20000 h																	
Lubricant amount :	13 g	9 g																	
Lubricant type :	Mobil Polyrex EM																		
Notes																			
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	13/04/2022		1 / 7																

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		2 / 7	

# TORQUE AND CURRENT VS SPEED CURVE



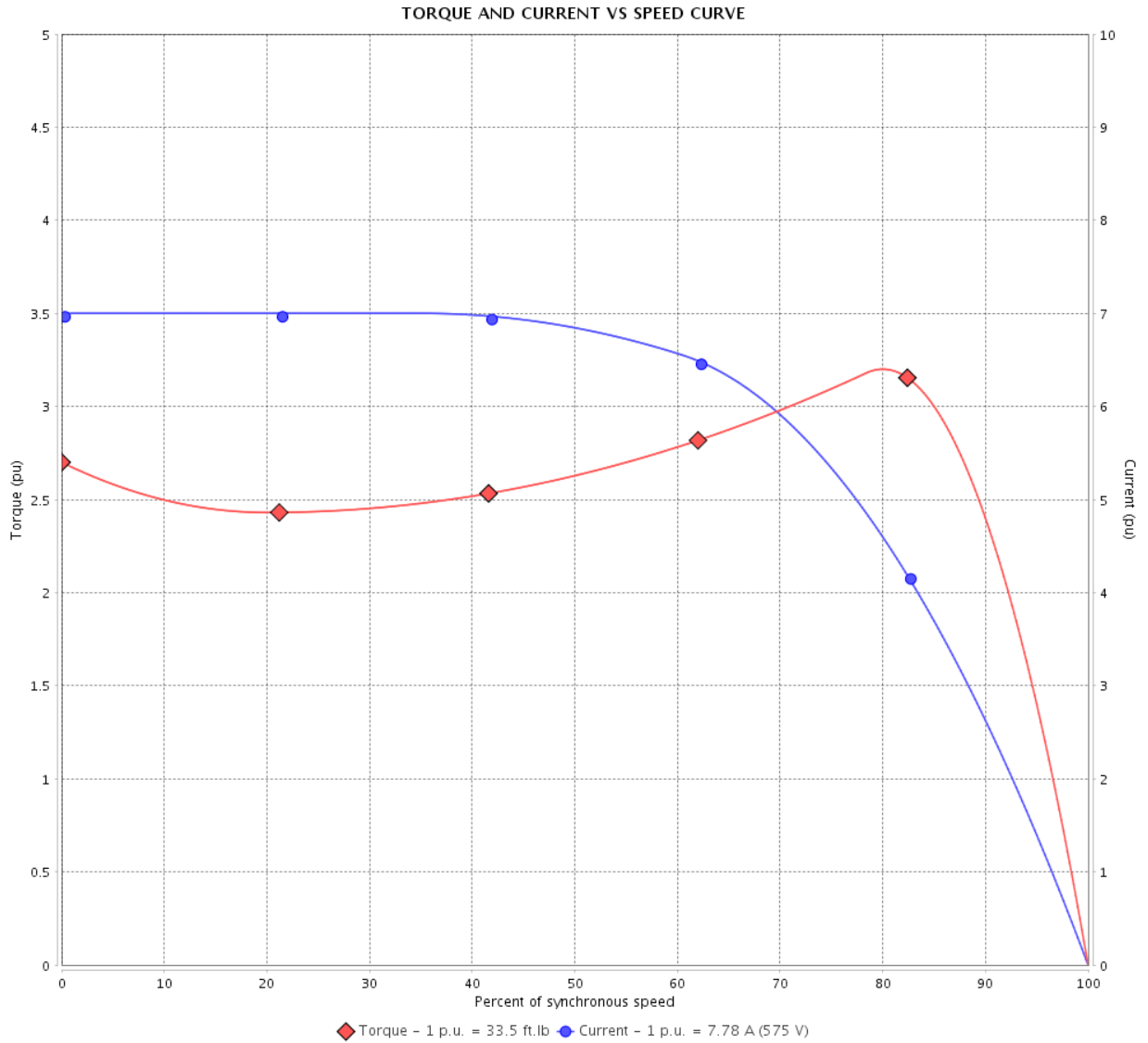
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407764

Catalog # : 00712XT3H254T



Performance : 575 V 60 Hz 6P

Rated current	: 7.78 A	Moment of inertia (J)	: 3.32 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 33.5 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.15
Breakdown torque	: 320 %	Temperature rise	: 80 K
Rated speed	: 1175 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 7	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



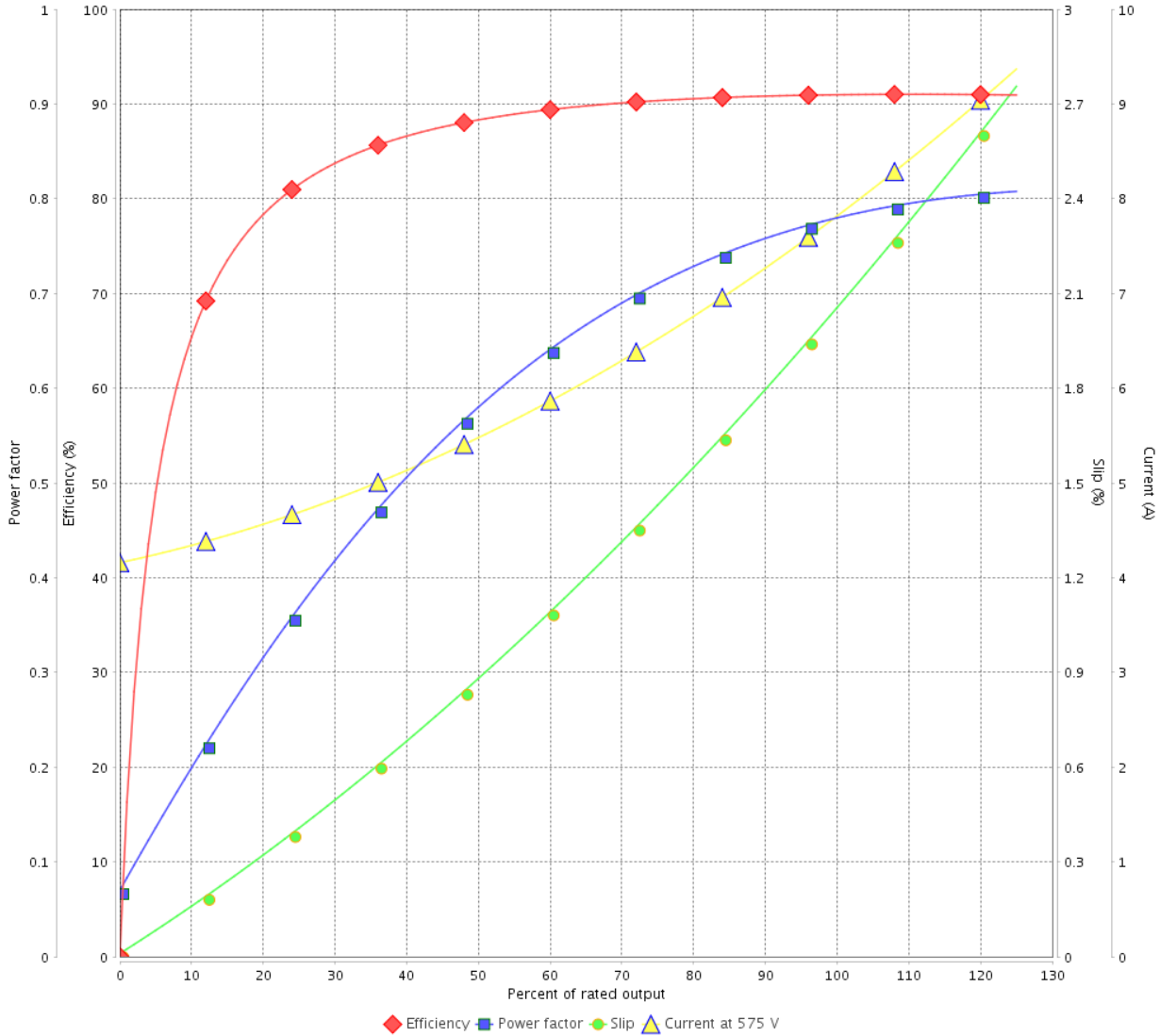
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407764

Catalog # : 00712XT3H254T

LOAD PERFORMANCE CURVE



Performance : 575 V 60 Hz 6P

Rated current : 7.78 A  
 LRC : 7.0  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.32 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 4 / 7	Revision
Checked by				
Date	13/04/2022			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14407764  
 Catalog # : 00712XT3H254T

Performance : 575 V 60 Hz 6P

Rated current : 7.78 A	Moment of inertia (J) : 3.32 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 33.5 ft.lb	Insulation class : F
Locked rotor torque : 270 %	Service factor : 1.15
Breakdown torque : 320 %	Temperature rise : 80 K
Rated speed : 1175 rpm	Design : B

Heating constant

Cooling constant

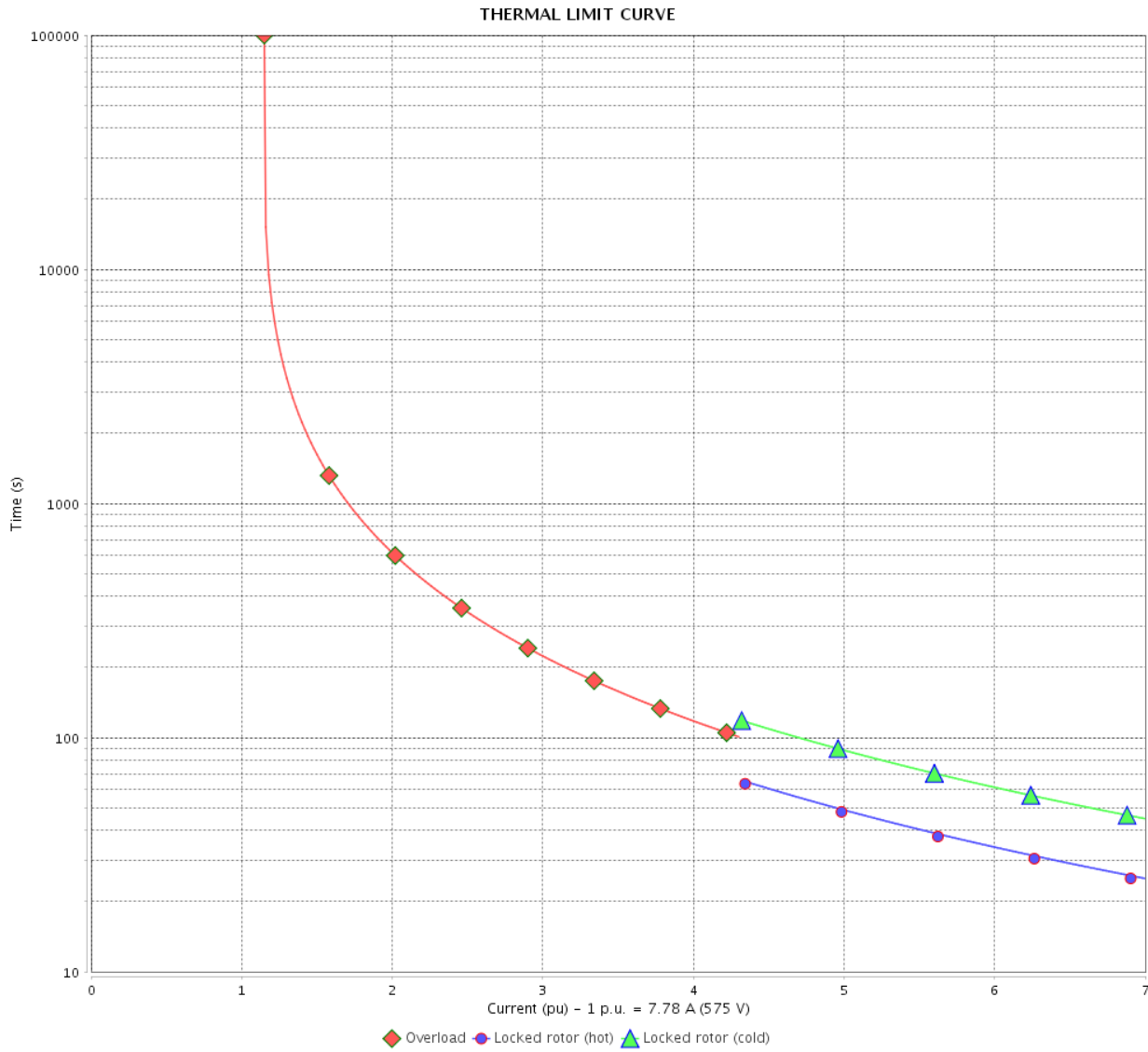
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 7	Revision
Checked by				
Date	13/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 6 / 7		Revision
Checked by				
Date				

# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

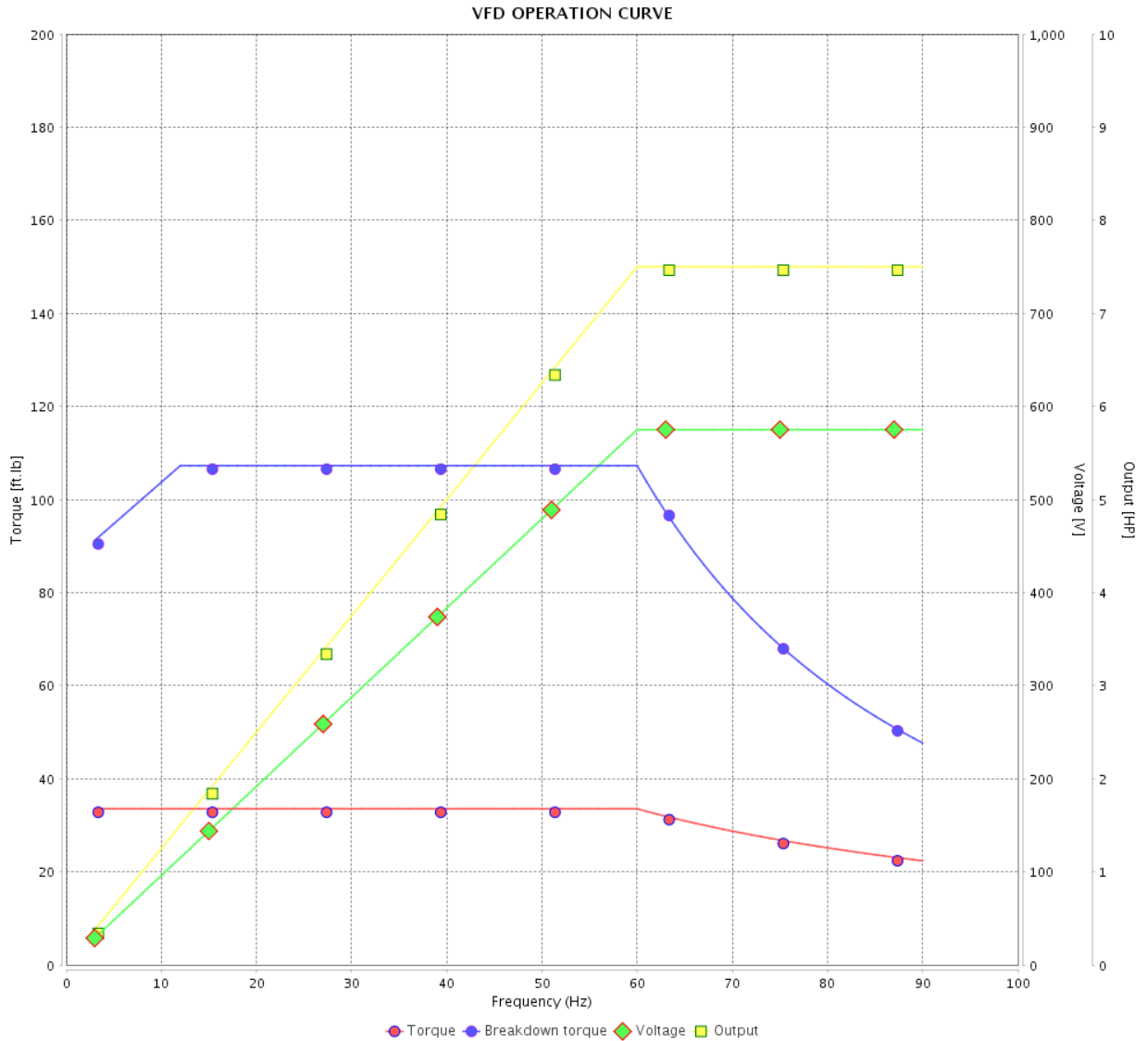


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14407764

Catalog # : 00712XT3H254T



Performance : 575 V 60 Hz 6P

Rated current : 7.78 A  
 LRC : 7.0  
 Rated torque : 33.5 ft.lb  
 Locked rotor torque : 270 %  
 Breakdown torque : 320 %  
 Rated speed : 1175 rpm

Moment of inertia (J) : 3.32 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 7 / 7
Checked by				
Date	13/04/2022			

1 2 3 4 5 6

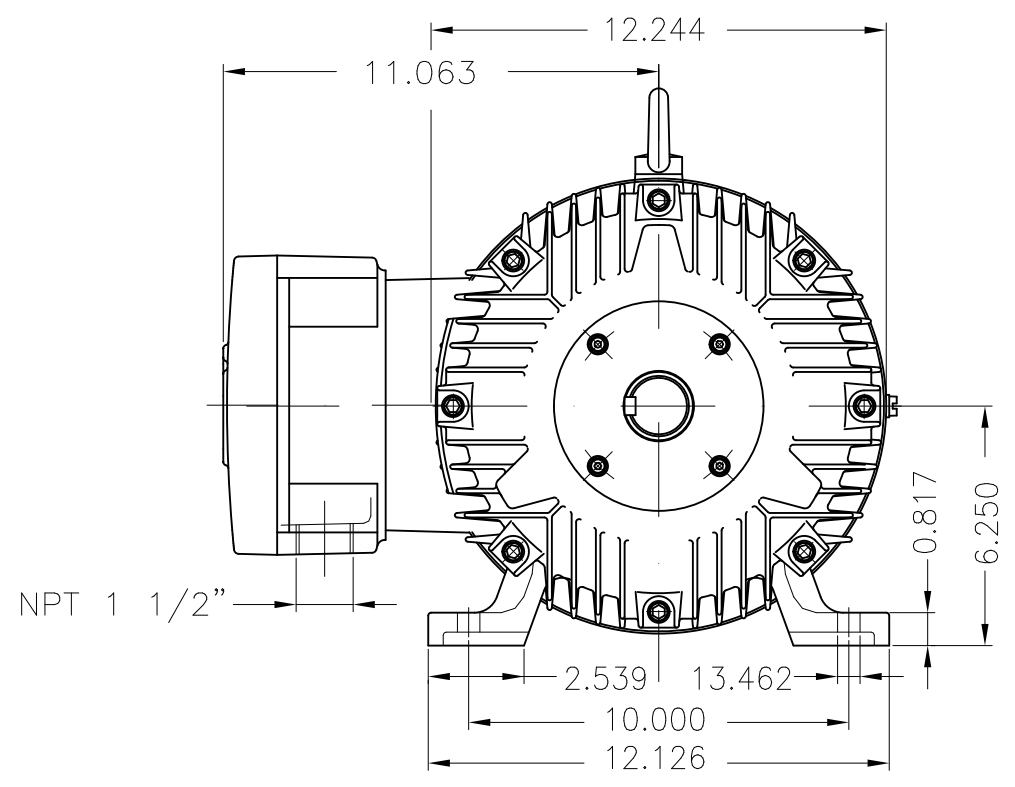
A

B

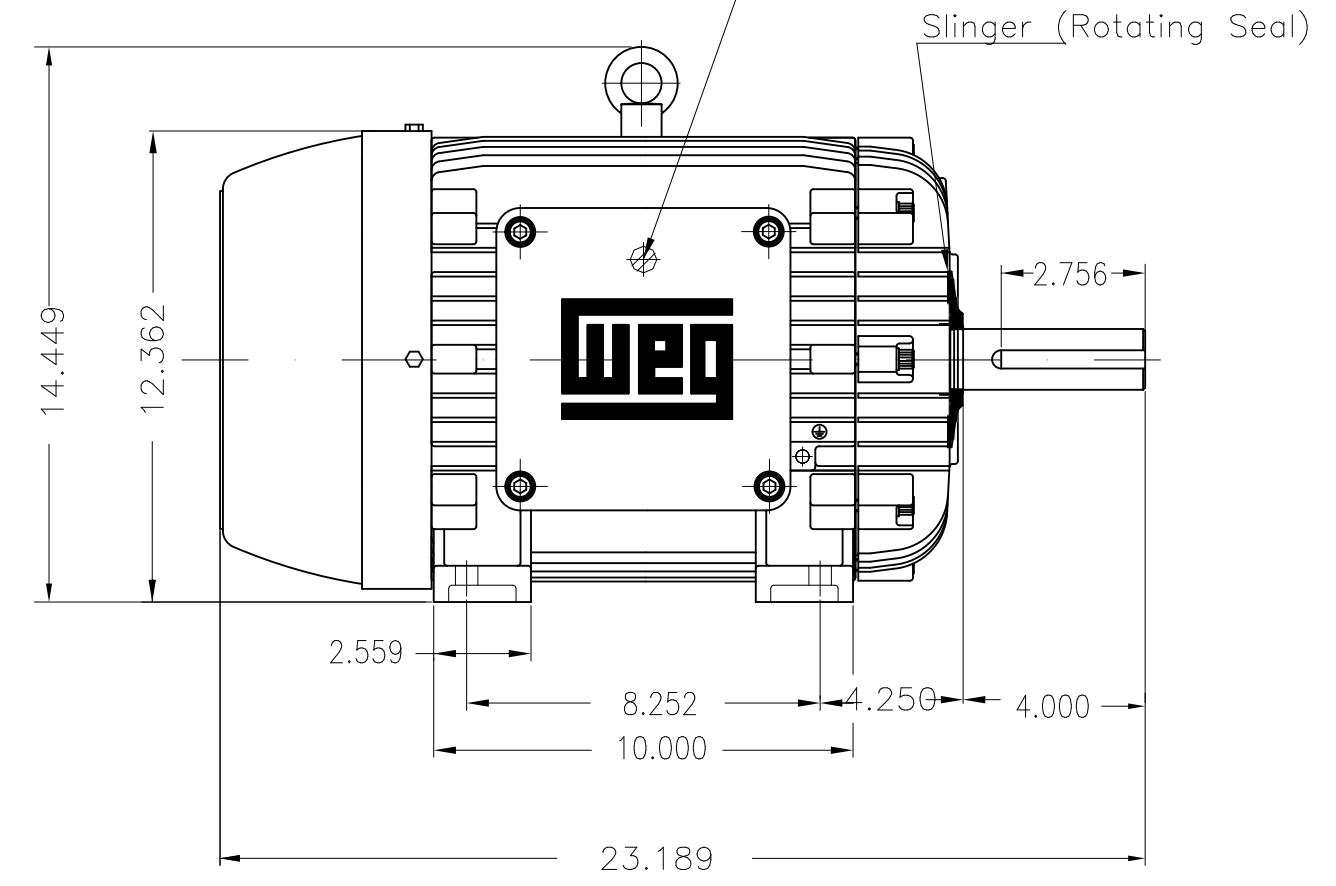
C

D

E

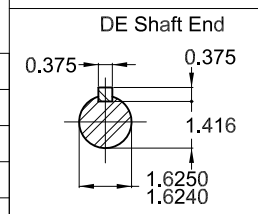


Grounding for leads 5.2–25 mm<sup>2</sup> / 10–4 AWG



7.5 HP 06 Poles 60 Hz A

- With grease fitting
- Color RAL 5009
- Painting plan 202P
- Mounting NEMA F-1
- Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 254T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW  
WDD



SHEET 1 / 1



MADE IN BRAZIL

**W21X NEMA**  
**Premium**

14407764



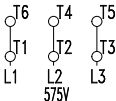
LISTED

CC029A

*Inverter Duty Motor*  
*Severe Duty*

HX007506NPW21X

PH 3	FR 254T	
HP(kW) 7.5(5.5)	HZ 60	IP55
V 575	A 7.78	
RPM 1175	NEMA NOM EFF 91.0%	
PF 0.78	SFA 8.95	DES B
INS CL F $\Delta$ T 80 K	SF 1.15	ENCL TEFC
DUTY CONT.	CODE J	ALT 1000 m.a.s.l.
AMB 40°C		
AMB 55°C SF1.0		



→ 6309-C3 MOBIL POLYREX EM  
→ 6209-C3 13 g 20000 h

324 Lbs



TEMP CODE T3C  
CSA/UL: Class I - Div. 1 - Groups C and D  
CSA: Class II - Div. 1 - Groups F and G  
CSA: Class I - Zone 1 - IIB

EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 6:1CT, 1.0SF, T3C, AMB 40°C.