

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :																			
Product line	: NEMA Premium Efficiency Three-Phase																		
Product code :	12970188																		
Catalog # :	04009ST3HIE365T-W22																		
Frame : 364/5T Output : 40 HP (30 kW) Poles : 8 Frequency : 60 Hz Rated voltage : 575 V Rated current : 41.8 A L. R. Amperes : 246 A LRC : 5.9x(Code G) No load current : 18.8 A Rated speed : 885 rpm Slip : 1.67 % Rated torque : 238 ft.lb Locked rotor torque : 170 % Breakdown torque : 210 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 29.0 sq.ft.lb Design : B	Locked rotor time : 59s (cold) 33s (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> : 60.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 876 lb																		
Output	25%    50%    75%    100%																		
Efficiency (%)	92.8    92.4    93.0    92.4																		
Power Factor	0.38    0.63    0.74    0.78																		
Foundation loads																			
Max. traction : 1268 lb																			
Max. compression : 2144 lb																			
	<table border="0" style="width:100%;"> <tr> <td style="width: 50%;"></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;">20000 h</td> <td style="text-align: center;">20000 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 :	20000 h	20000 h	Lubricant amount :	27 g	27 g	Lubricant type :	Mobil Polyrex EM	
	<u>Drive end</u>	<u>Non drive end</u>																	
Bearing type :	6314 C3	6314 C3																	
Sealing :	Inpro/Seal	Inpro/Seal																	
Lubrication interval :	20000 h	20000 h																	
Lubricant amount :	27 g	27 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	01/06/2022		1 / 6																

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



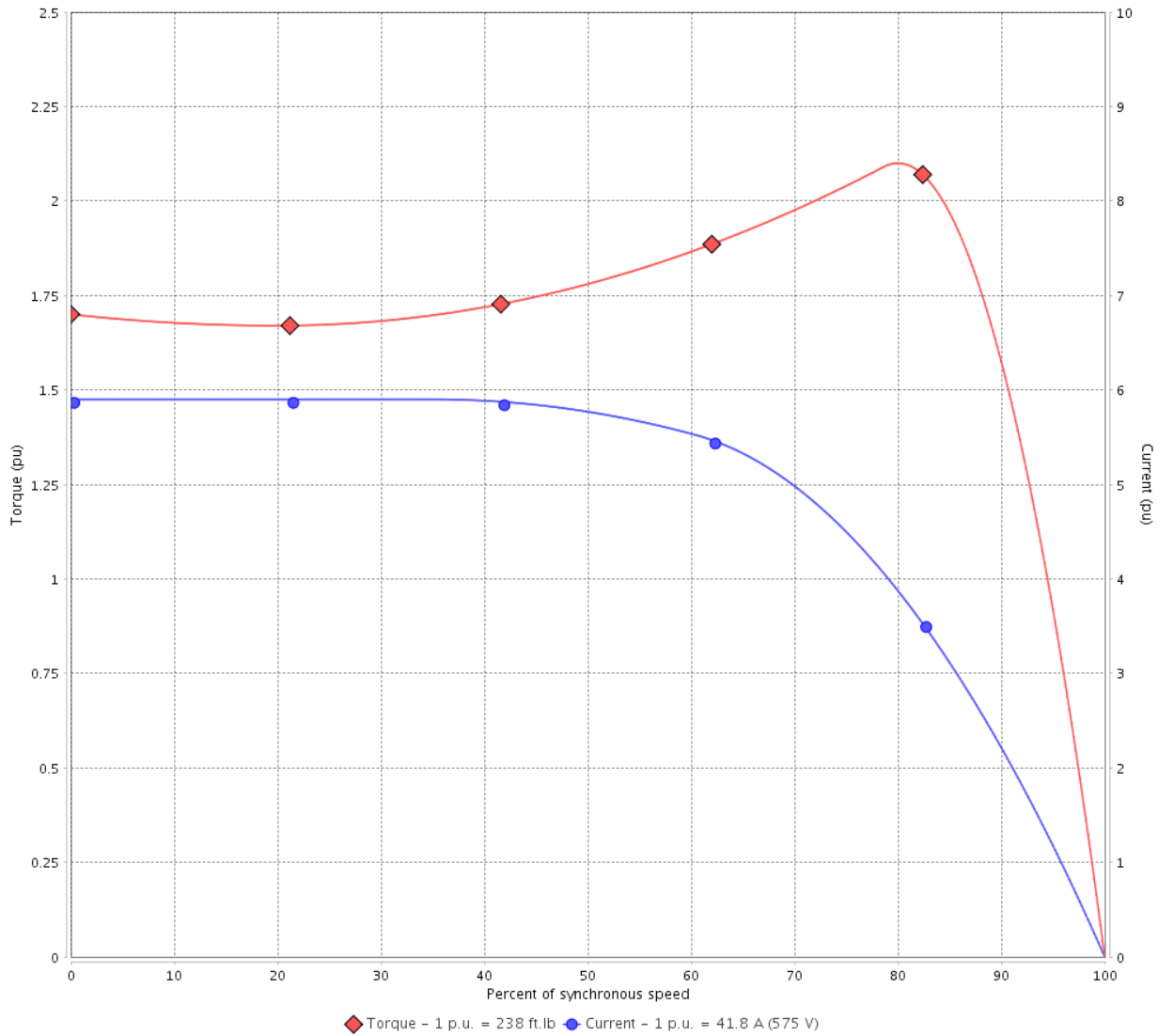
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12970188

Catalog # : 04009ST3HIE365T-W22

TORQUE AND CURRENT VS SPEED CURVE



Performance : 575 V 60 Hz 8P

Rated current	: 41.8 A	Moment of inertia (J)	: 29.0 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 238 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 885 rpm	Design	: B

Locked rotor time : 59s (cold) 33s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 6	Revision
Checked by				
Date	01/06/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

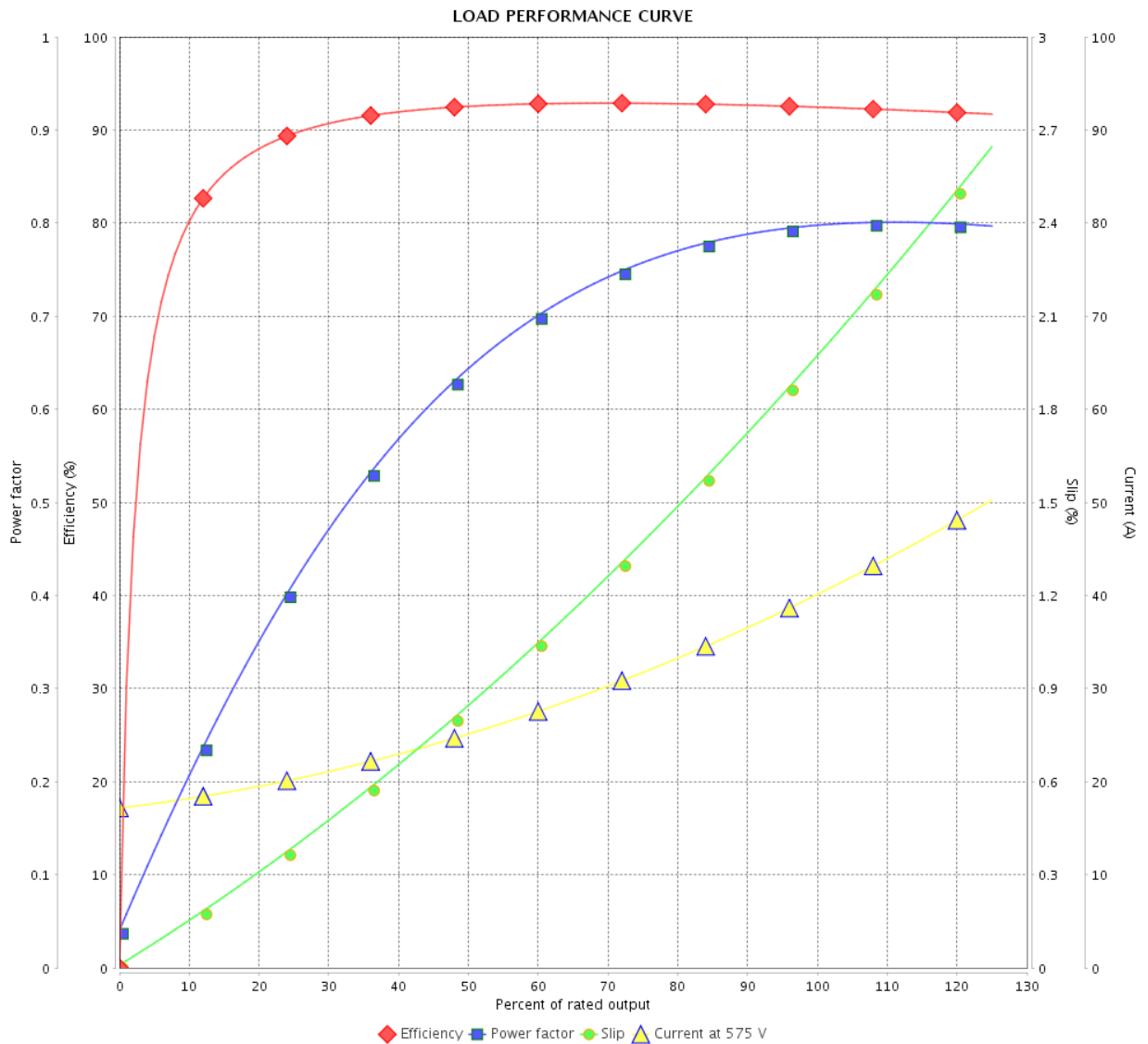


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12970188

Catalog # : 04009ST3HIE365T-W22



Performance : 575 V 60 Hz 8P

Rated current : 41.8 A  
 LRC : 5.9  
 Rated torque : 238 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 Rated speed : 885 rpm

Moment of inertia (J) : 29.0 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			3 / 6	
Date	01/06/2022			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 12970188  
Catalog # : 04009ST3HIE365T-W22

Performance : 575 V 60 Hz 8P

Rated current	: 41.8 A	Moment of inertia (J)	: 29.0 sq.ft.lb
LRC	: 5.9	Duty cycle	: Cont.(S1)
Rated torque	: 238 ft.lb	Insulation class	: F
Locked rotor torque	: 170 %	Service factor	: 1.25
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 885 rpm	Design	: B

Heating constant

Cooling constant

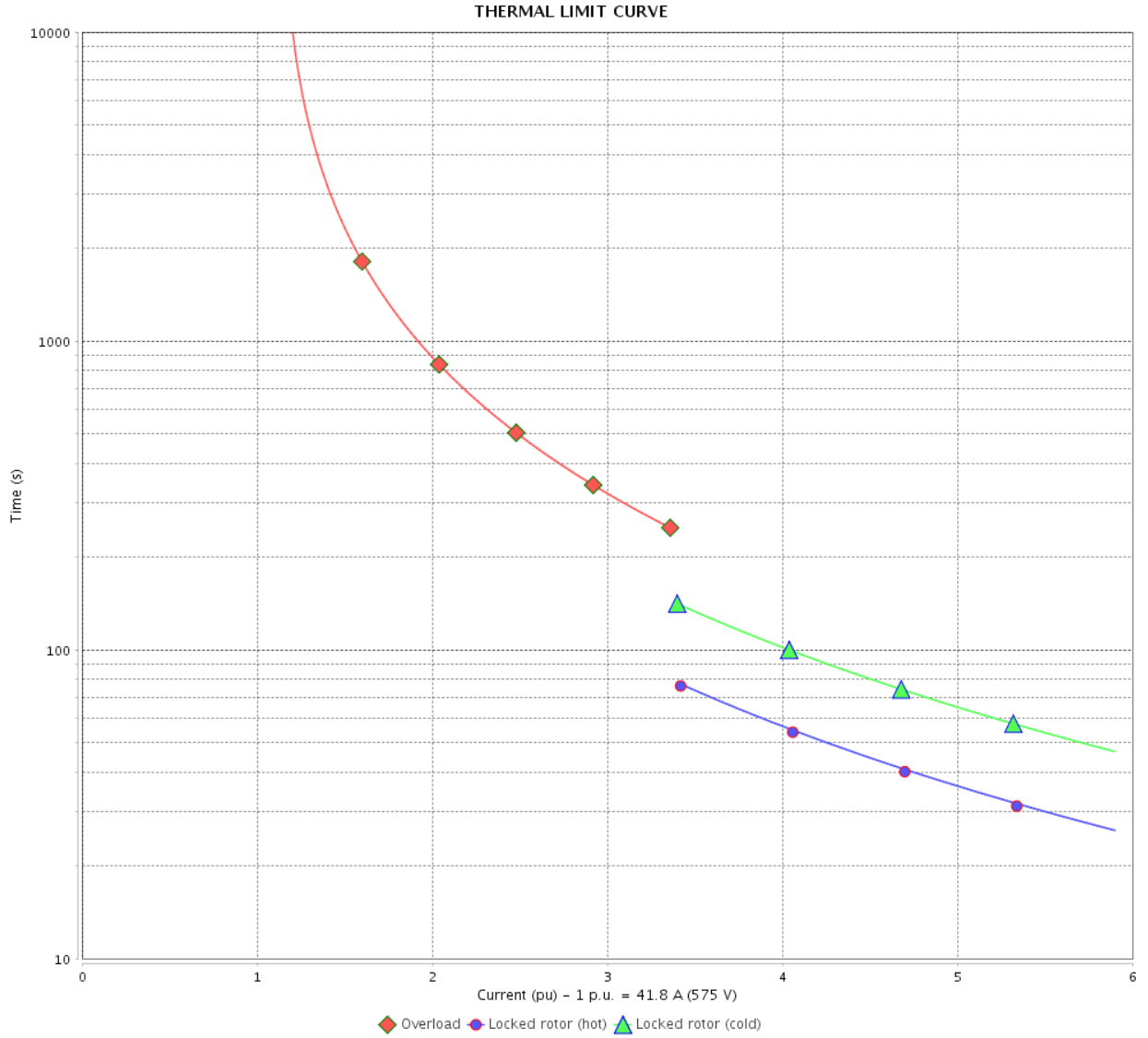
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	01/06/2022		4 / 6	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			5 / 6	

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



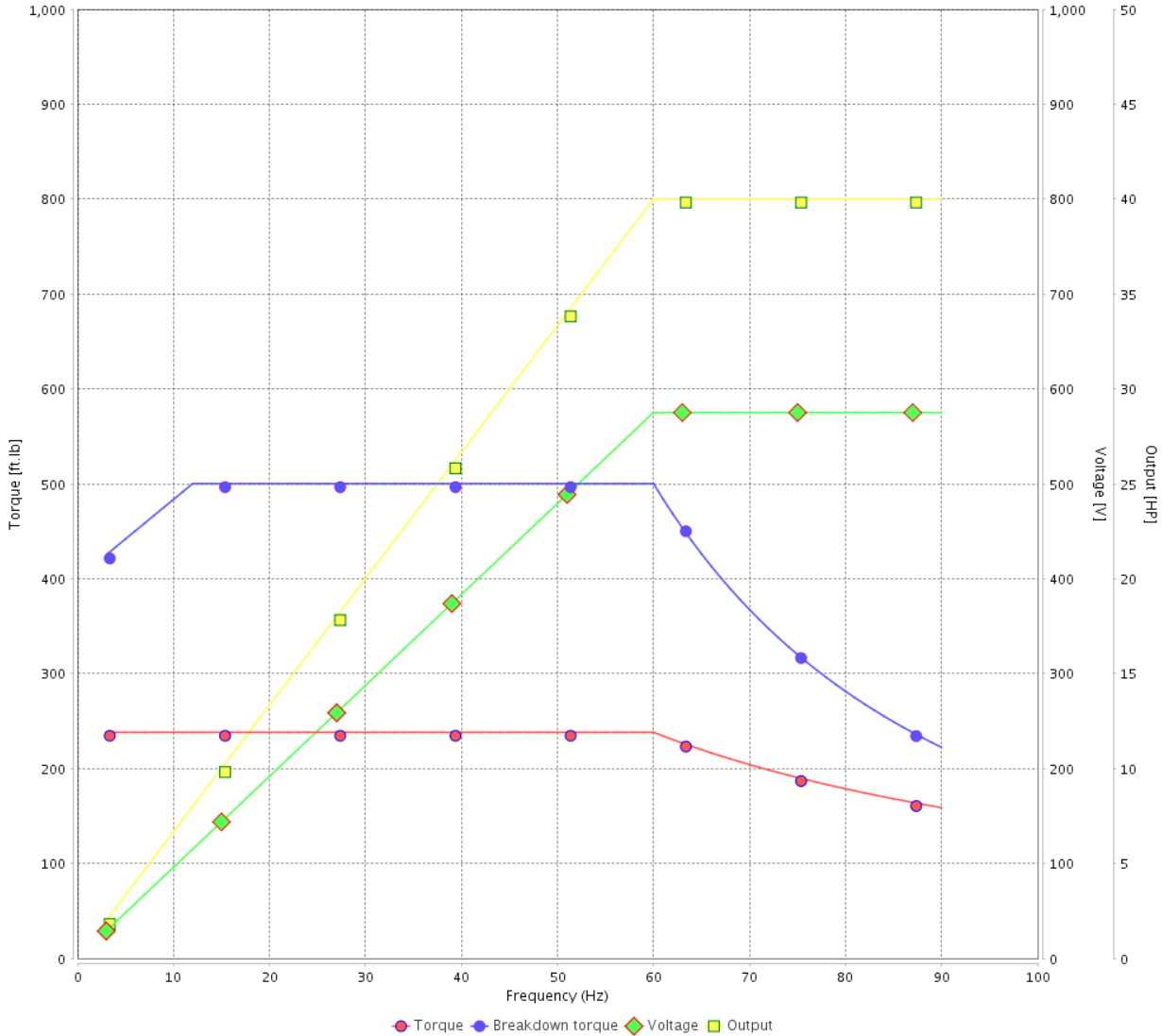
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12970188

Catalog # : 04009ST3HIE365T-W22

VFD OPERATION CURVE



Performance : 575 V 60 Hz 8P

Rated current : 41.8 A  
 LRC : 5.9  
 Rated torque : 238 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 210 %  
 Rated speed : 885 rpm

Moment of inertia (J) : 29.0 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.25  
 Temperature rise : 80 K  
 Design : B

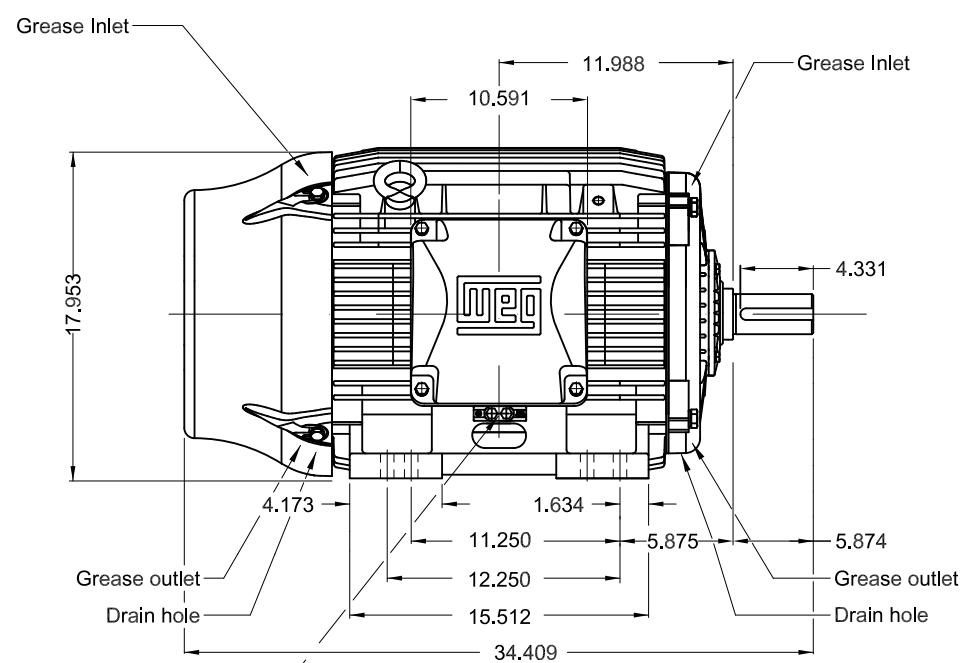
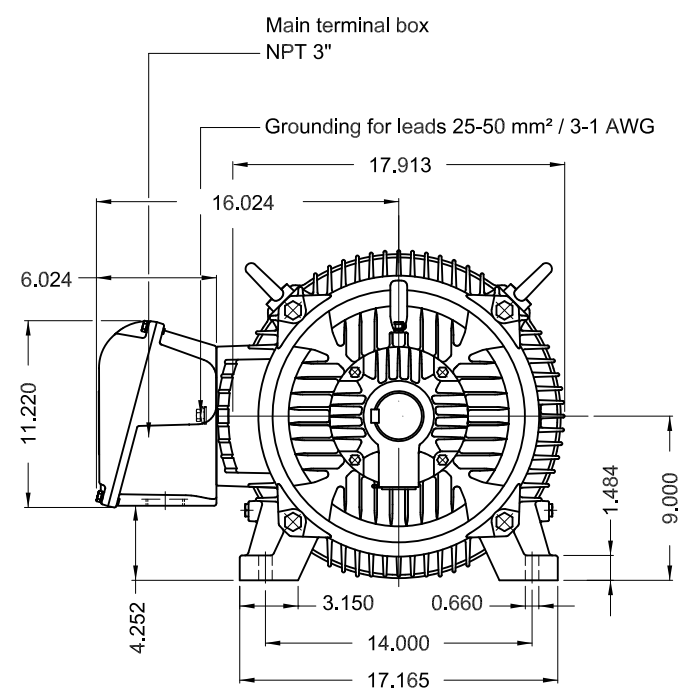
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 6	Revision
Checked by				
Date	01/06/2022			

1 2 3 4 5 6

A

B

C

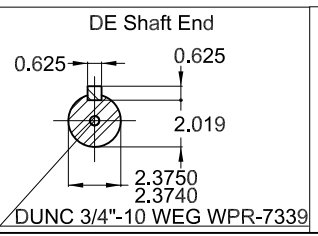


Grounding for leads 25-185 mm² / 3AWG-350MCM

D

E

Without vertical jackscrews
Color RAL 5009
Painting plan 202E
Mounting NEMA F-1
Mounting B3R(D)



40 HP 08 Poles 60 Hz A

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER	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