

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14272485 Catalog # : 06018OT3E364TC-W40	
Frame		: 364/5TC		Cooling method : IC01 - ODP	
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> : 772 lb	
Protection degree		: IP23		Moment of inertia (J) : 15.6 sq.ft.lb	
Design		: B			
Output [HP]	60	50	50	50	50
Poles	4	4	4	4	4
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	140/69.9	69.6	66.9	65.3	65.3
L. R. Amperes [A]	909/454	473	482	457	457
LRC [A]	6.5x(Code G)	6.8x(Code G)	7.2x(Code H)	7.0x(Code H)	7.0x(Code H)
No load current [A]	49.4/24.7	24.4	26.2	27.7	27.7
Rated speed [RPM]	1780	1480	1480	1485	1485
Slip [%]	1.11	1.33	1.33	1.00	1.00
Rated torque [ft.lb]	177	177	177	177	177
Locked rotor torque [%]	200	200	220	240	240
Breakdown torque [%]	240	229	250	270	270
Service factor	1.25	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	34s (cold) 19s (hot)	32s (cold) 18s (hot)	30s (cold) 17s (hot)	28s (cold) 16s (hot)	28s (cold) 16s (hot)
Noise level <sup>2</sup>	69.0 dB(A)				
Efficiency (%)	25%	94.4	93.4	93.4	93.4
	50%	94.5	93.5	93.5	93.5
	75%	95.0	93.9	93.9	93.9
	100%	95.0	93.9	93.9	93.9
Power Factor	25%	0.48	0.49	0.45	0.42
	50%	0.73	0.74	0.71	0.68
	75%	0.82	0.83	0.81	0.79
	100%	0.85	0.86	0.85	0.84
Bearing type		Drive end : 6314 C3	Non drive end : 6212 Z C3	Foundation loads	
Sealing		: Without	: Without	Max. traction : 1250 lb	
Lubrication interval		: 20000 h	: 20000 h	Max. compression : 2022 lb	
Lubricant amount		: 27 g	: 13 g		
Lubricant type		: Mobil Polyrex EM			
Notes USABLE @208V 155A SF 1.15 SFA 178A					
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 / 21	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



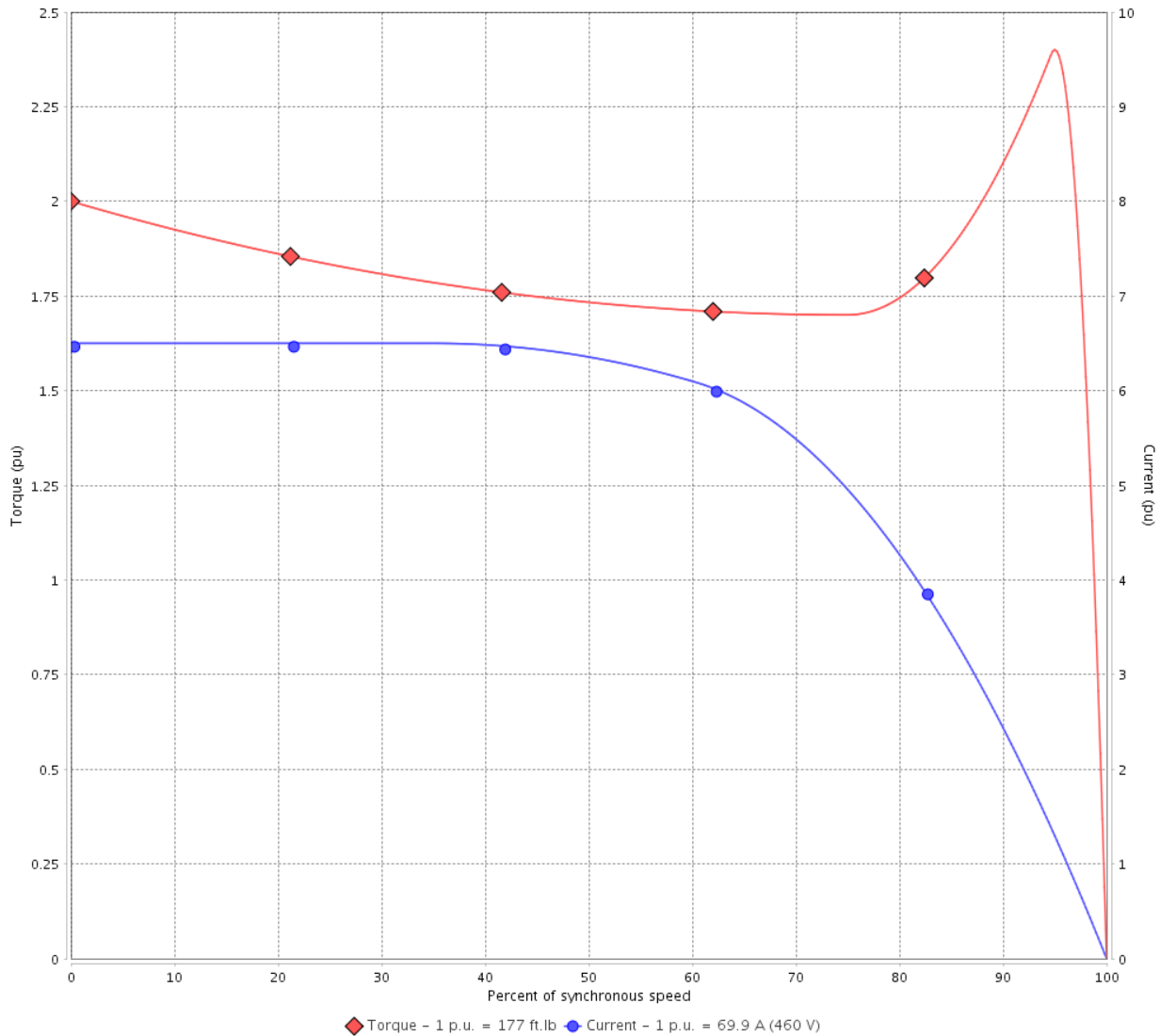
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 140/69.9 A  
LRC : 6.5  
Rated torque : 177 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 240 %  
Rated speed : 1780 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Locked rotor time : 34s (cold) 19s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 21	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



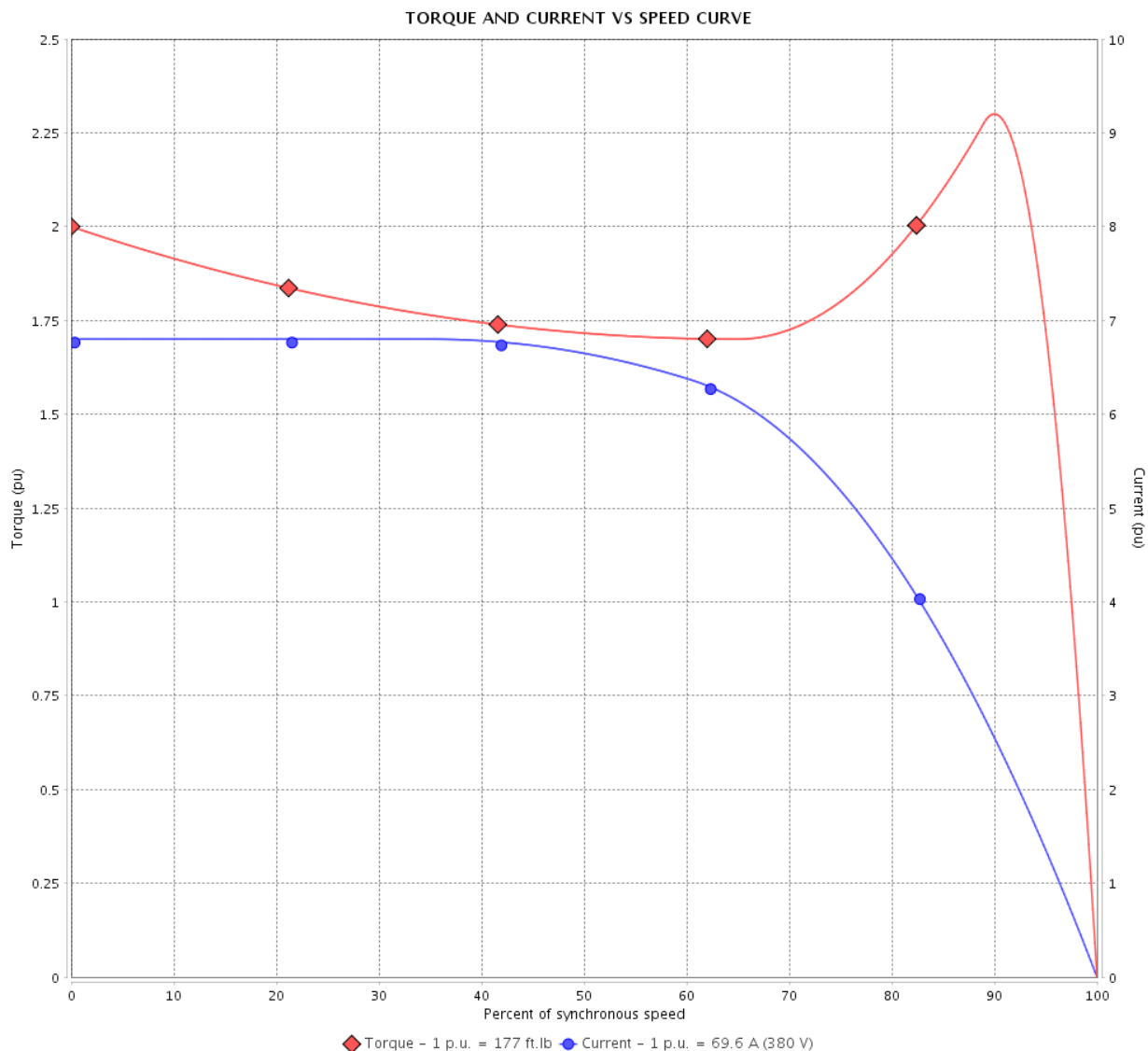
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 380 V 50 Hz 4P IE3

Rated current	: 69.6 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 21	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



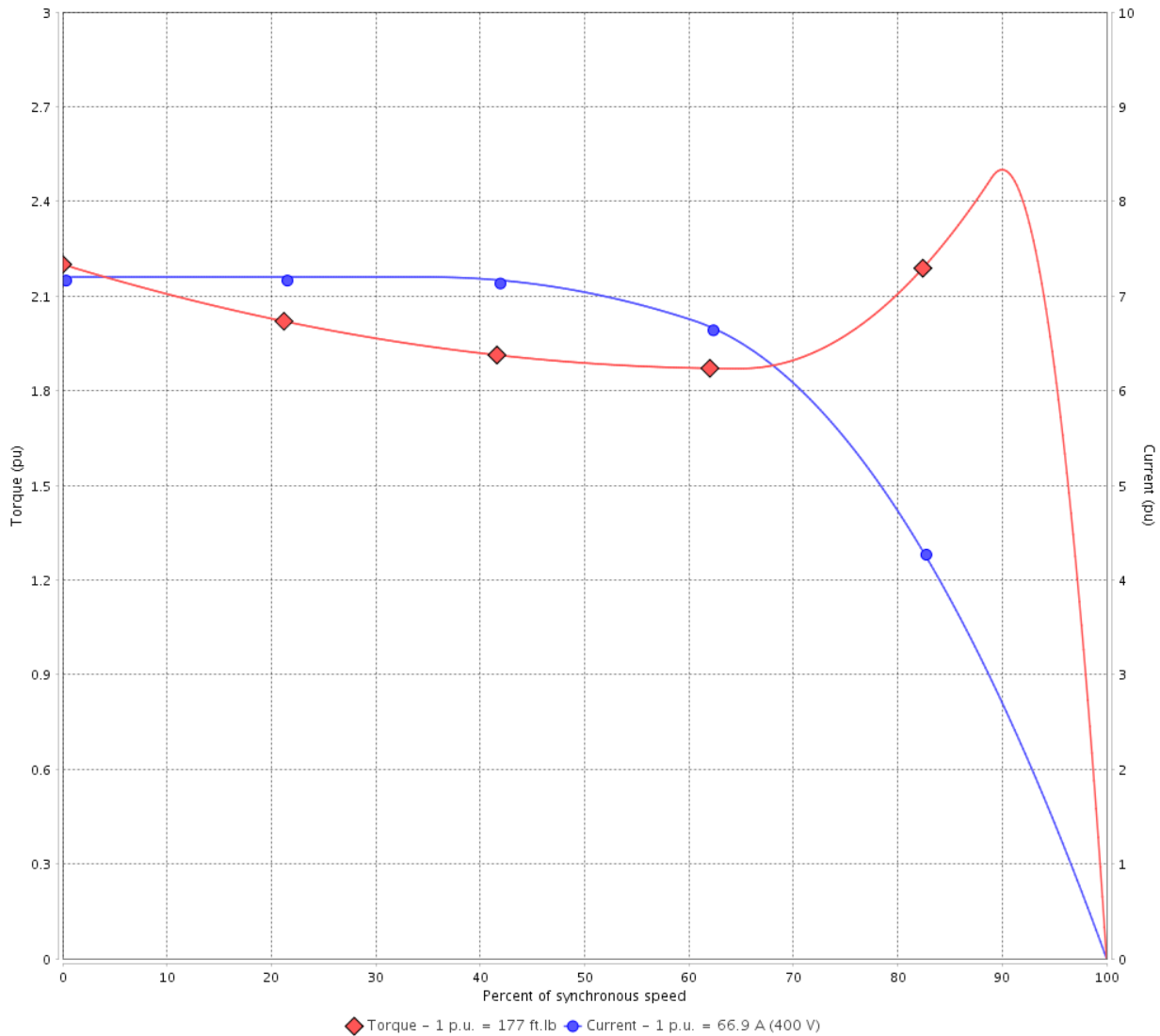
Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 4P IE3

Rated current	: 66.9 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 21	Revision
Checked by				
Date	12/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



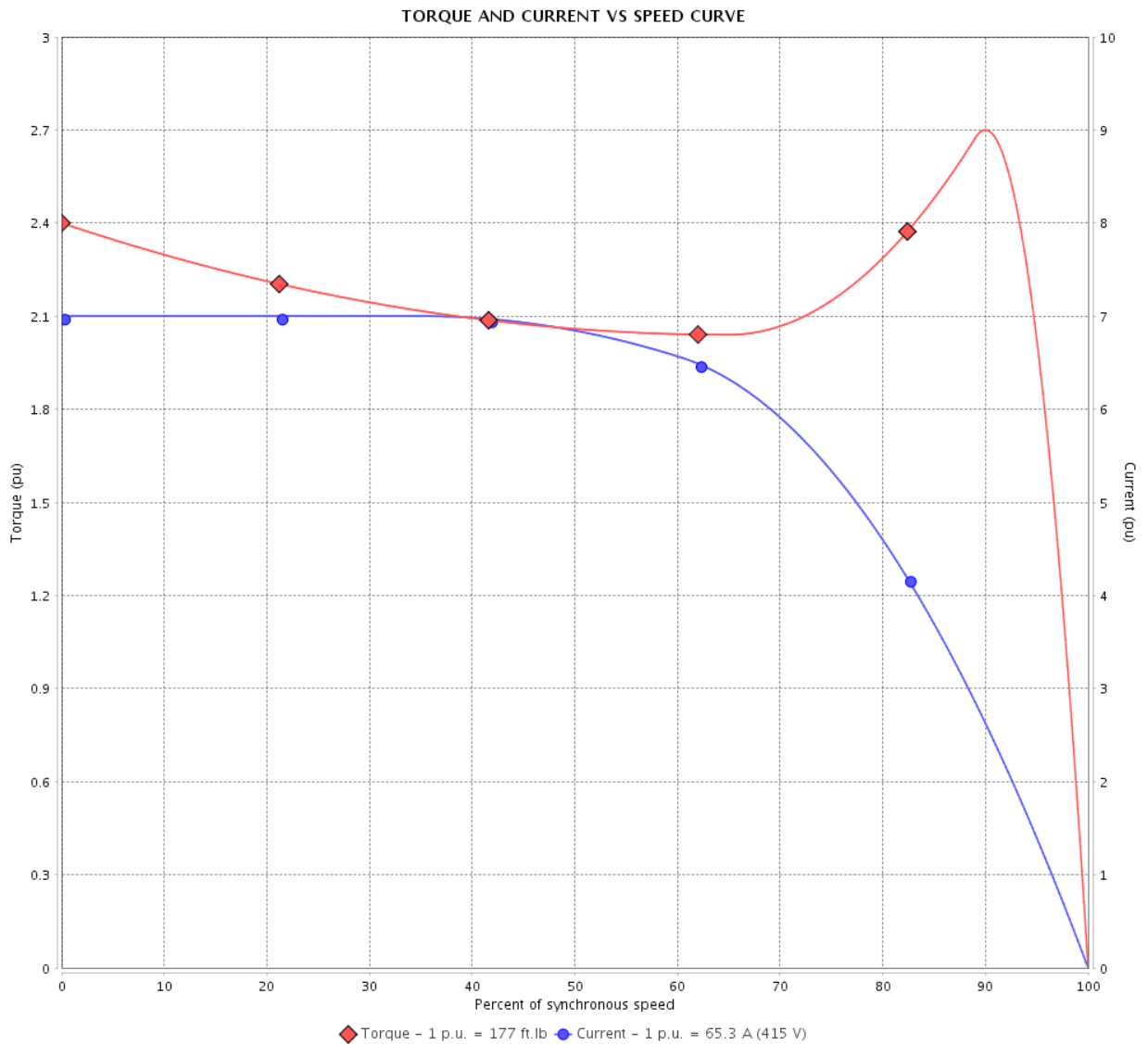
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 415 V 50 Hz 4P IE3

Rated current	: 65.3 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 1485 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 21	Revision
Checked by				
Date	12/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

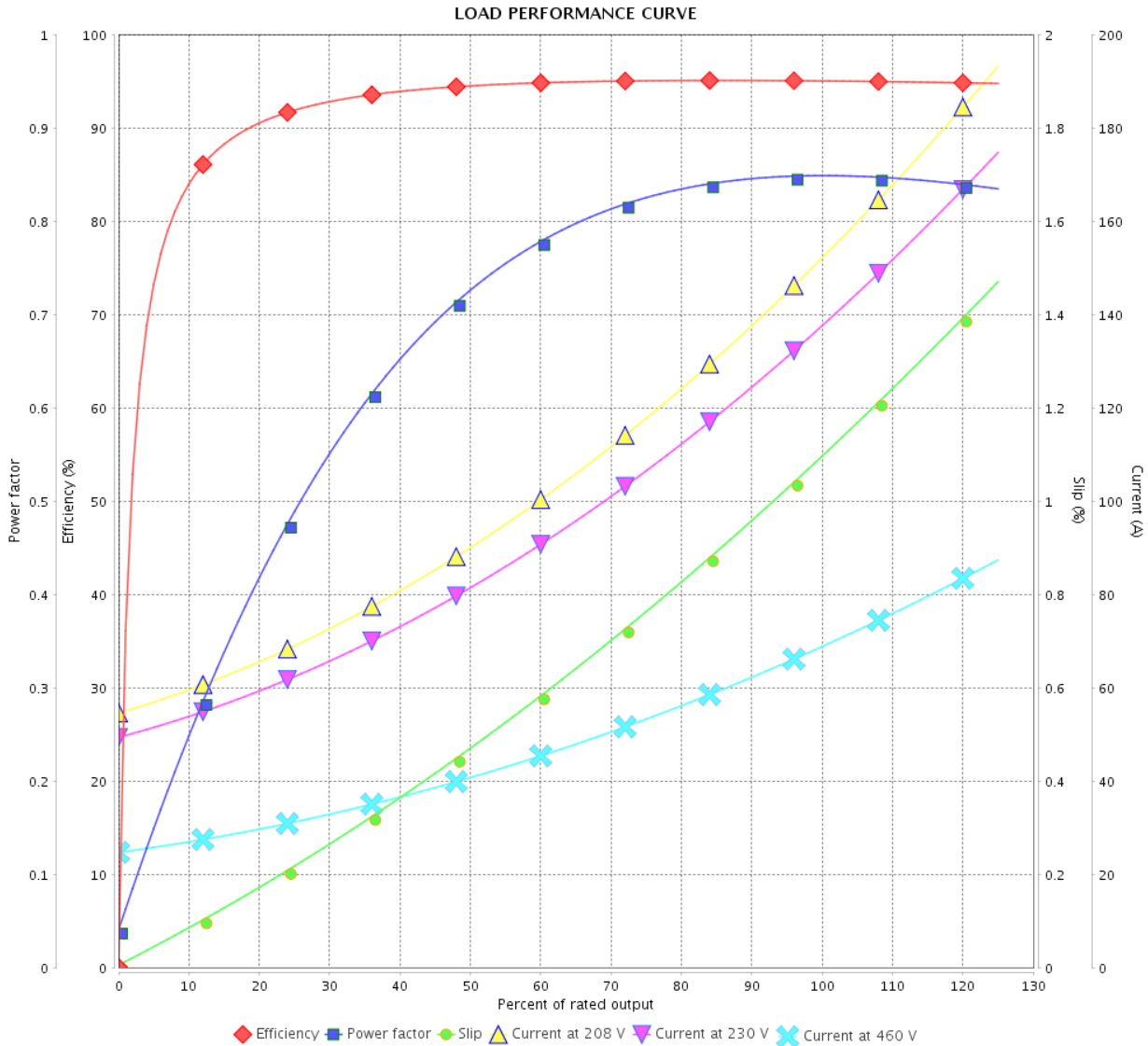


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 230/460 V 60 Hz 4P

Rated current : 140/69.9 A  
 LRC : 6.5  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 15.6 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				
Date				

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

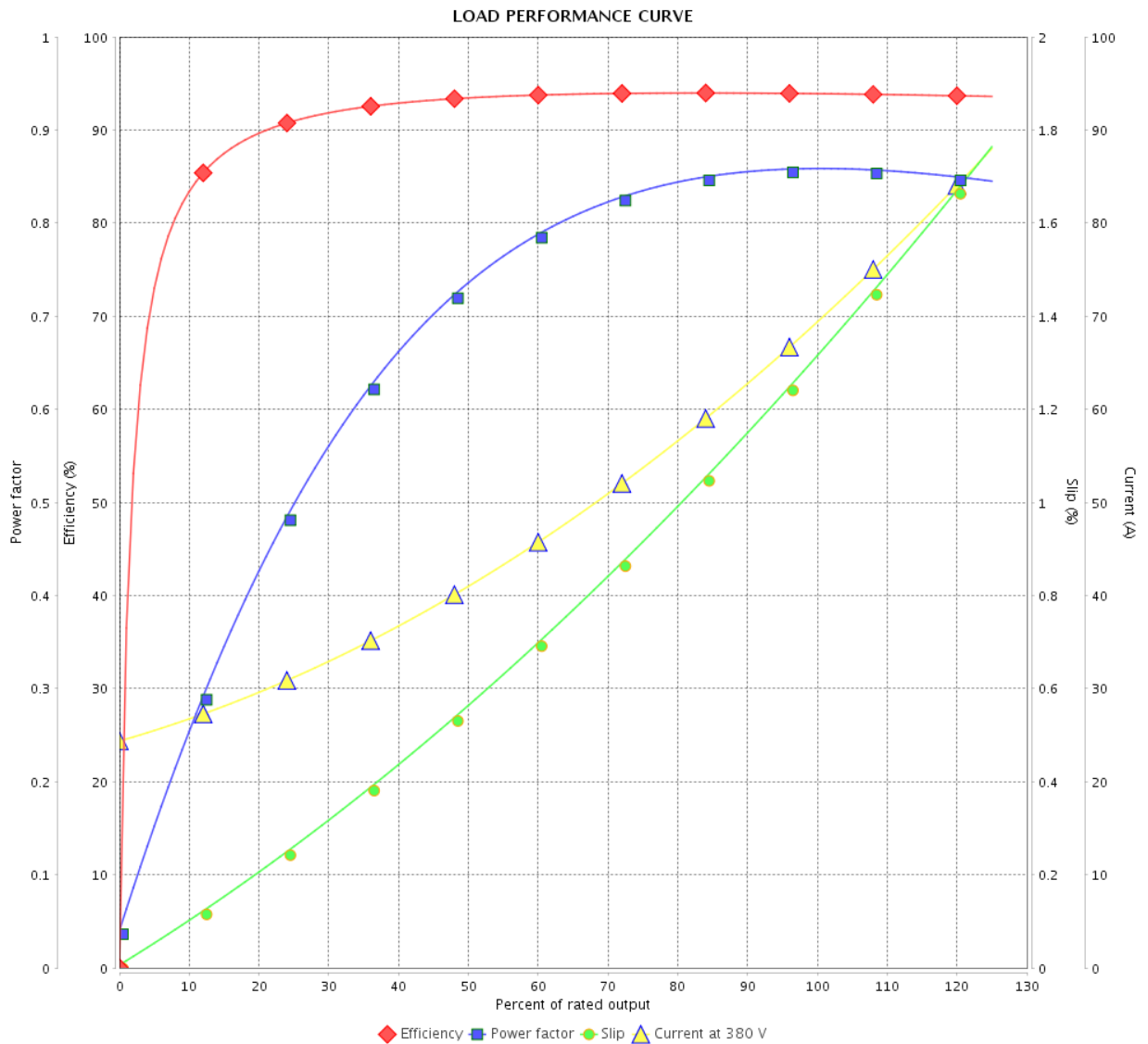


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 69.6 A  
 LRC : 6.8  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 229 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 21		
Date		12/04/2022		

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

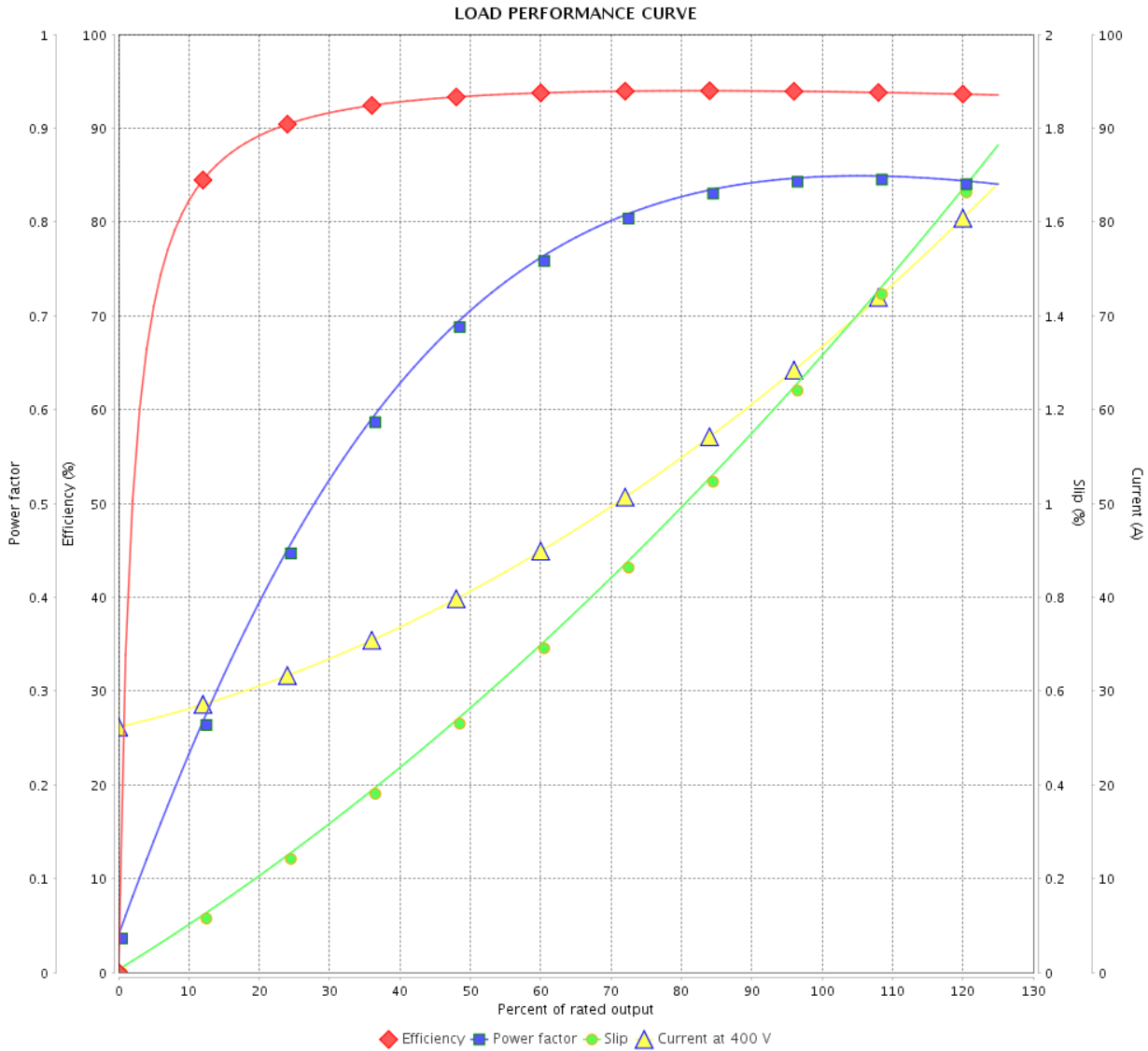


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 66.9 A  
 LRC : 7.2  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 8 / 21	Revision
Checked by				
Date	12/04/2022			



# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

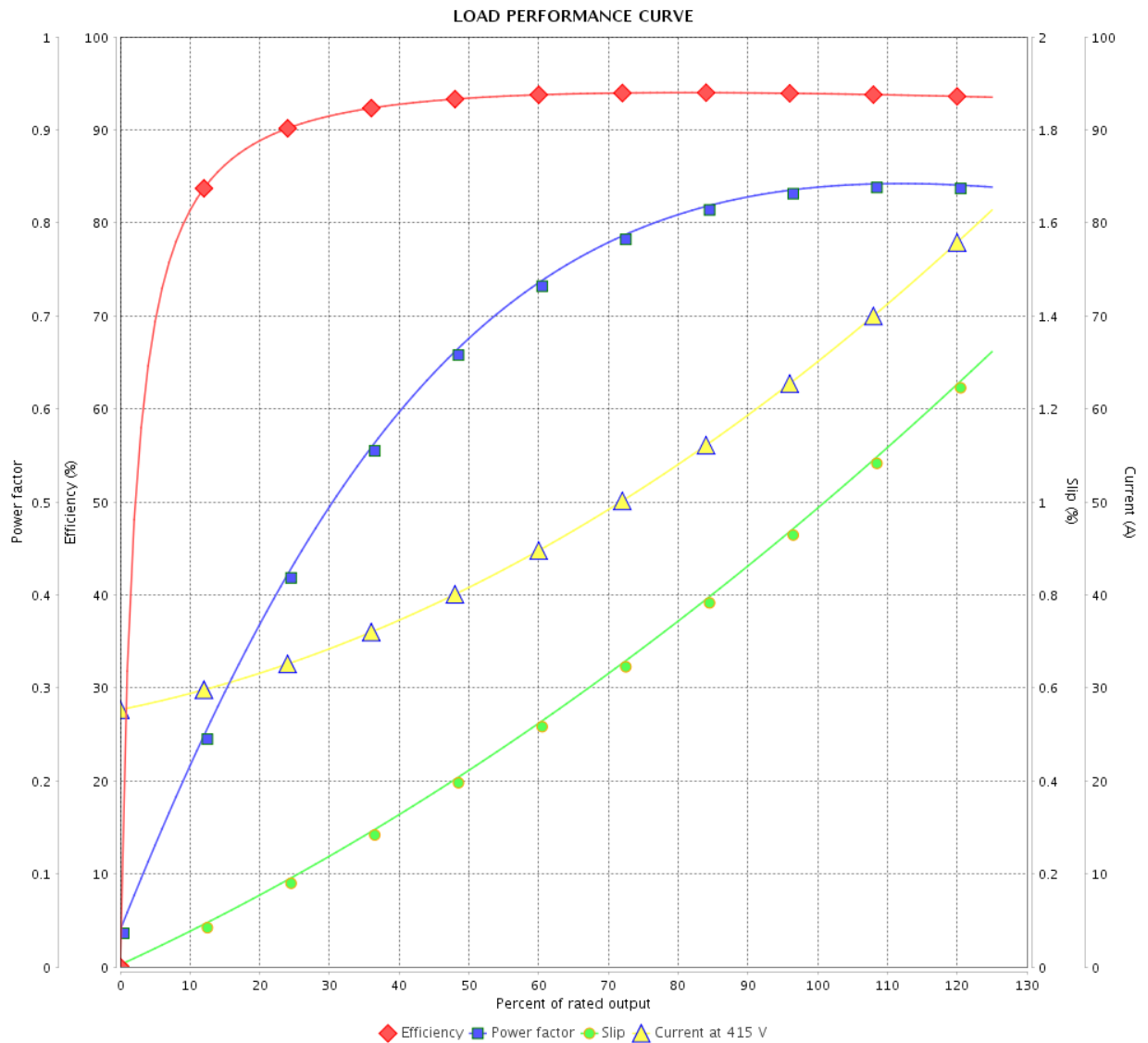


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 415 V 50 Hz 4P IE3

Rated current : 65.3 A  
 LRC : 7.0  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 270 %  
 Rated speed : 1485 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			9 / 21	
Date	12/04/2022			

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

Performance : 230/460 V 60 Hz 4P

Rated current : 140/69.9 A	Moment of inertia (J) : 15.6 sq.ft.lb
LRC : 6.5	Duty cycle : Cont.(S1)
Rated torque : 177 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.25
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 1780 rpm	Design : B

Heating constant

Cooling constant

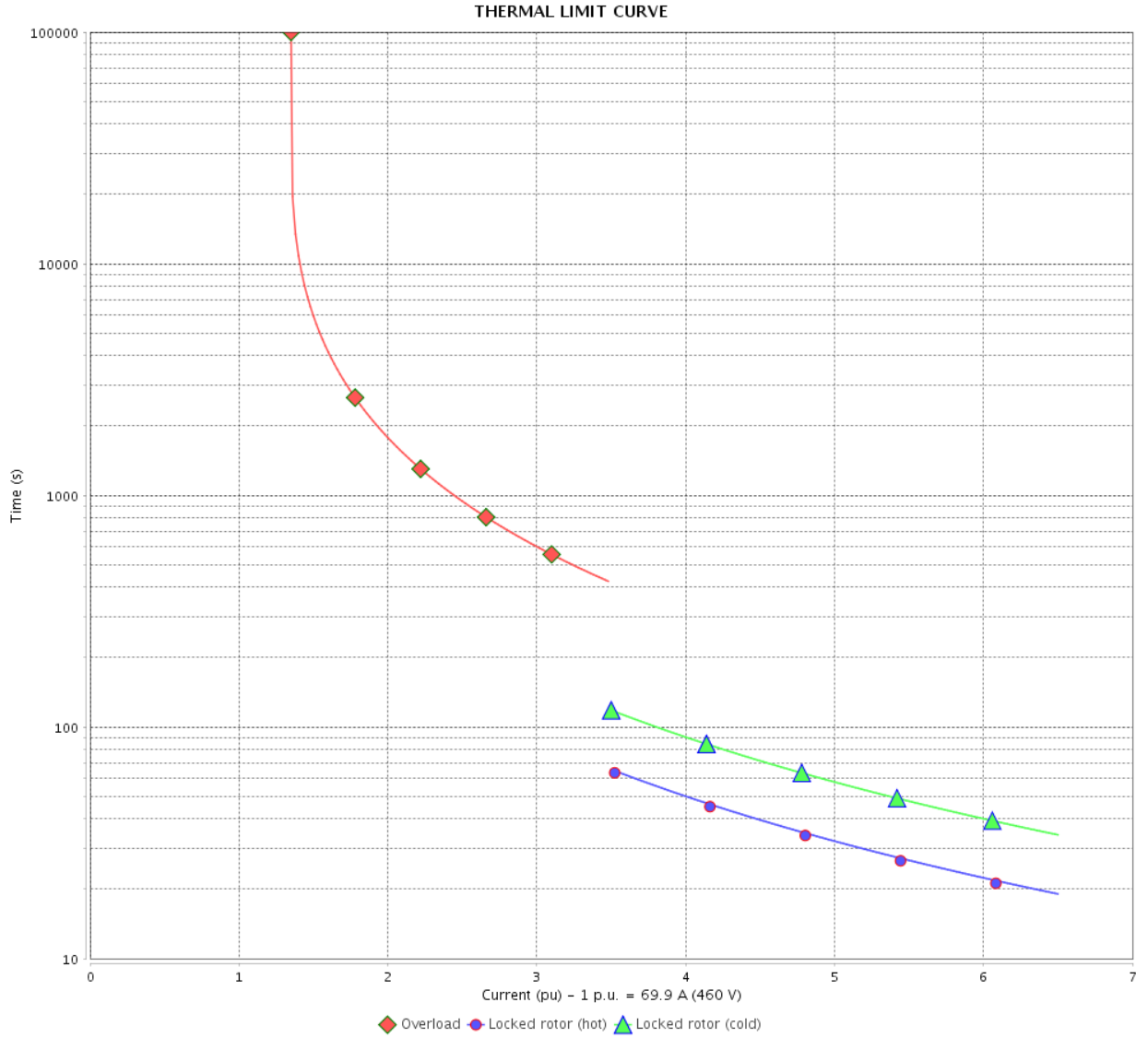
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 21	Revision
Checked by				
Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 11 / 21      Revision		
Checked by				
Date				

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

Performance : 380 V 50 Hz 4P IE3

Rated current	: 69.6 A	Moment of inertia (J)	: 15.6 sq.ft.lb
LRC	: 6.8	Duty cycle	: Cont.(S1)
Rated torque	: 177 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 229 %	Temperature rise	: 80 K
Rated speed	: 1480 rpm	Design	: B

Heating constant

Cooling constant

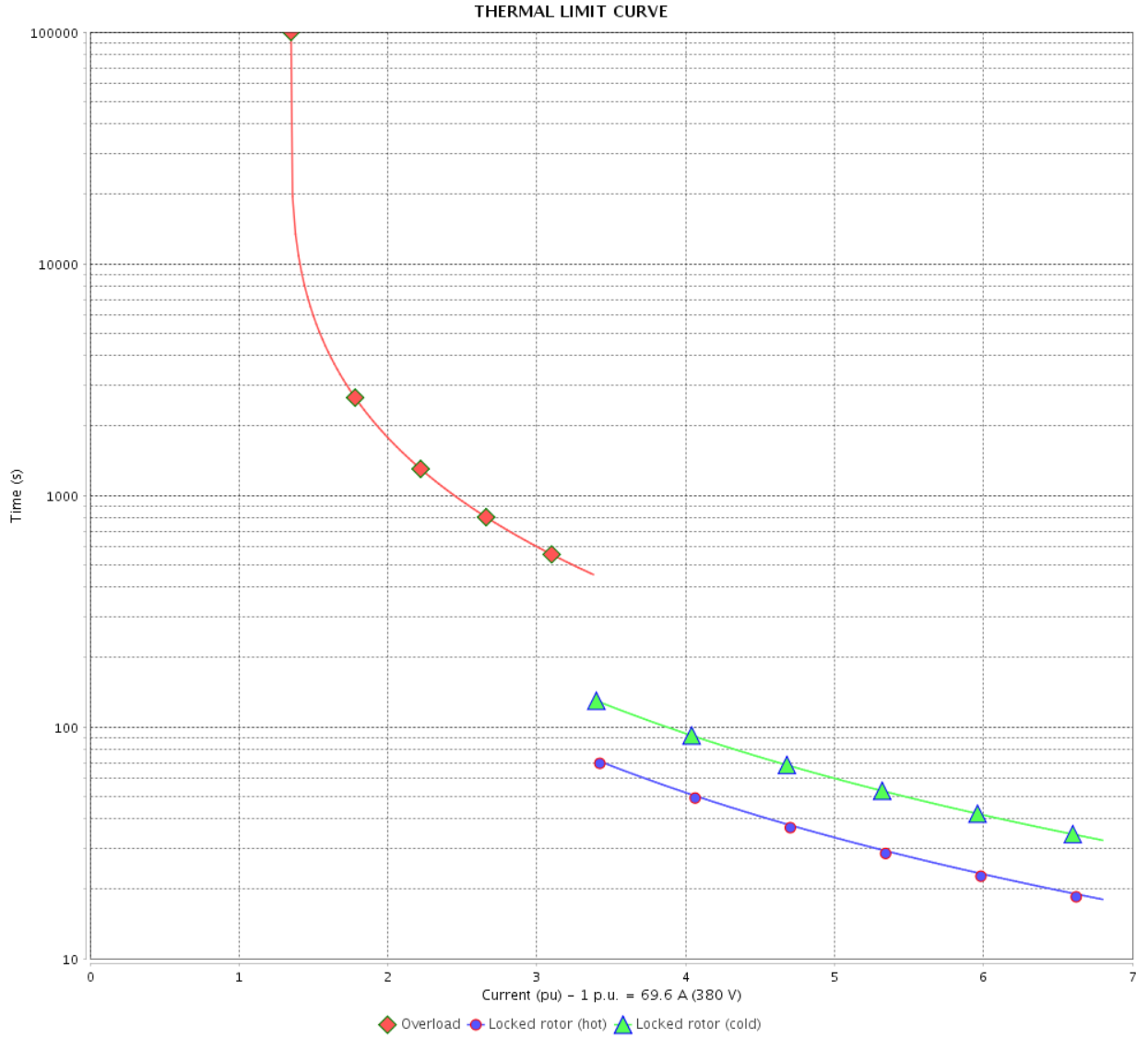
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	12/04/2022		12 / 21	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 21		
Date		12/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

Performance : 400 V 50 Hz 4P IE3

Rated current : 66.9 A	Moment of inertia (J) : 15.6 sq.ft.lb
LRC : 7.2	Duty cycle : Cont.(S1)
Rated torque : 177 ft.lb	Insulation class : F
Locked rotor torque : 220 %	Service factor : 1.00
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 1480 rpm	Design : B

Heating constant

Cooling constant

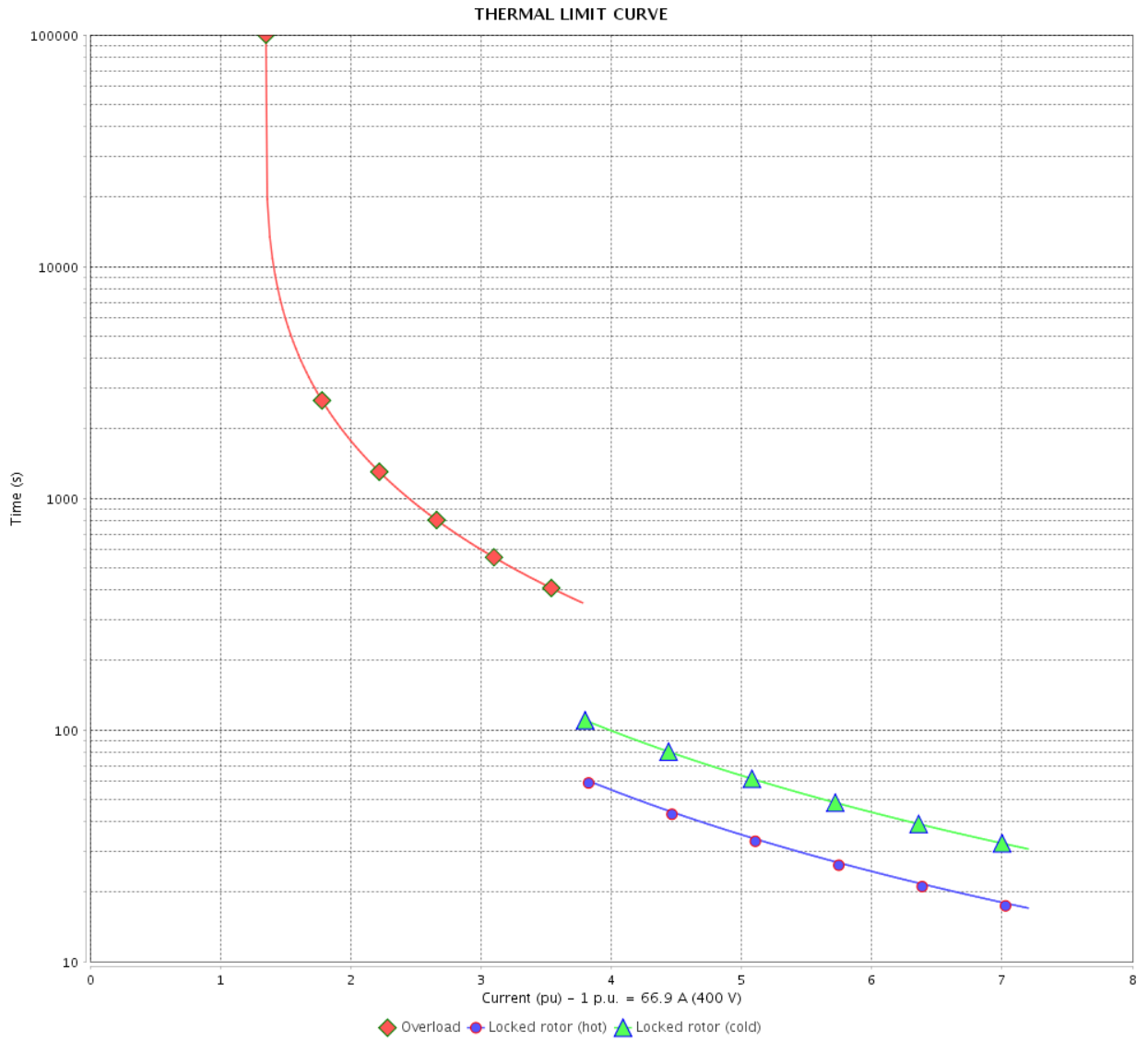
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 21	Revision
Checked by				
Date	12/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 15 / 21		Revision
Checked by				
Date				

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

Performance : 415 V 50 Hz 4P IE3

Rated current : 65.3 A	Moment of inertia (J) : 15.6 sq.ft.lb
LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 177 ft.lb	Insulation class : F
Locked rotor torque : 240 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 1485 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 16 / 21	Revision
Checked by				
Date	12/04/2022			

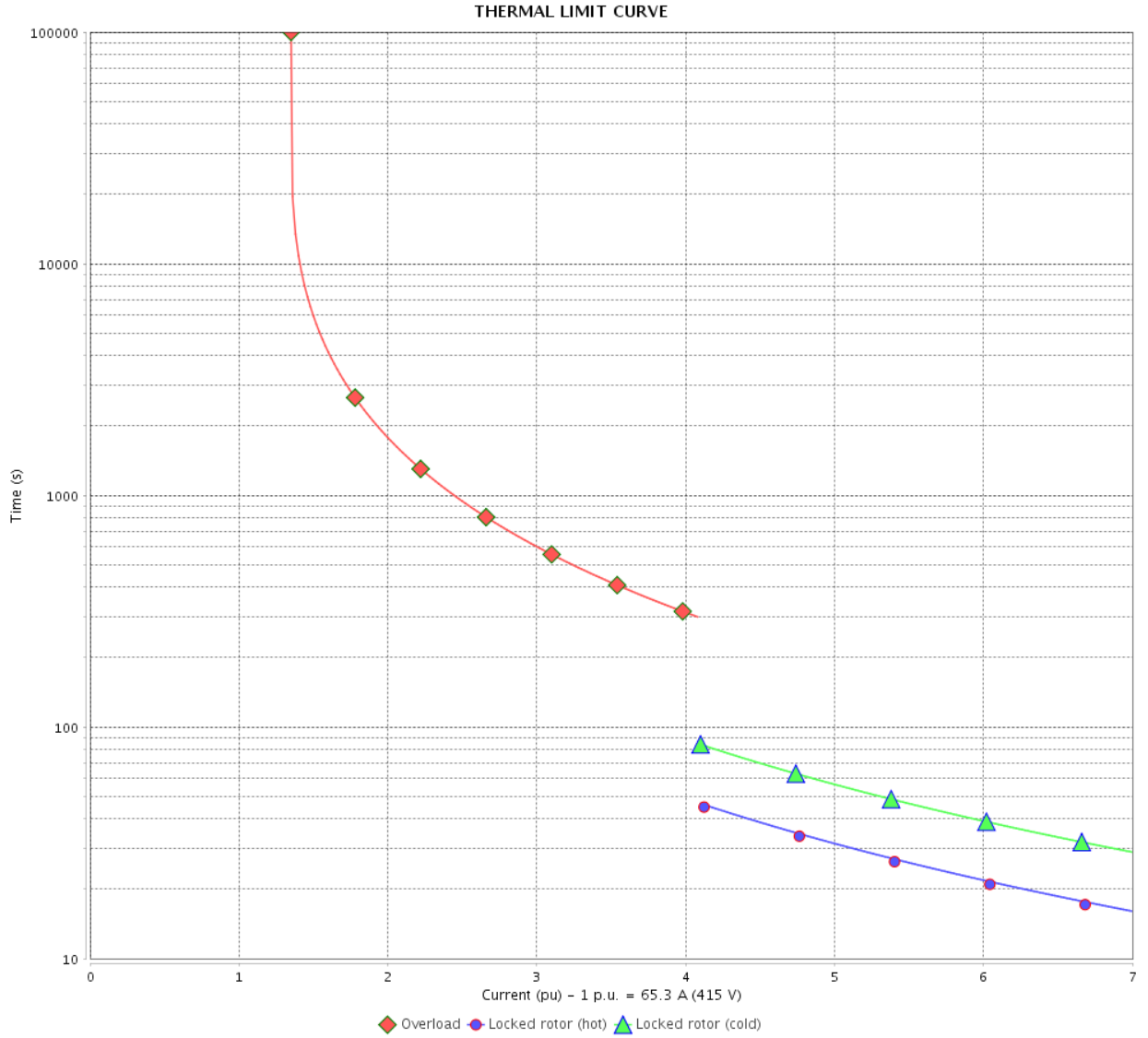


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 17 / 21		Revision
Checked by				
Date				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



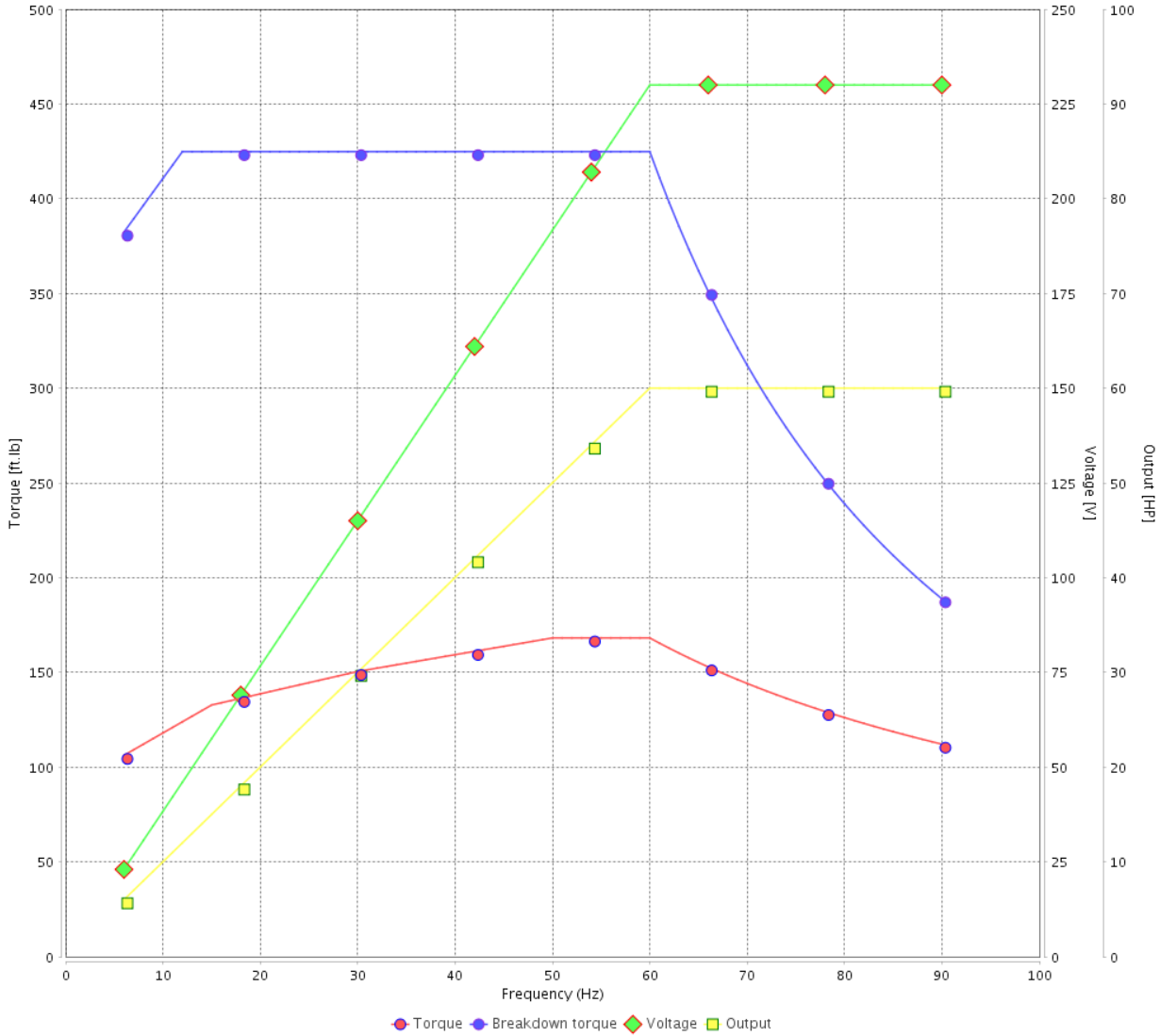
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 140/69.9 A  
 LRC : 6.5  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 200 %  
 Breakdown torque : 240 %  
 Rated speed : 1780 rpm

Moment of inertia (J) : 15.6 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 18 / 21	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

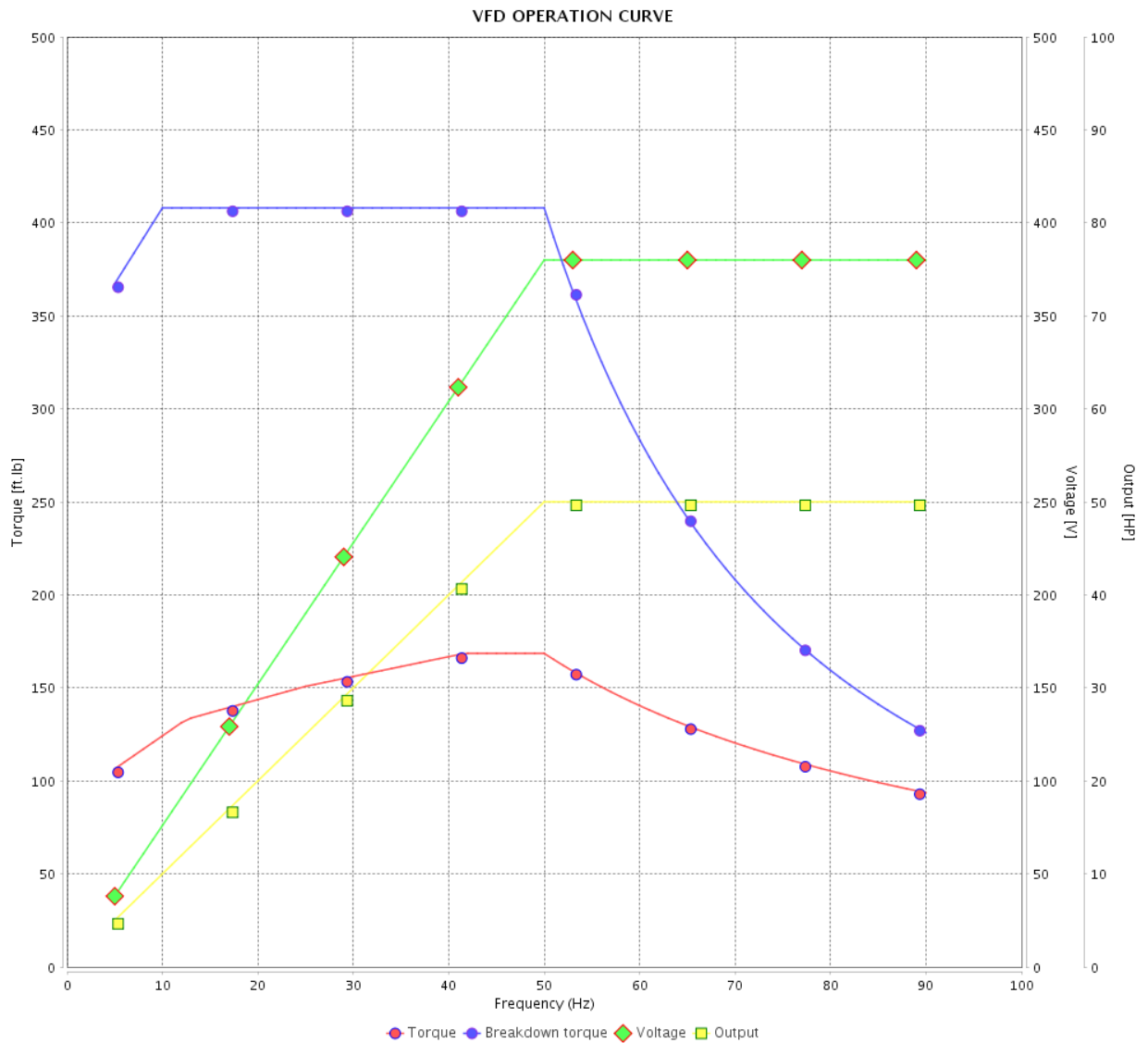


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 380 V 50 Hz 4P IE3

Rated current : 69.6 A  
LRC : 6.8  
Rated torque : 177 ft.lb  
Locked rotor torque : 200 %  
Breakdown torque : 229 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		19 / 21		
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

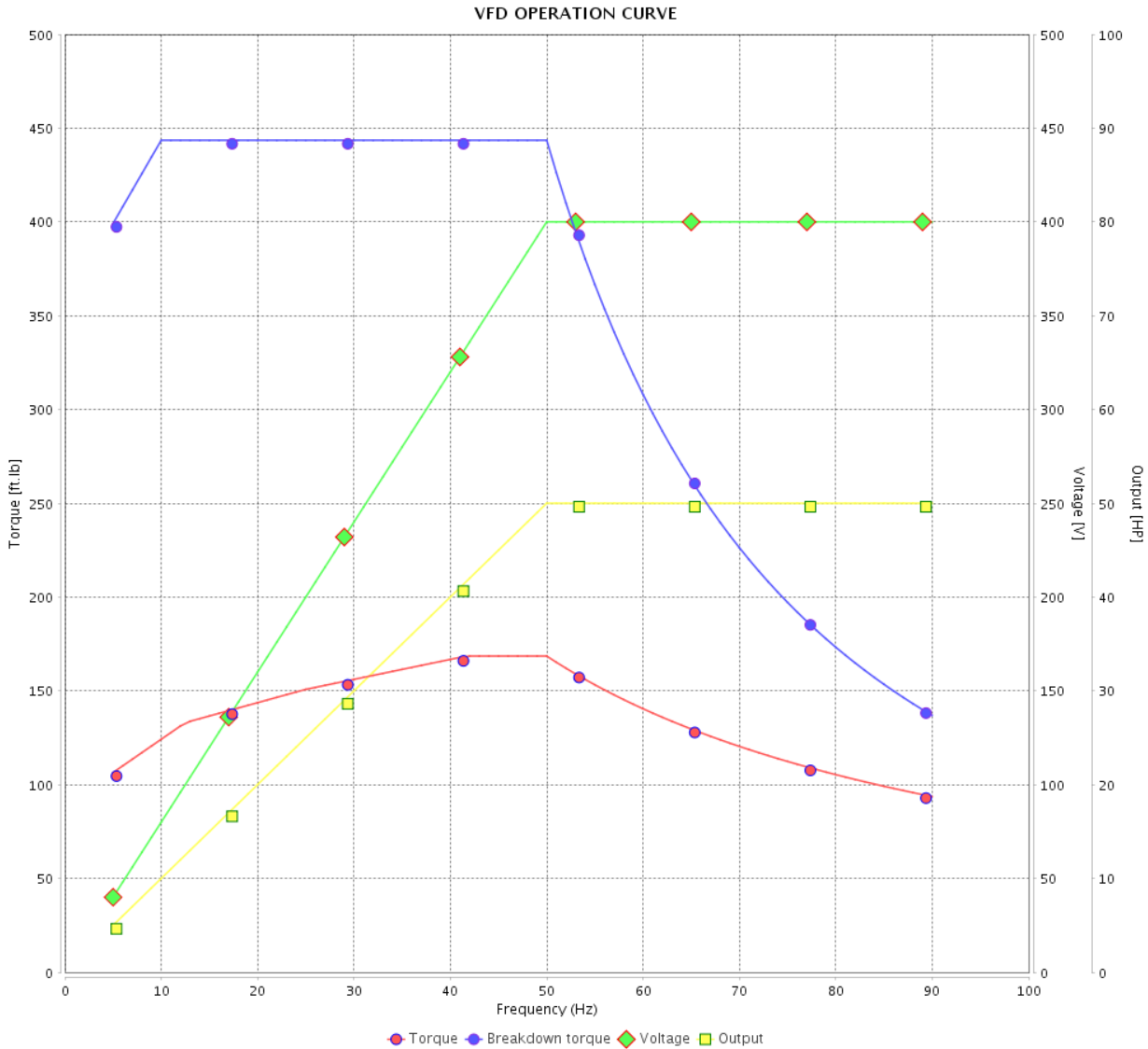


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40



Performance : 400 V 50 Hz 4P IE3

Rated current : 66.9 A  
 LRC : 7.2  
 Rated torque : 177 ft.lb  
 Locked rotor torque : 220 %  
 Breakdown torque : 250 %  
 Rated speed : 1480 rpm

Moment of inertia (J) : 15.6 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 20 / 21	Revision
Checked by				
Date	12/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

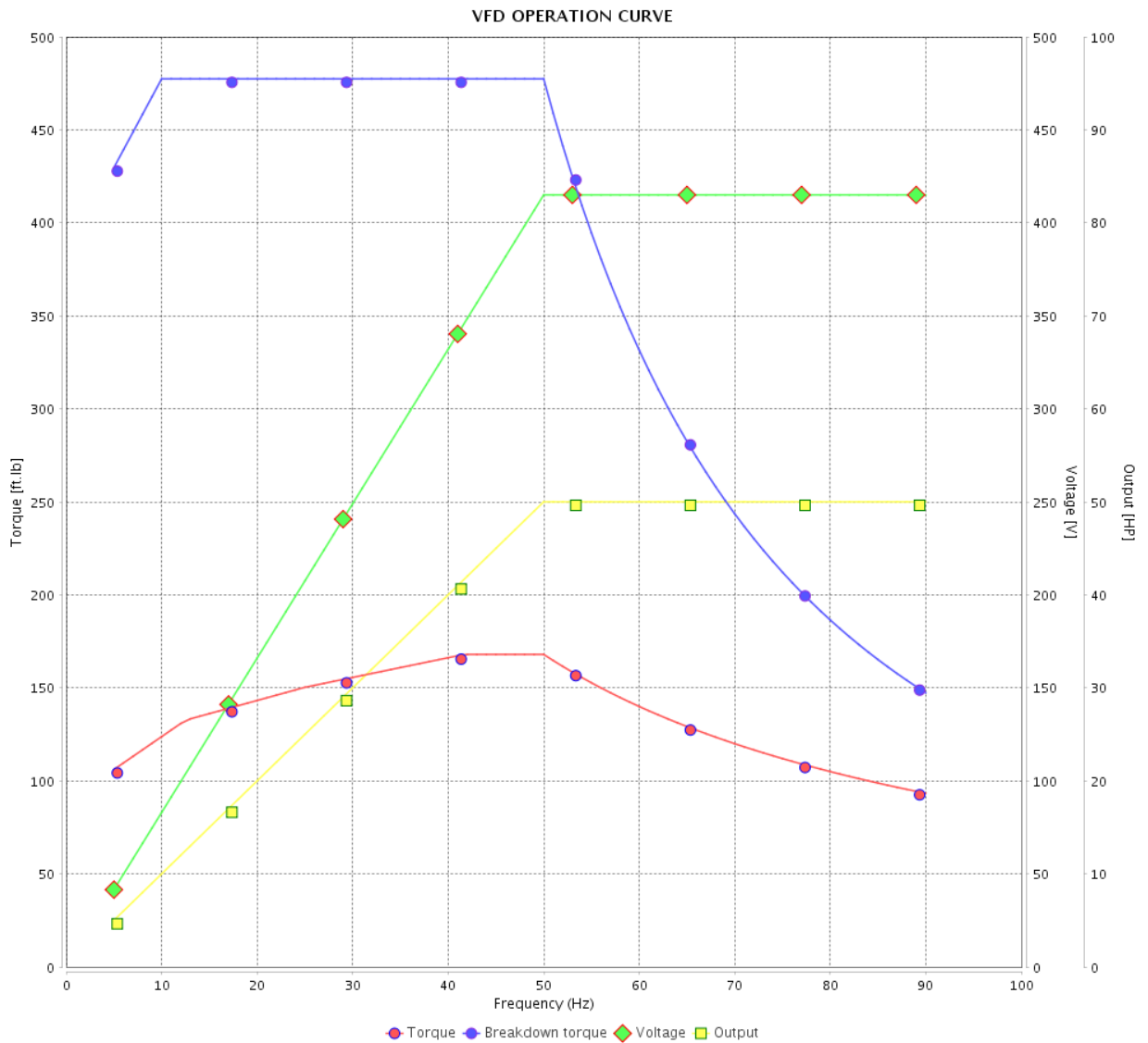


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272485

Catalog # : 06018OT3E364TC-W40

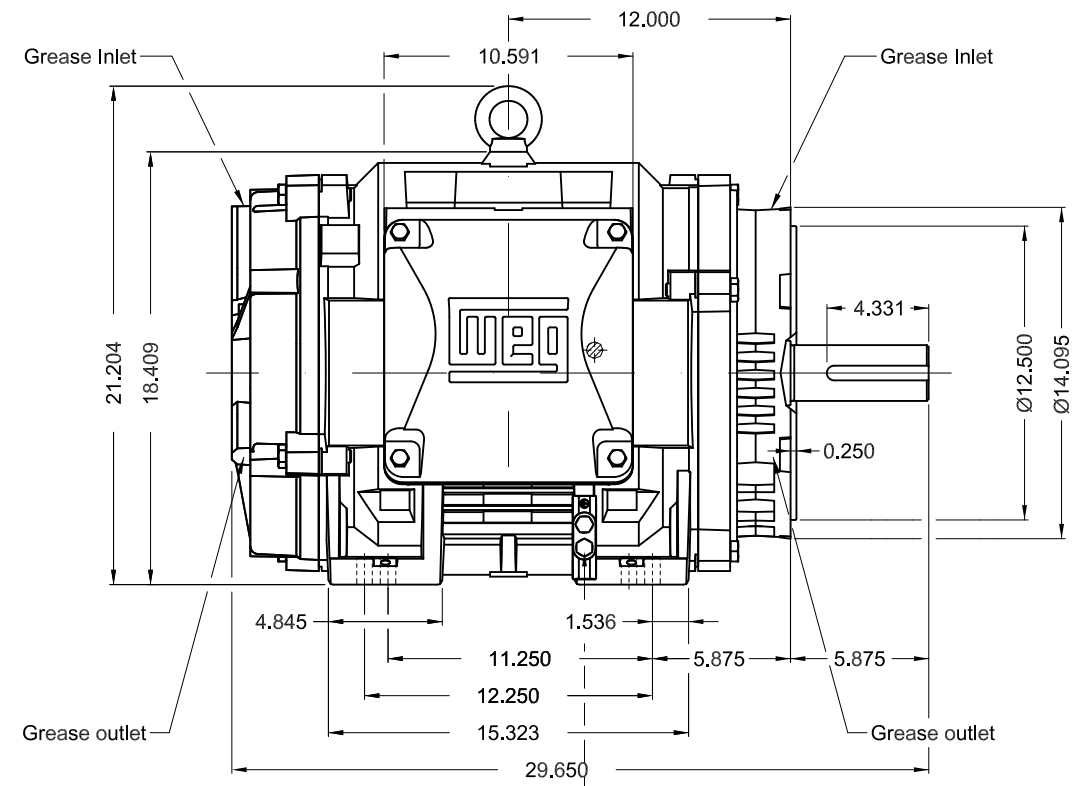
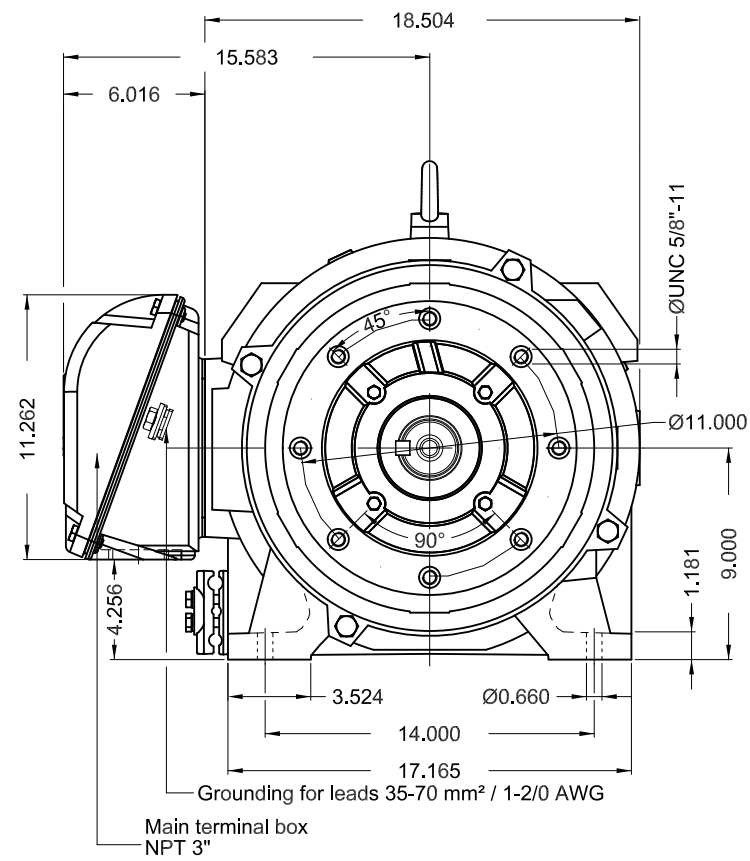


Performance : 415 V 50 Hz 4P IE3

Rated current : 65.3 A  
LRC : 7.0  
Rated torque : 177 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 270 %  
Rated speed : 1485 rpm

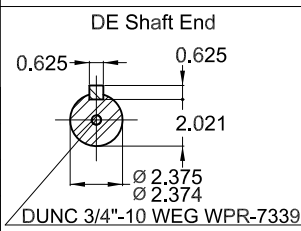
Moment of inertia (J) : 15.6 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		21 / 21		
Date	12/04/2022			



Grounding for leads 25-185 mm<sup>2</sup> / 3AWG-350MCM

Color RAL 5009  
 Painting plan 203A  
 Mounting NEMA F-1  
 Mounting B34R(D)



60 HP 04 Poles 60 Hz A

1:8

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR W40 PREM. EFF.					
CHECKED		FRAME 364/5TC IP23 ODP					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
**WDD**



**WEG** **W40 NEMA**  
**CC029A Premium**  
*Inverter Duty Motor*



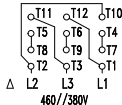
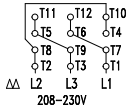
IEC 60034-1  
 MOD.T01#FOXON




For 60Hz use on PWM, VT 1000:1, CT 2:1, 1.0SF

MODEL 060180T3E364TC-W40  
 MADE IN BRAZIL  
 14272485

PH 3	FR 364/5TC	HP(kW) 60.0(45.0)	Hz 60
V 230/460	A 140/69.9	RPM 1780	DES B
NEMA NOM EFF 95.0 %	INS. CL. F ΔT 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.85	SF 1.25	SFA 175/87.4
USABLE @208V	155 A	SF 1.15	SFA 178
50HP 37kW 50Hz 380V 69.6A 1480RPM SF1.00 EFF 93.9% (IE3)	ALT 1000 m.a.s.l.		



-  → 6314-C3(27g)
- 6212-Z-C3(13g)

MOBIL POLYREX EM  
 20000 h