

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	11431931																		
Catalog # :	05012ST3HIE365T-W22																		
Frame : 364/5T Output : 50 HP (37 kW) Poles : 6 Frequency : 60 Hz Rated voltage : 575 V Rated current : 45.9 A L. R. Amperes : 294 A LRC : 6.4x(Code G) No load current : 16.0 A Rated speed : 1180 rpm Slip : 1.67 % Rated torque : 223 ft.lb Locked rotor torque : 200 % Breakdown torque : 240 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 32.4 sq.ft.lb Design : B	Locked rotor time : 32s (cold) 18s (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 ¹ : Both (CW and CCW) Noise level ² : 66.0 dB(A) Starting method : Direct On Line Approx. weight ³ : 756 lb																		
Output	25% 50% 75% 100%																		
Efficiency (%)	93.4 93.6 94.1 94.1																		
Power Factor	0.49 0.74 0.83 0.86																		
Foundation loads																			
Max. traction : 1450 lb																			
Max. compression : 2206 lb																			
	<table border="0"> <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;">6314 C3</td> <td style="text-align: center;">6314 C3</td> </tr> <tr> <td>Sealing :</td> <td style="text-align: center;">Inpro/Seal</td> <td style="text-align: center;">Inpro/Seal</td> </tr> <tr> <td>Lubrication interval :</td> <td style="text-align: center;">17000 h</td> <td style="text-align: center;">17000 h</td> </tr> <tr> <td>Lubricant amount :</td> <td style="text-align: center;">27 g</td> <td style="text-align: center;">27 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 :	6314 C3	6314 C3	Sealing :	Inpro/Seal	Inpro/Seal	Lubrication interval :	17000 h	17000 h	Lubricant amount :	27 g	27 g	Lubricant type :	Mobil Polyrex EM	
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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	12/04/2022		1 / 6																

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



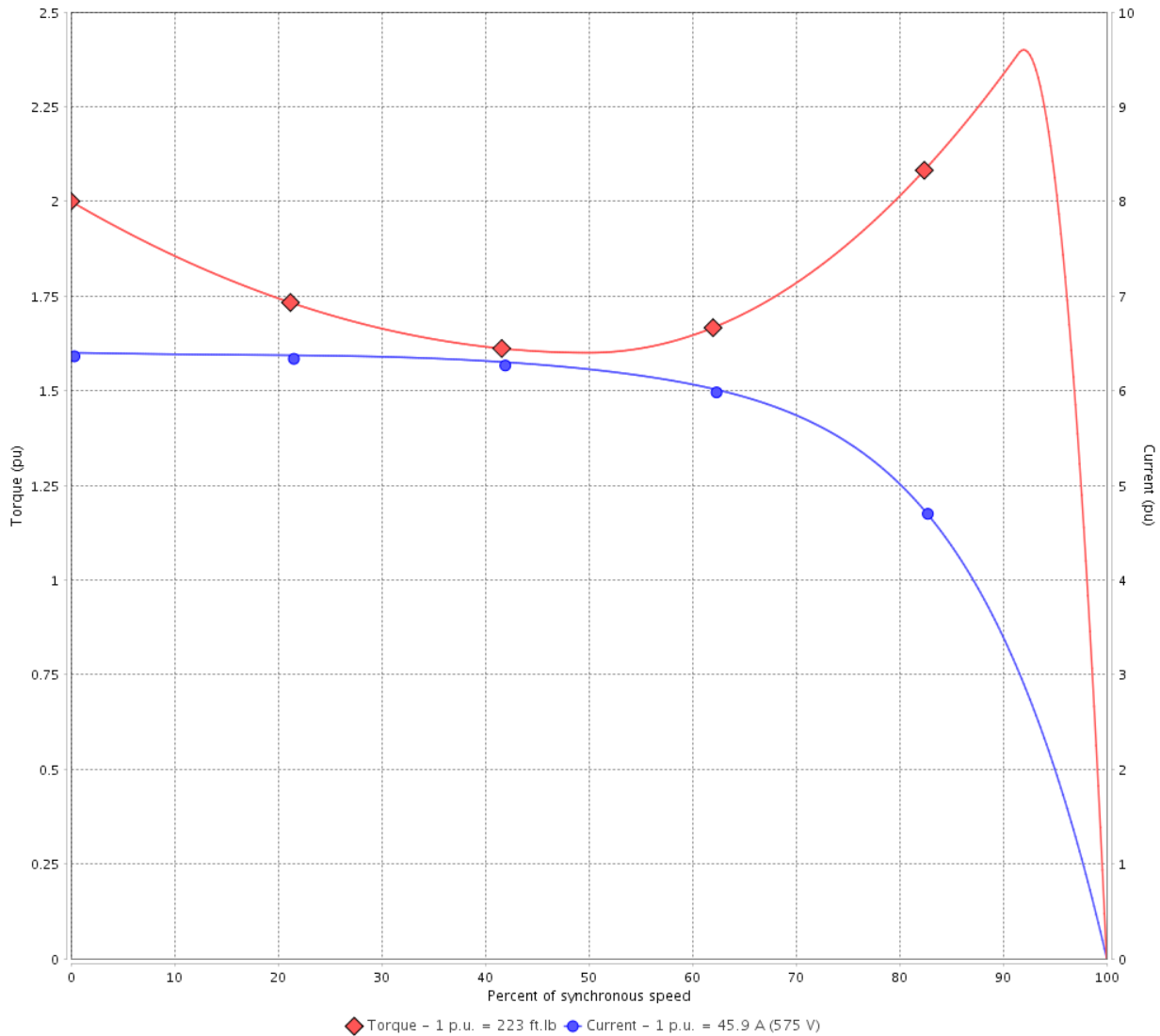
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11431931

Catalog # : 05012ST3HIE365T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 6P

Rated current	: 45.9 A	Moment of inertia (J)	: 32.4 sq.ft.lb
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 223 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1180 rpm	Design	: B

Locked rotor time : 32s (cold) 18s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 6	Revision
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Date	12/04/2022			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

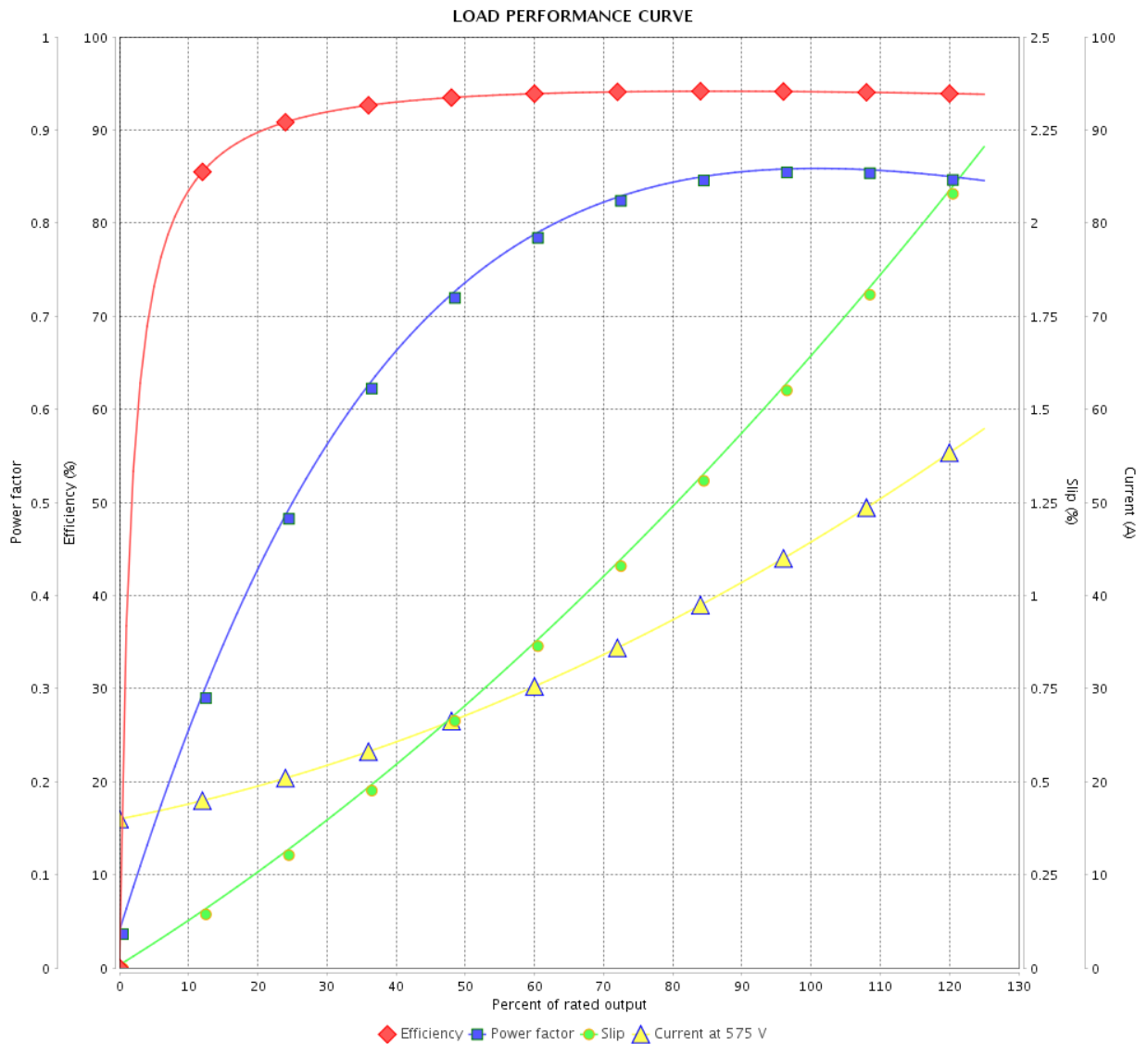


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Product code : 11431931

Catalog # : 05012ST3HIE365T-W22



Performance : 575 V 60 Hz 6P

Rated current : 45.9 A
 LRC : 6.4
 Rated torque : 223 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
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 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Heating constant

Cooling constant

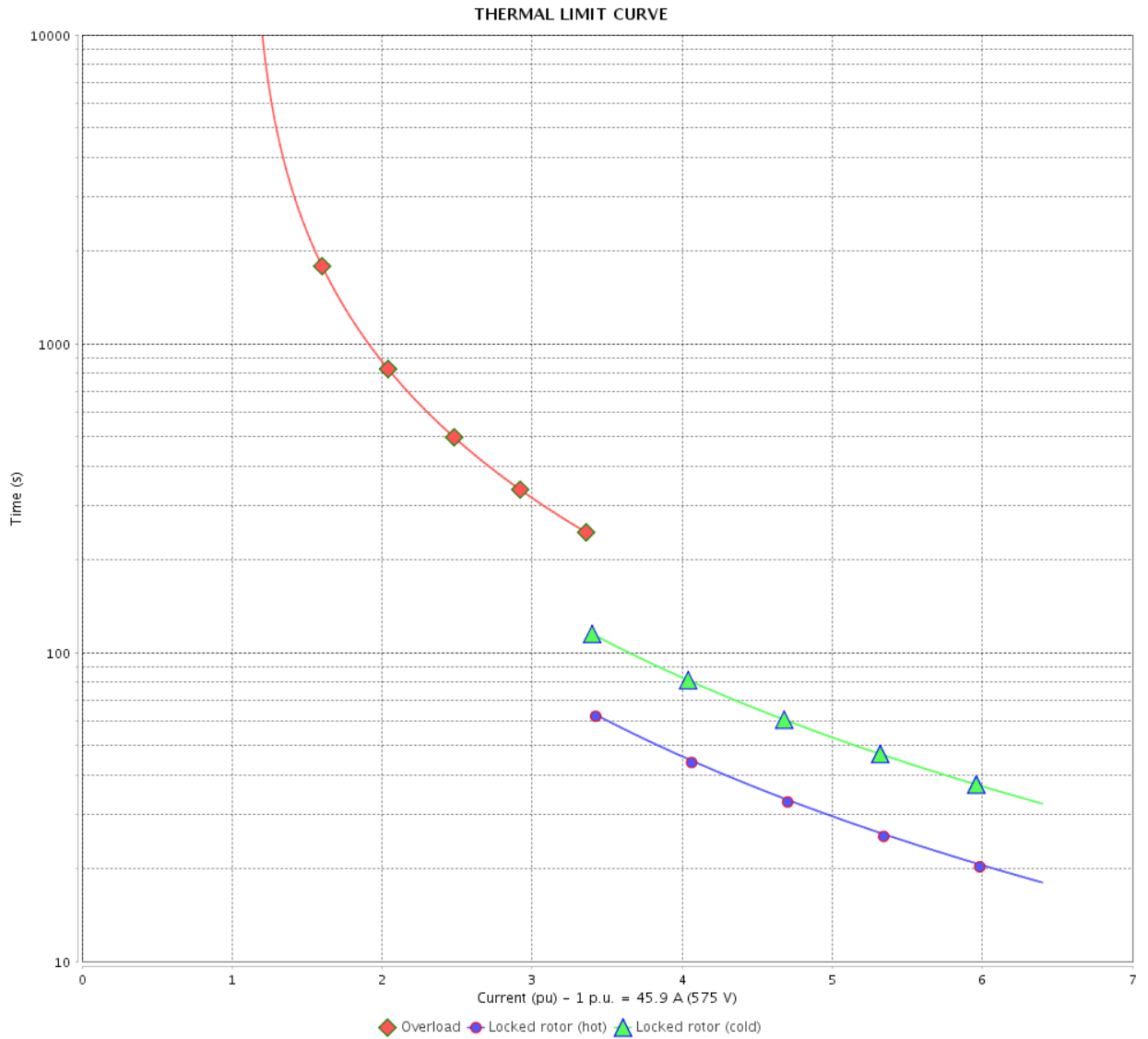
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performed by		Page		Revision
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Date		12/04/2022		

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



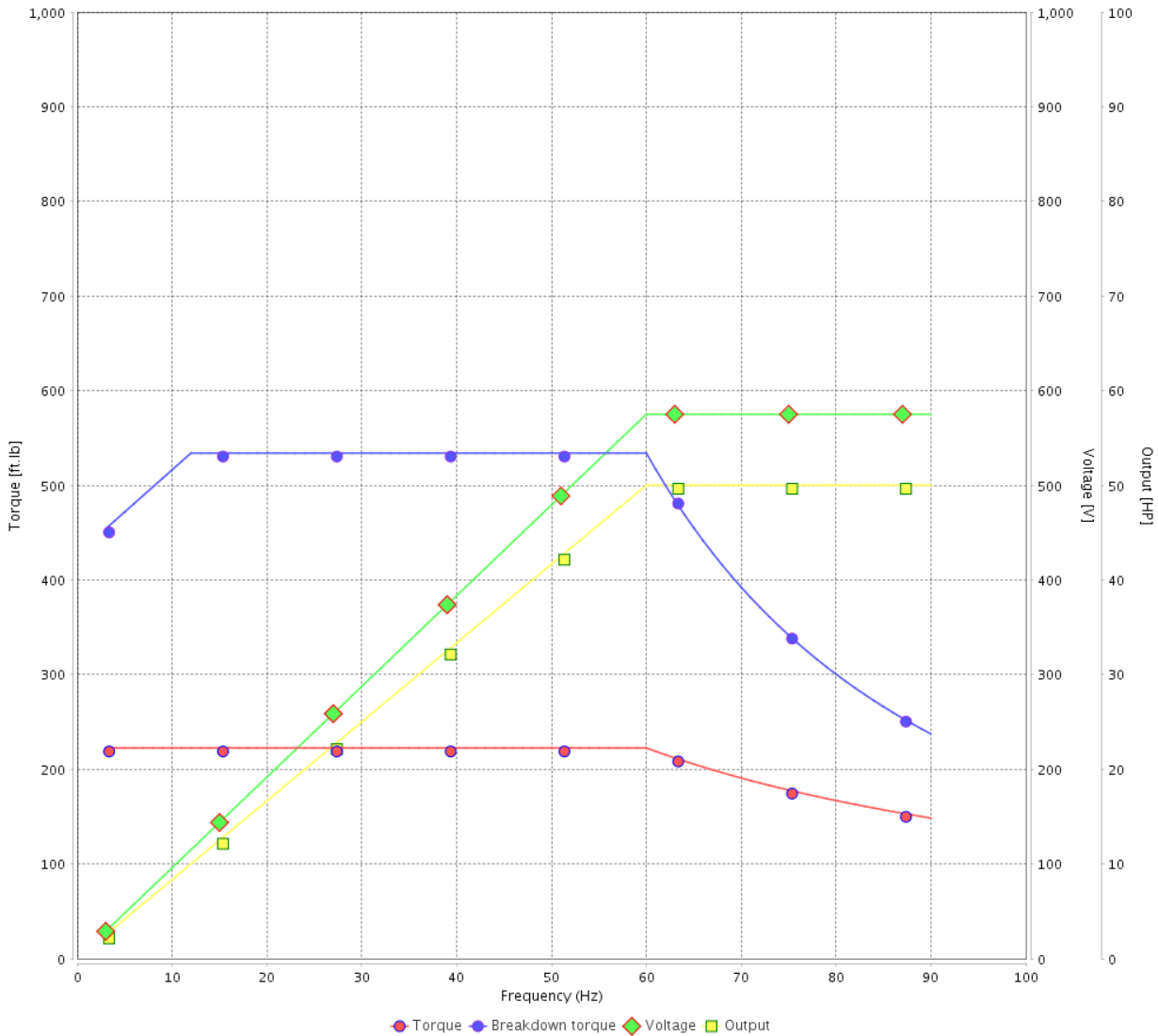
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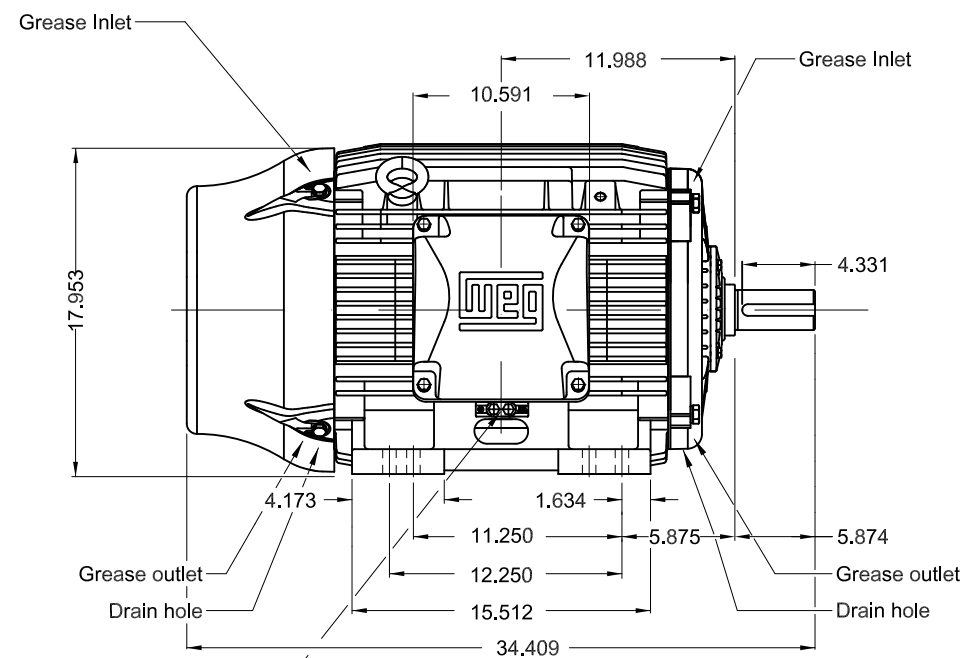
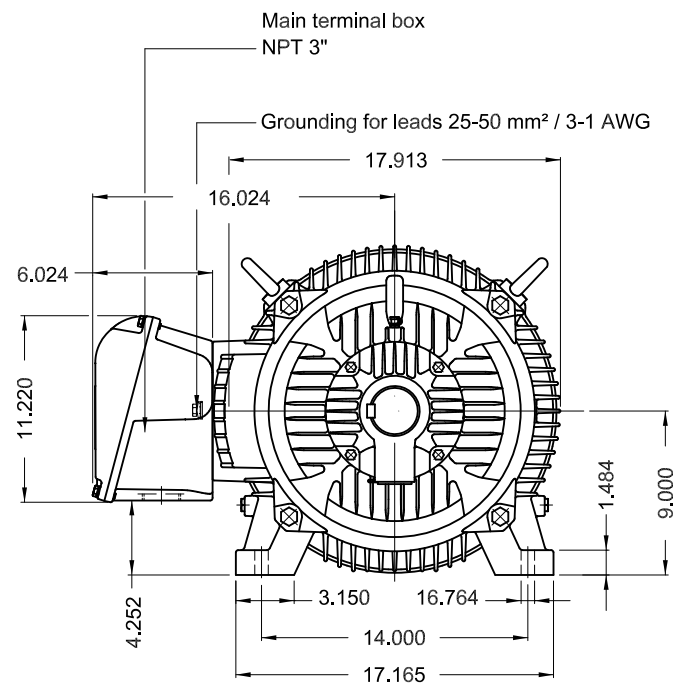
Rev.	Changes Summary	Performed	Checked	Date
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Date	12/04/2022			

1 2 3 4 5 6

A

B

C



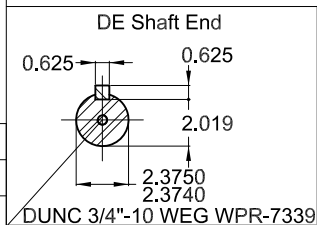
Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

50 HP 06 Poles 60 Hz A

Color RAL 5009
Painting plan 202E
Mounting B3R(D)



ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR IEEE 841 W22 PREM. EFF.					
CHECKED		FRAME 364/5T IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
WDD



SHEET 1 / 1

Dimensions in inches XME A3



NEMA
Premium
W22



FOR SAFE AREA
Mod.TE1BFOXON
CC029A



Class I, Div 2, Gr A, B, C and D - T3
Class I, Zone 2, IIC - T3
Class II, Div 2, Gr F and G - T4
For use on PWM: Gr. A, B, C, D and F,
VT 1000:1, CT 20:1, 1.00SF - T3A

MODEL 05012ST3HIE365T-W22



Inverter Duty Motor
Severe Duty

MADE IN BRAZIL
11431931

PH3 60Hz Fr. 364/5T 1000m.a.s.l. IP55 TEFC 910lb

V 575

A 45.9

HP 50

kW 37

SF 1.25

SFA 57.4

RPM 1180

PF 0.86

AMB 40°C

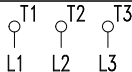
INS cl. F DT80K

NEMA NOM EFF 94.1%

DUTY CONT.

DES B Code G

GUARANT. EFF 93.0%



575V



→ 6314-C3 (27g) 70BC03X30

→ 6314-C3 (27g) 70BC03X30



MOBIL POLYREX EM (17000h)

