

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: W40 NEMA Premium Efficiency Three-Phase		Product code : 14272484	
				Catalog # : 05012OT3E365TC-W40	
Frame		: 364/5TC		Cooling method : IC01 - ODP	
Insulation class		: F		Mounting : F-1	
Duty cycle		: Cont.(S1)		Rotation ¹ : Both (CW and CCW)	
Ambient temperature		: -20°C to +40°C		Starting method : Direct On Line	
Altitude		: 1000 m.a.s.l.		Approx. weight ² : 802 lb	
Protection degree		: IP23		Moment of inertia (J) : 23.9 sq.ft.lb	
Design		: B			
Output [HP]	50	40	40	40	40
Poles	6	6	6	6	6
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	230/460	380	400	415	415
Rated current [A]	116/58.1	57.1	54.8	53.5	53.5
L. R. Amperes [A]	779/389	400	395	412	412
LRC [A]	6.7x(Code G)	7.0x(Code H)	7.2x(Code H)	7.7x(Code J)	7.7x(Code J)
No load current [A]	40.8/20.4	20.2	21.7	23.0	23.0
Rated speed [RPM]	1185	985	985	985	985
Slip [%]	1.25	1.50	1.50	1.50	1.50
Rated torque [ft.lb]	222	213	213	213	213
Locked rotor torque [%]	220	200	229	250	250
Breakdown torque [%]	240	240	270	290	290
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	27s (cold) 15s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level ²	68.0 dB(A)				
Efficiency (%)	25%	93.5	92.4	92.4	92.4
	50%	93.6	92.5	92.5	92.5
	75%	94.1	92.9	92.9	92.9
	100%	94.1	92.9	92.9	92.9
Power Factor	25%	0.48	0.48	0.44	0.42
	50%	0.74	0.74	0.70	0.68
	75%	0.82	0.83	0.80	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 : 1718 lb		
	: Bearing Seal	: Bearing Seal	Max. compression : 2520 lb		
Lubrication interval	: 20000 h	: 20000 h			
Lubricant amount	: 27 g	: 13 g			
Lubricant type	: Mobil Polyrex EM				
Notes					
USABLE @208V 128A SF 1.15 SFA 148A					
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.		
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



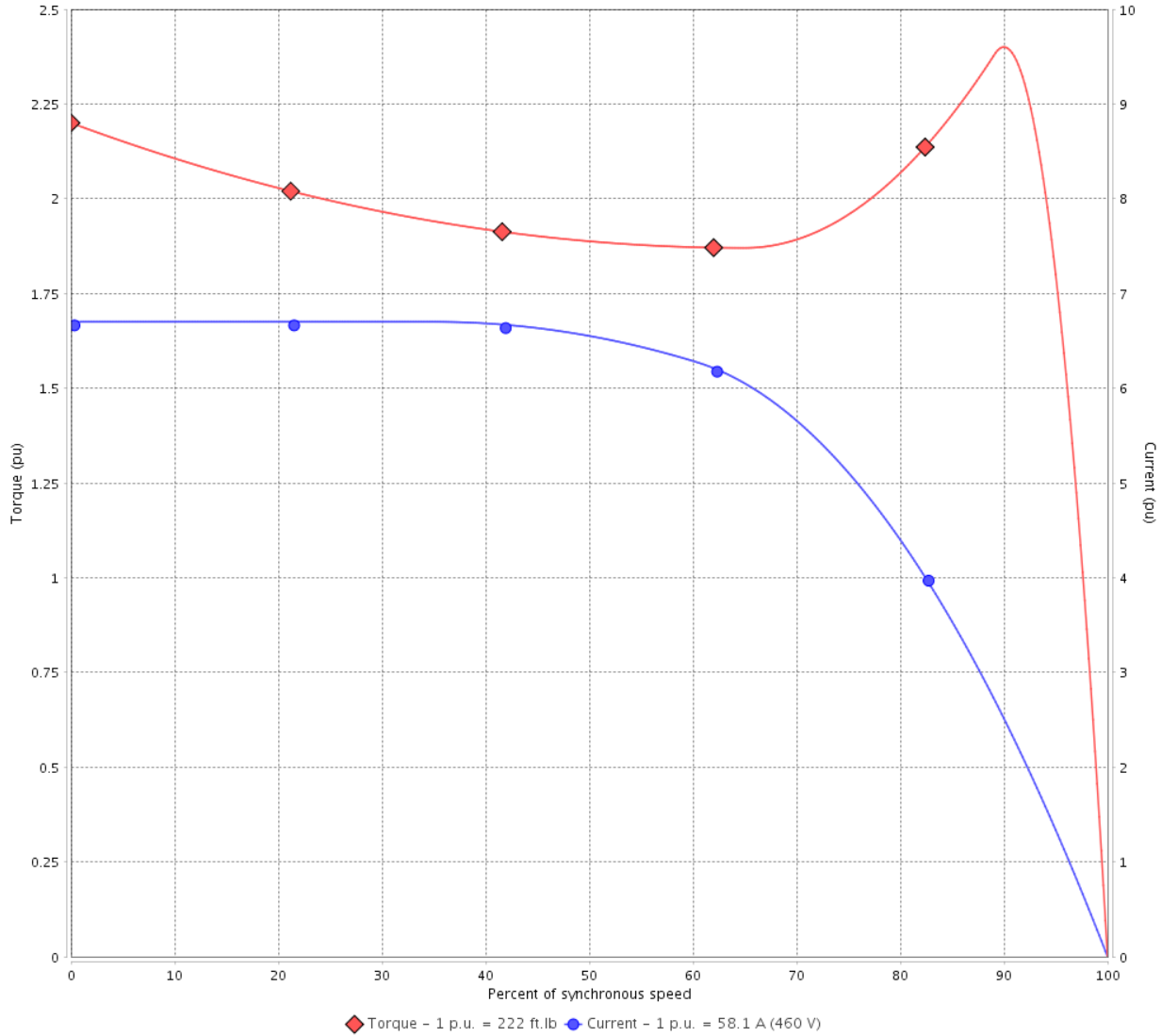
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 050120T3E365TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 6P

Rated current	: 116/58.1 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 6.7	Duty cycle	: Cont.(S1)
Rated torque	: 222 ft.lb	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.25
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: B

Locked rotor time : 27s (cold) 15s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



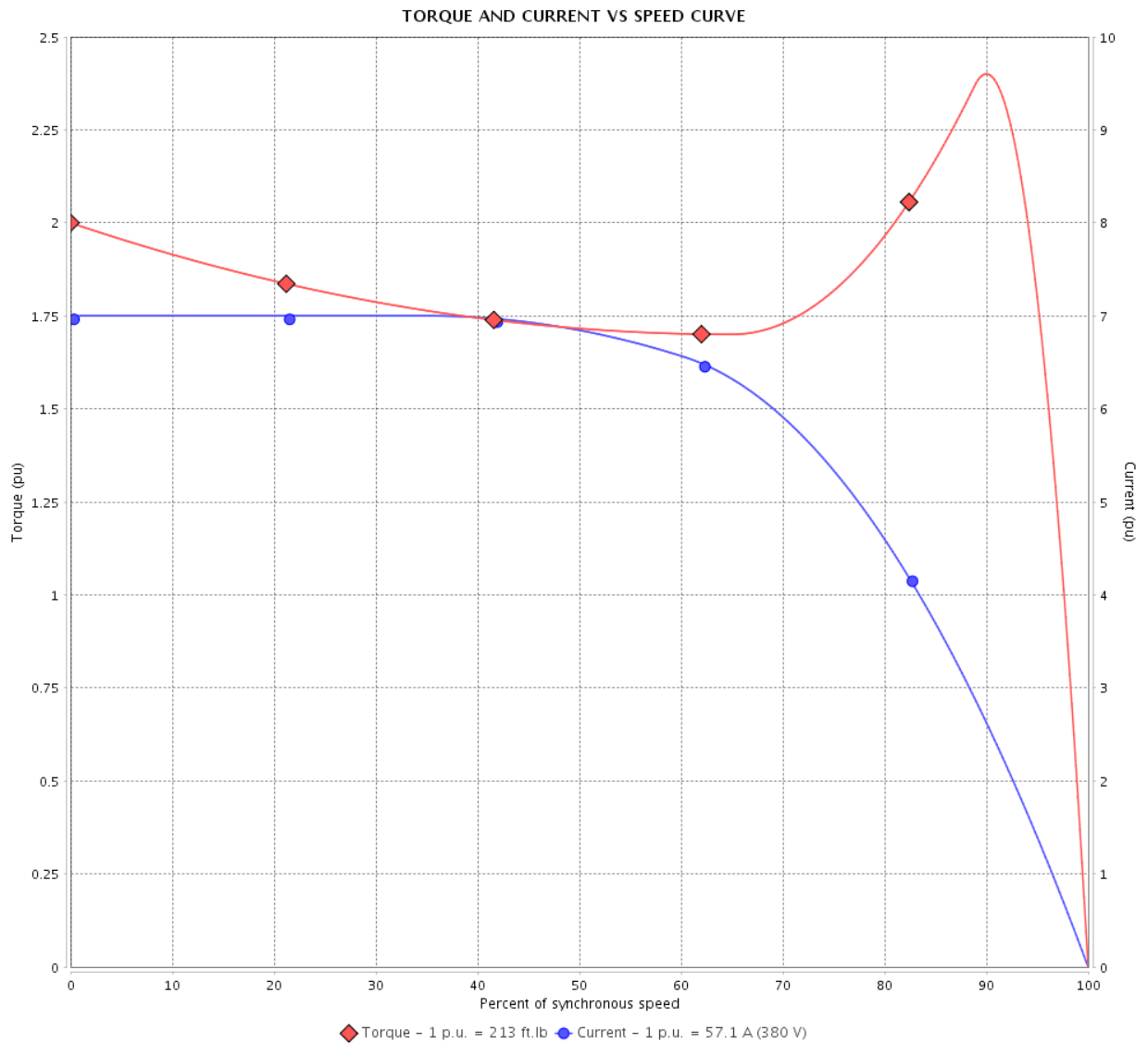
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current	: 57.1 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



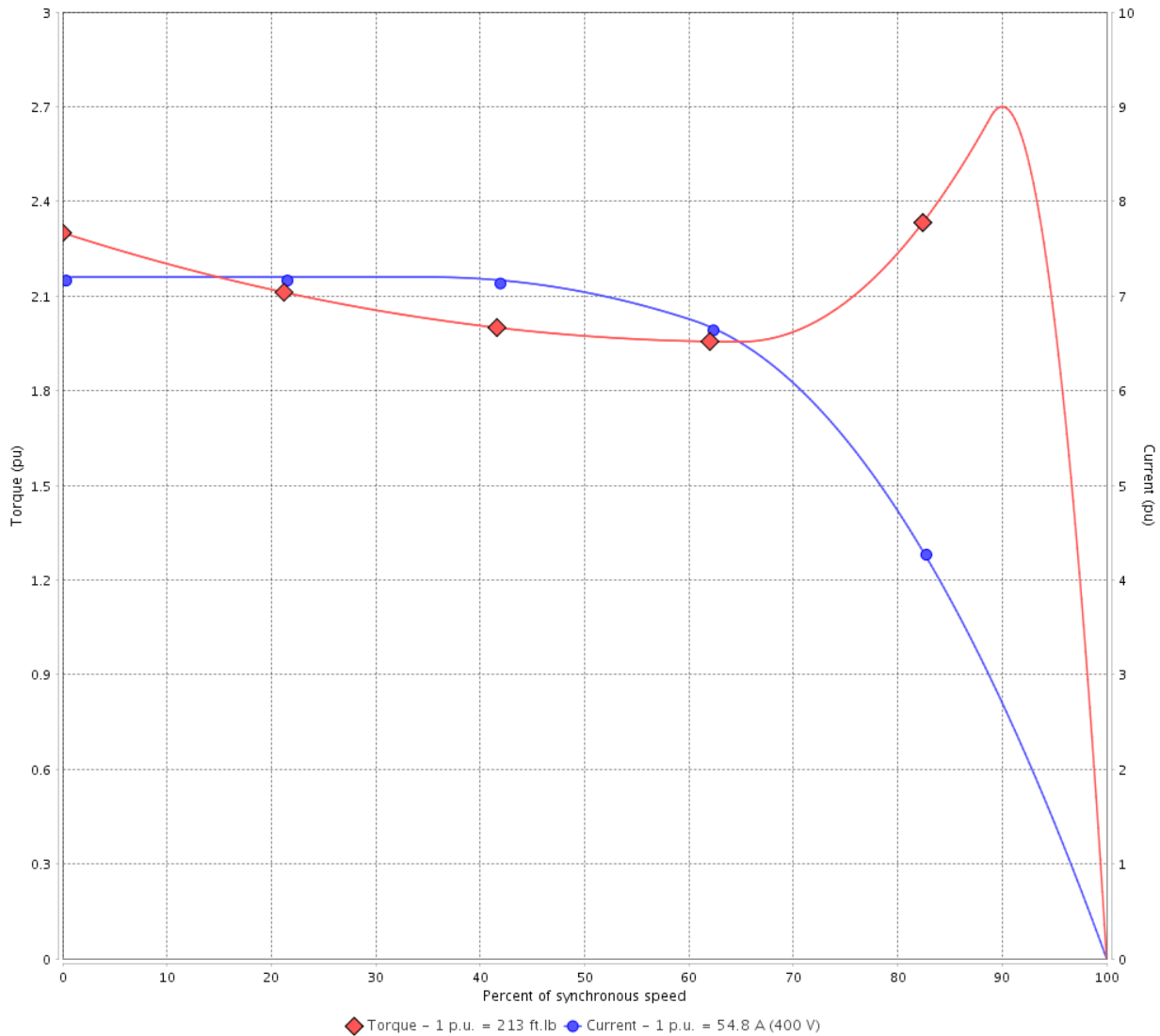
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40

TORQUE AND CURRENT VS SPEED CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current	: 54.8 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



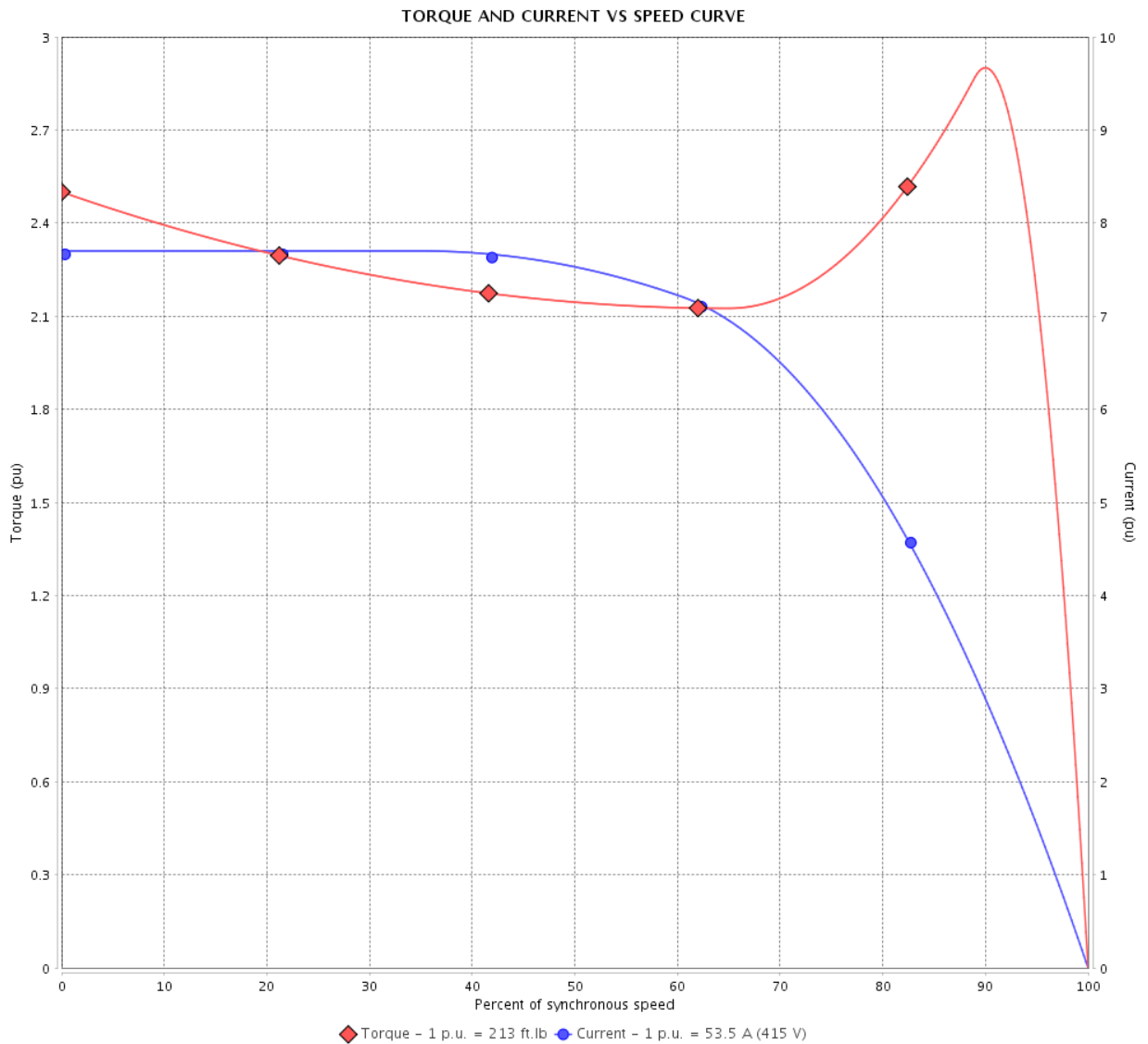
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current	: 53.5 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.7	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Locked rotor time : 25s (cold) 14s (hot)

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LOAD PERFORMANCE CURVE

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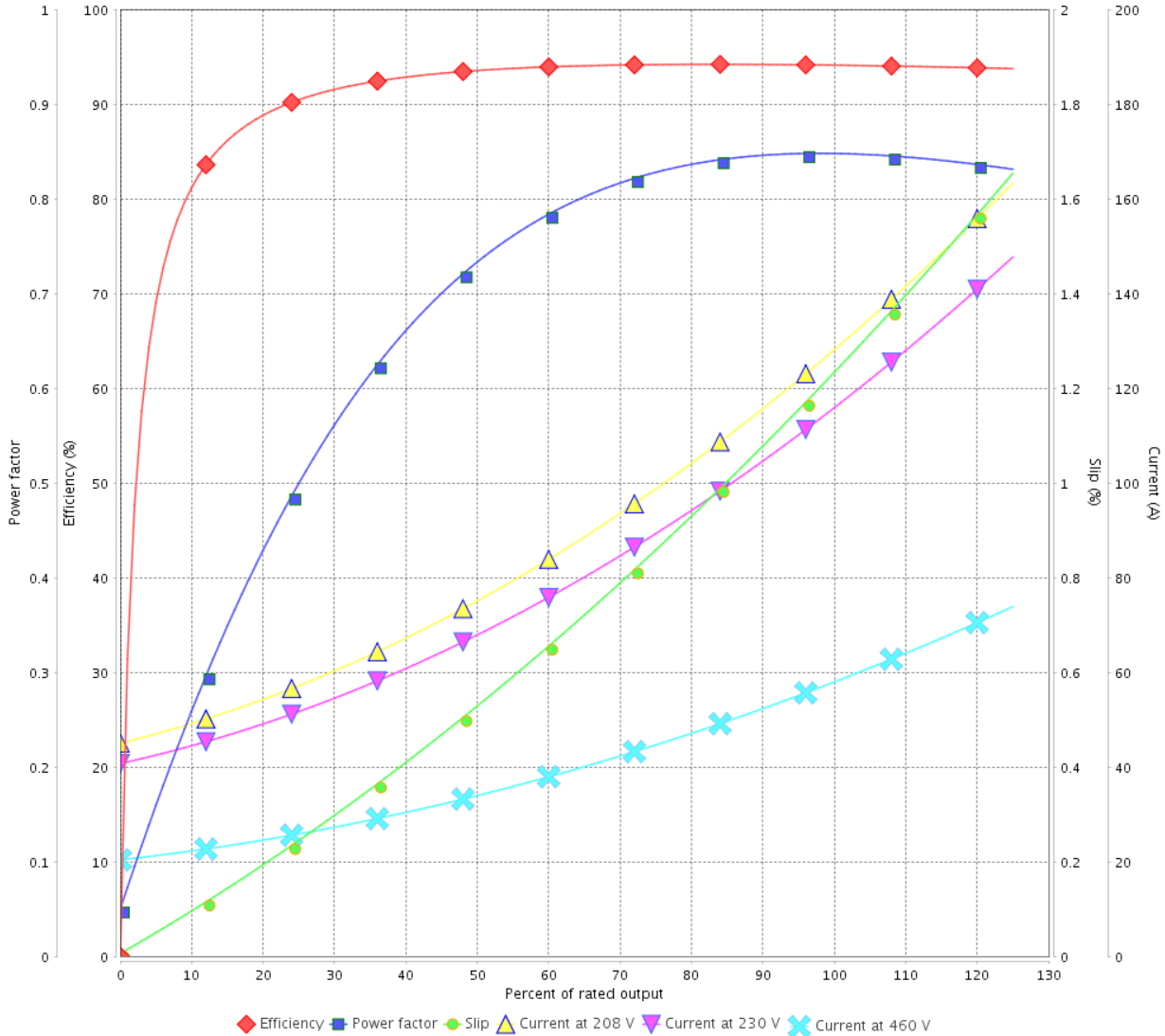
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 050120T3E365TC-W40

LOAD PERFORMANCE CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A
LRC : 6.7
Rated torque : 222 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 240 %
Rated speed : 1185 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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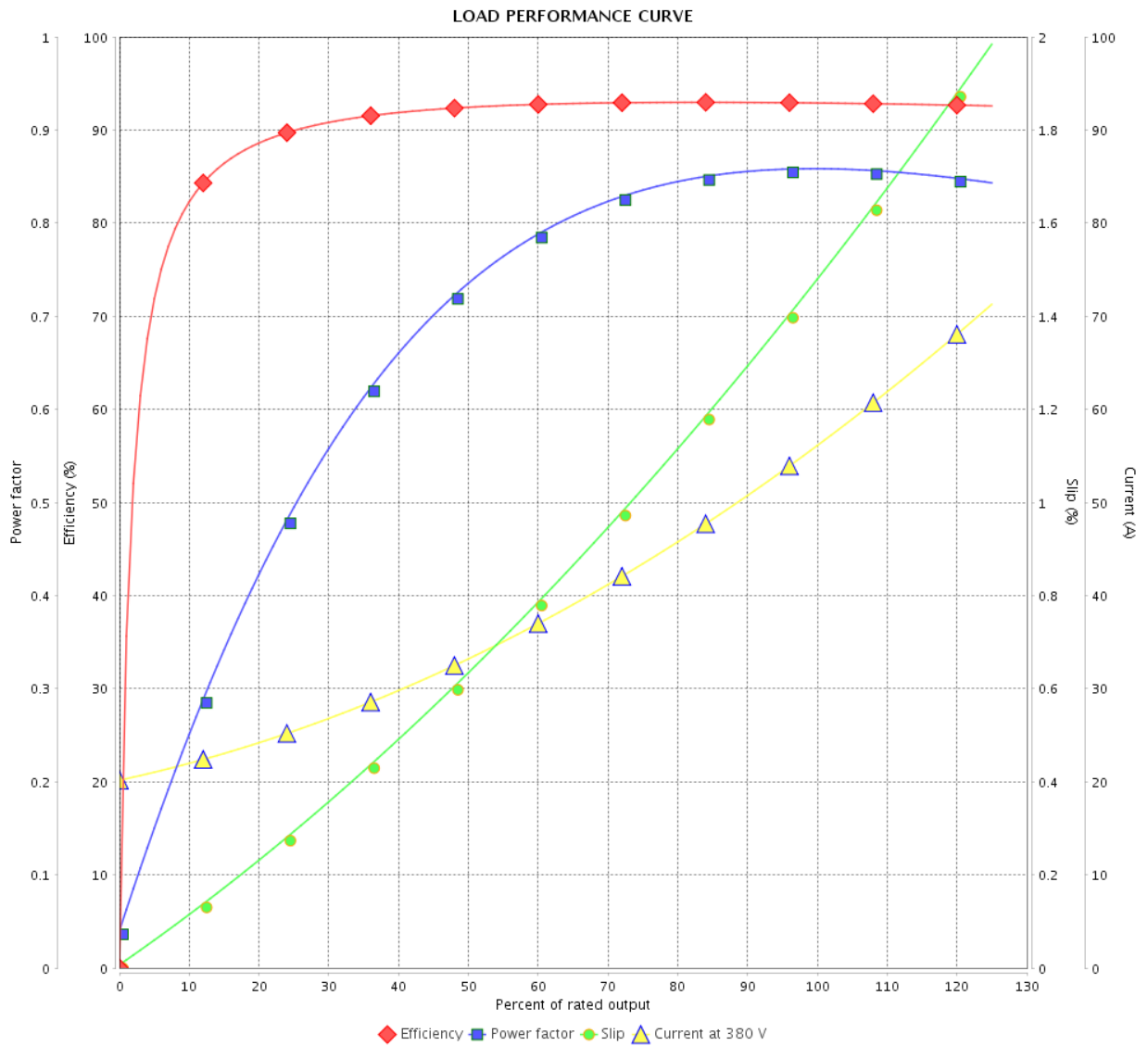


Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 57.1 A
 LRC : 7.0
 Rated torque : 213 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage



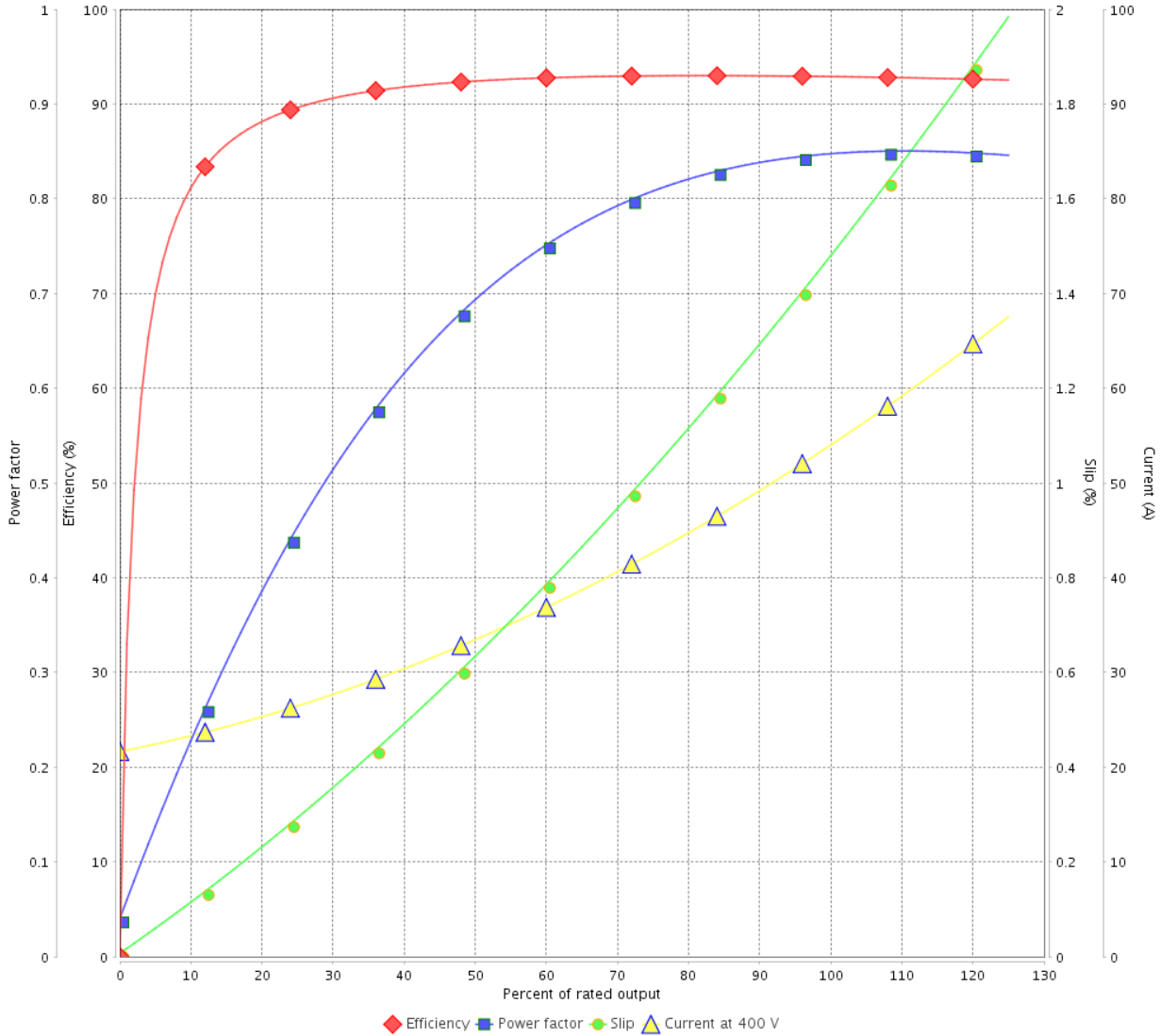
Customer :

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Three-Phase

Product code : 14272484

Catalog # : 050120T3E365TC-W40

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 54.8 A
 LRC : 7.2
 Rated torque : 213 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 270 %
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

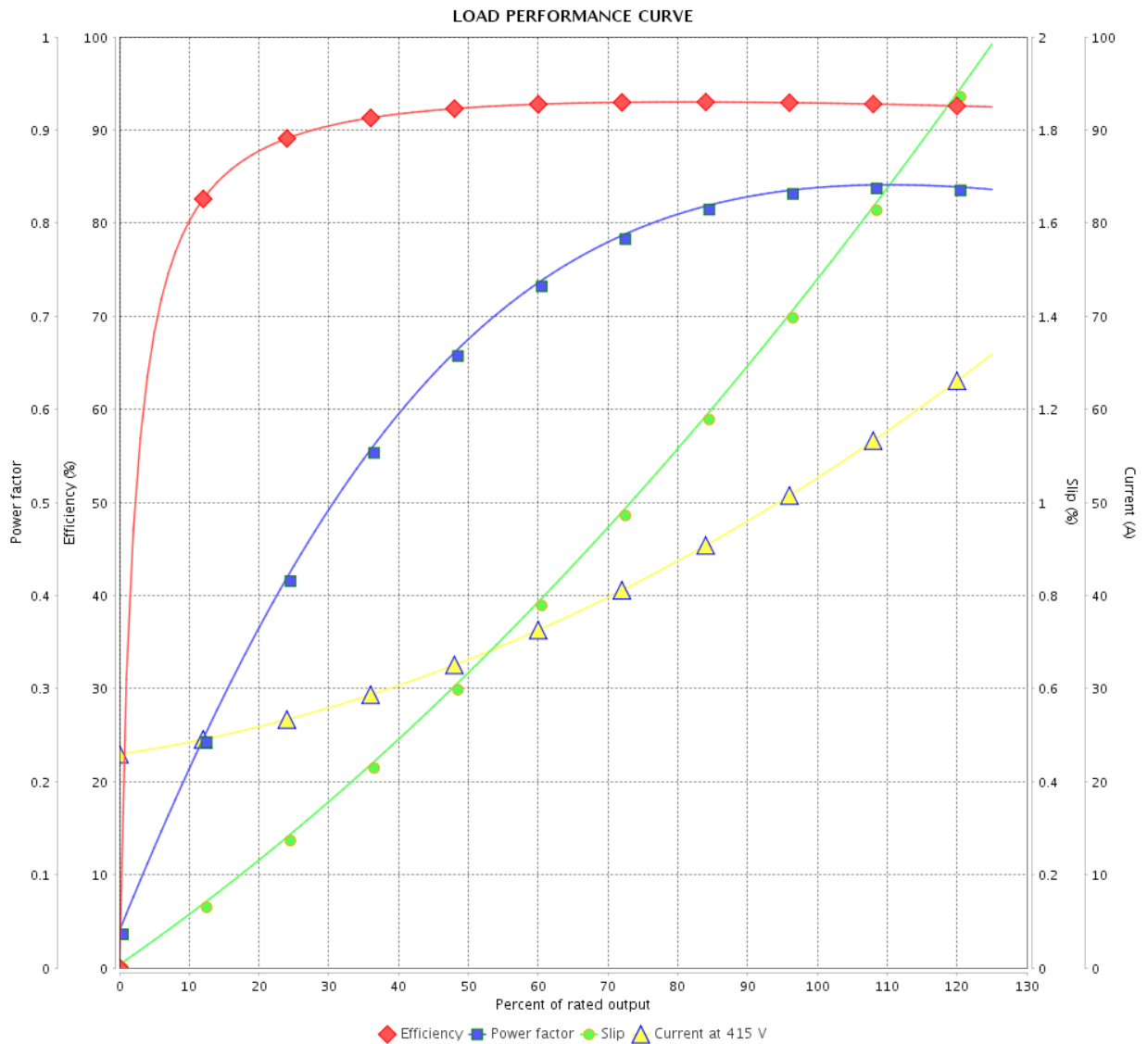


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40



Performance : 415 V 50 Hz 6P IE3

Rated current : 53.5 A
 LRC : 7.7
 Rated torque : 213 ft.lb
 Locked rotor torque : 250 %
 Breakdown torque : 290 %
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Heating constant

Cooling constant

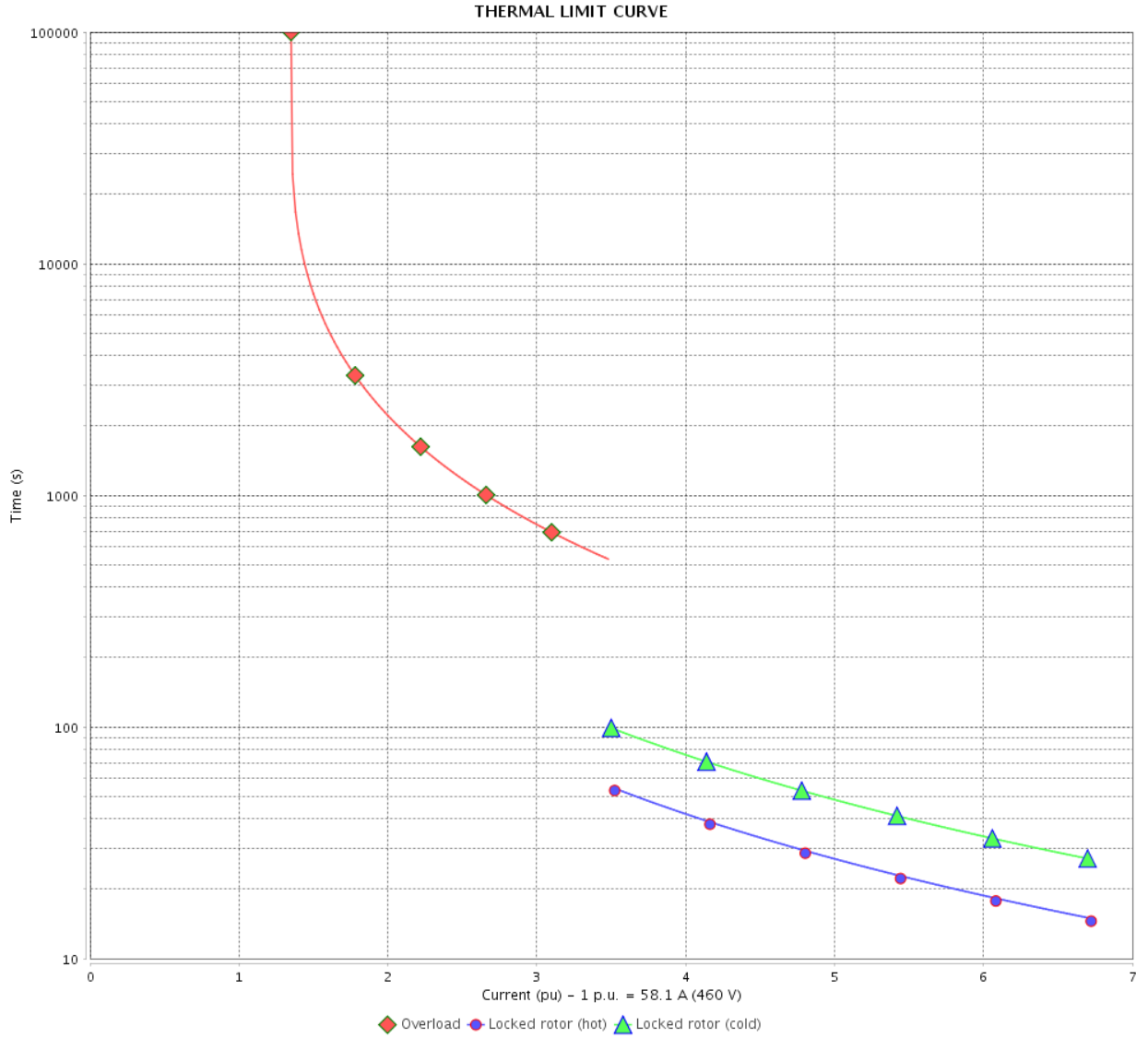
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



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LRC : 7.0	Duty cycle : Cont.(S1)
Rated torque : 213 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 985 rpm	Design : B

Heating constant

Cooling constant

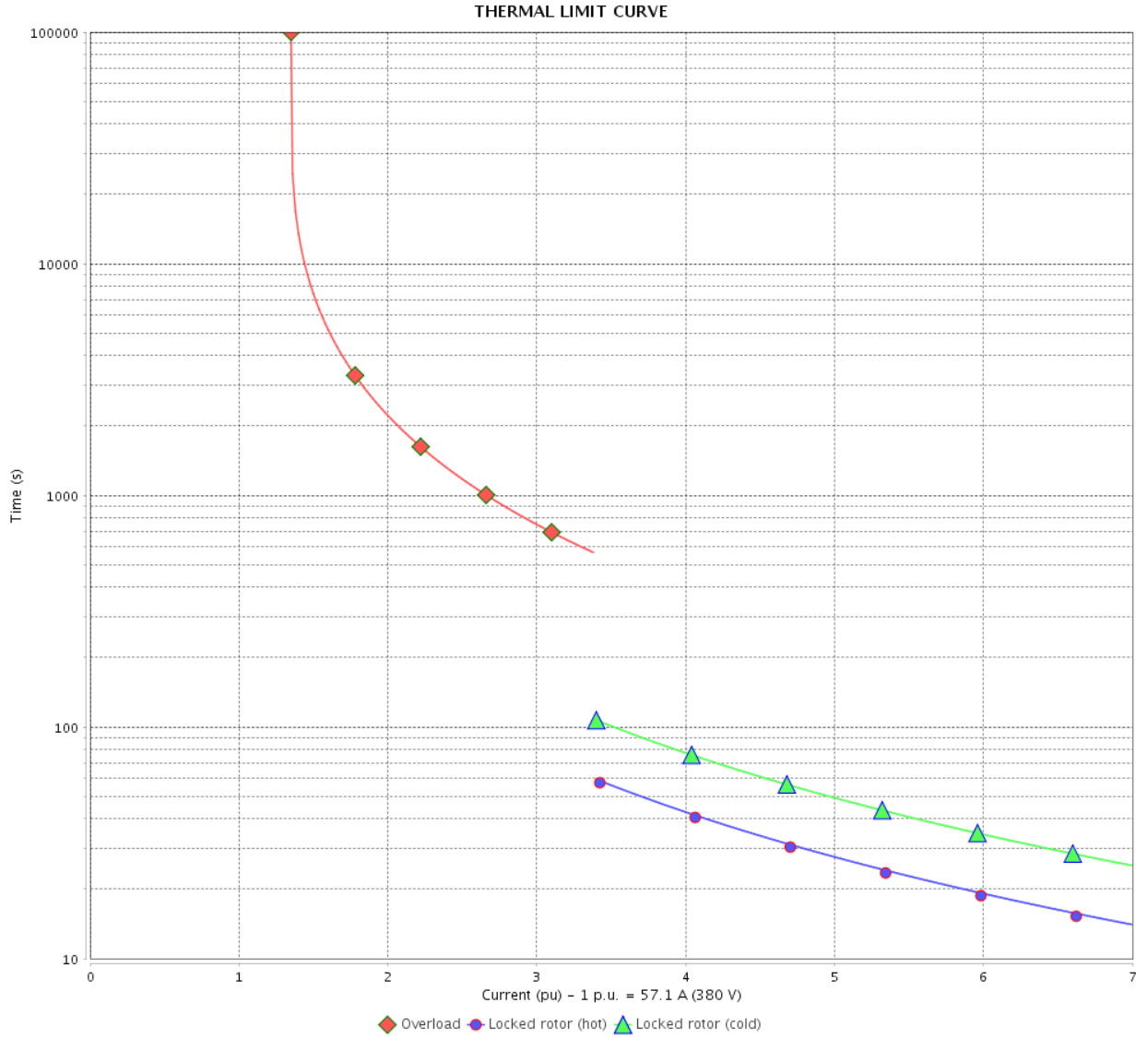
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Performance : 400 V 50 Hz 6P IE3

Rated current	: 54.8 A	Moment of inertia (J)	: 23.9 sq.ft.lb
LRC	: 7.2	Duty cycle	: Cont.(S1)
Rated torque	: 213 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 985 rpm	Design	: B

Heating constant

Cooling constant

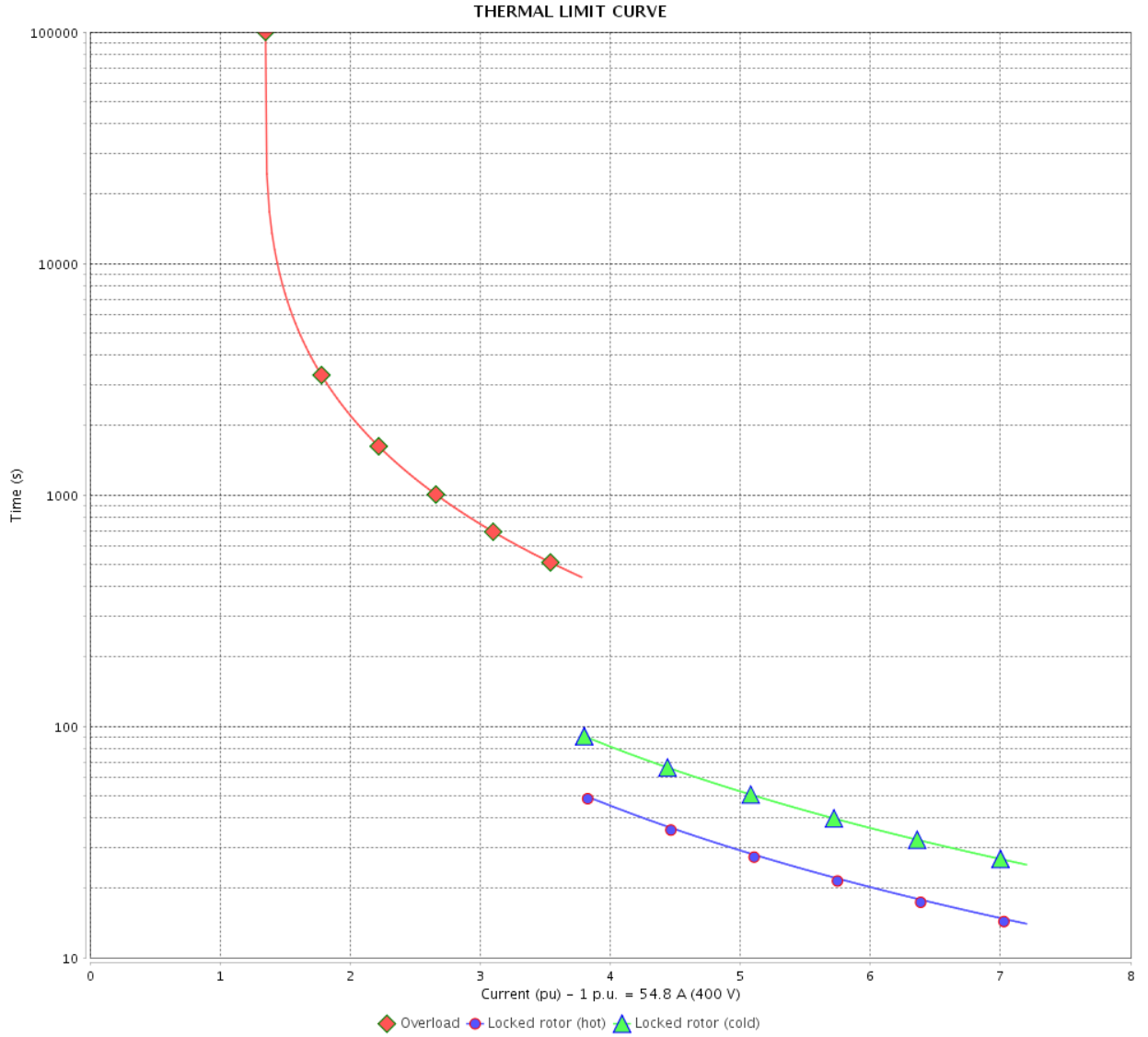
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Three Phase Induction Motor - Squirrel Cage



Customer : _____



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Date				

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40

Performance : 415 V 50 Hz 6P IE3

Rated current : 53.5 A	Moment of inertia (J) : 23.9 sq.ft.lb
LRC : 7.7	Duty cycle : Cont.(S1)
Rated torque : 213 ft.lb	Insulation class : F
Locked rotor torque : 250 %	Service factor : 1.00
Breakdown torque : 290 %	Temperature rise : 80 K
Rated speed : 985 rpm	Design : B

Heating constant

Cooling constant

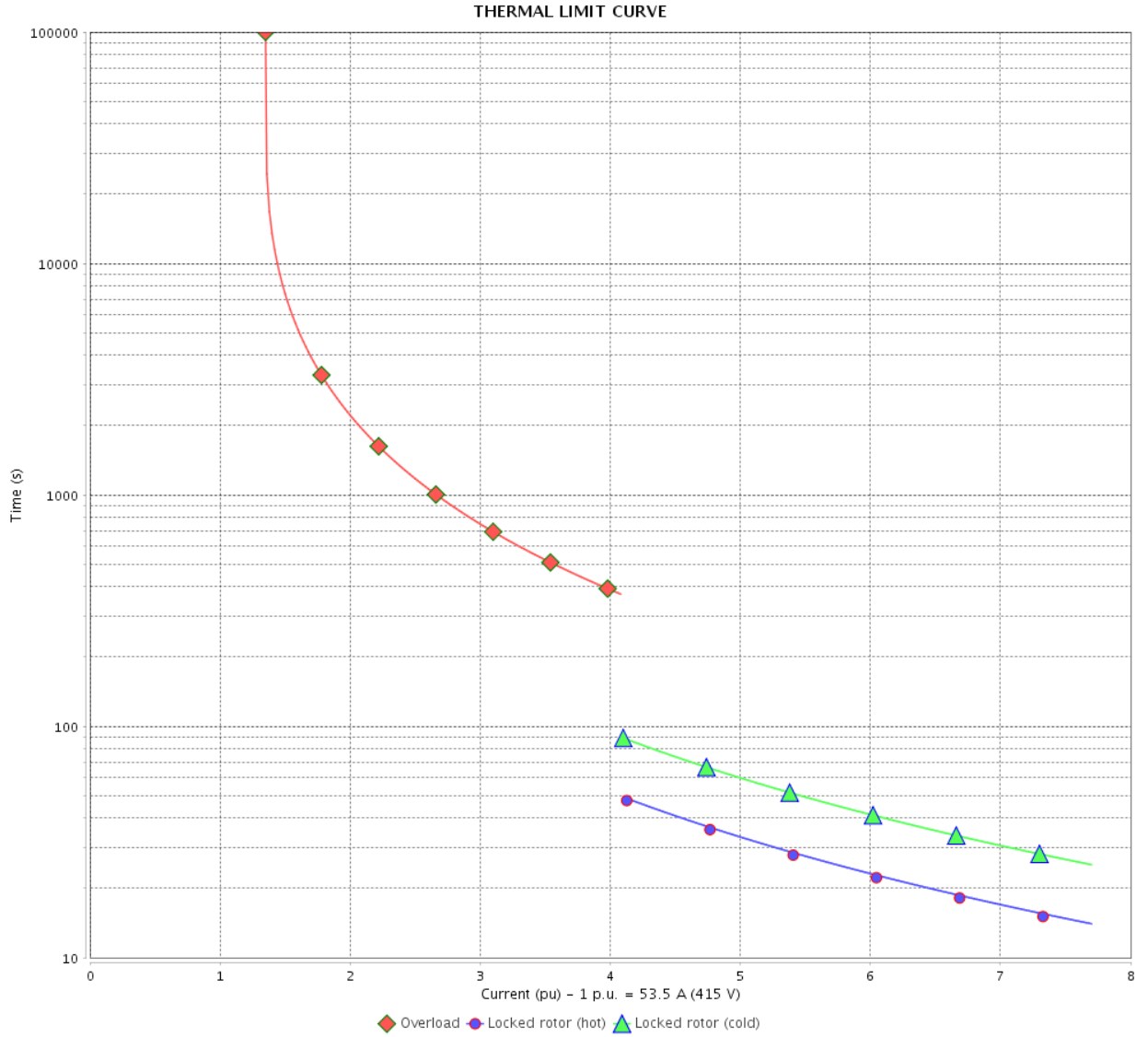
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Date				

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



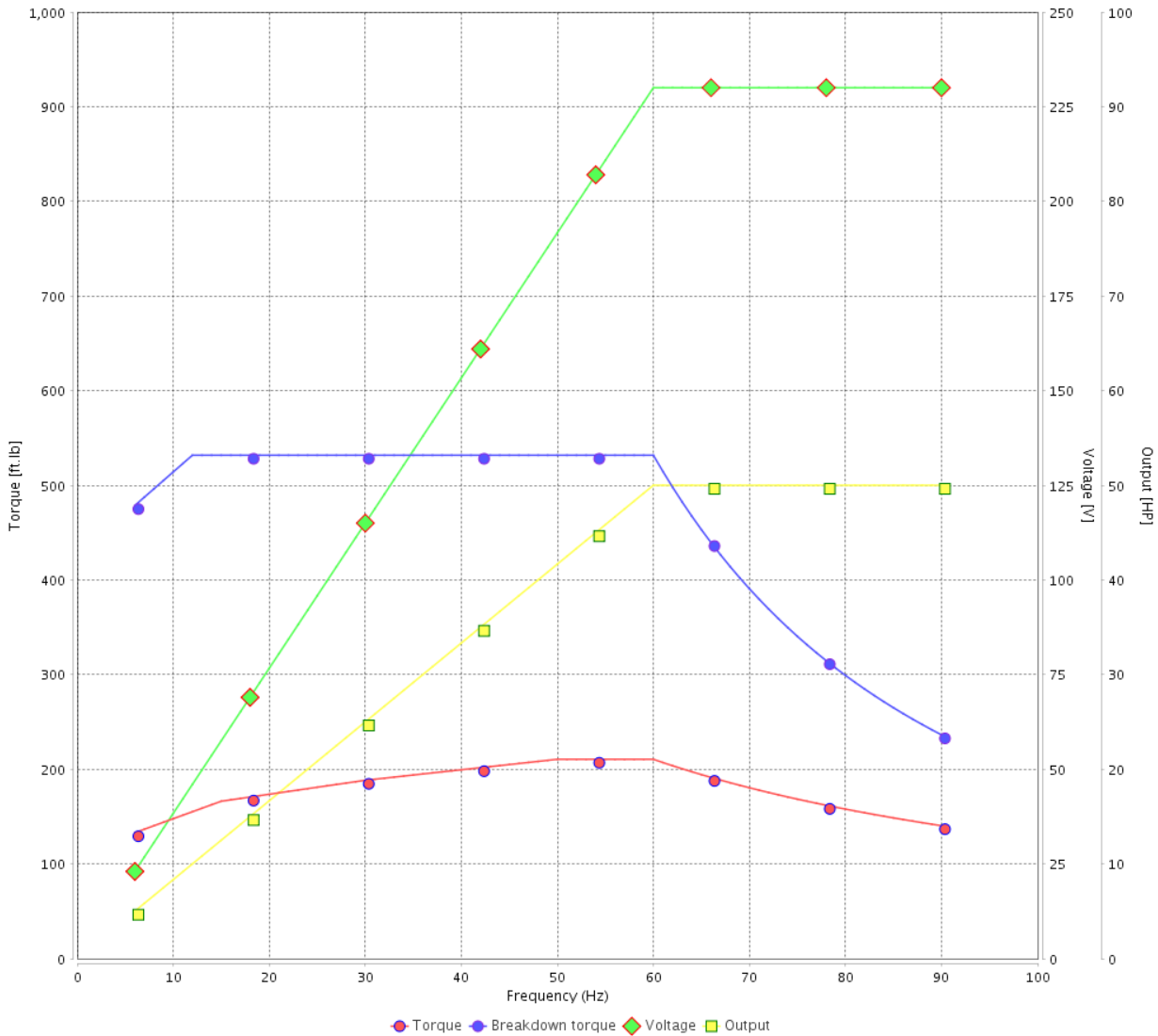
Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14272484

Catalog # : 050120T3E365TC-W40

VFD OPERATION CURVE



Performance : 230/460 V 60 Hz 6P

Rated current : 116/58.1 A
LRC : 6.7
Rated torque : 222 ft.lb
Locked rotor torque : 220 %
Breakdown torque : 240 %
Rated speed : 1185 rpm

Moment of inertia (J) : 23.9 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
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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

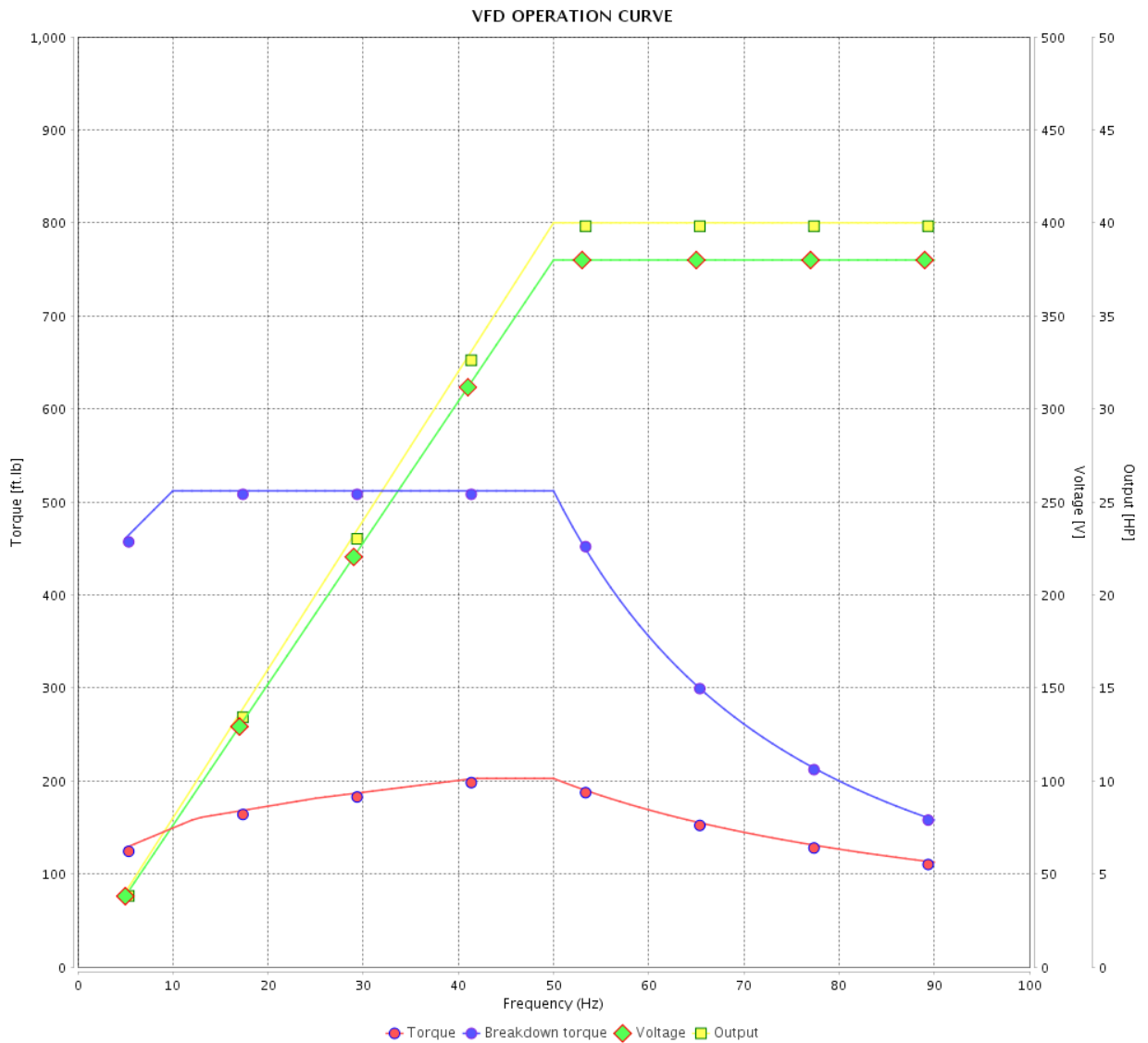


Customer :

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Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40



Performance : 380 V 50 Hz 6P IE3

Rated current : 57.1 A
 LRC : 7.0
 Rated torque : 213 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 240 %
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



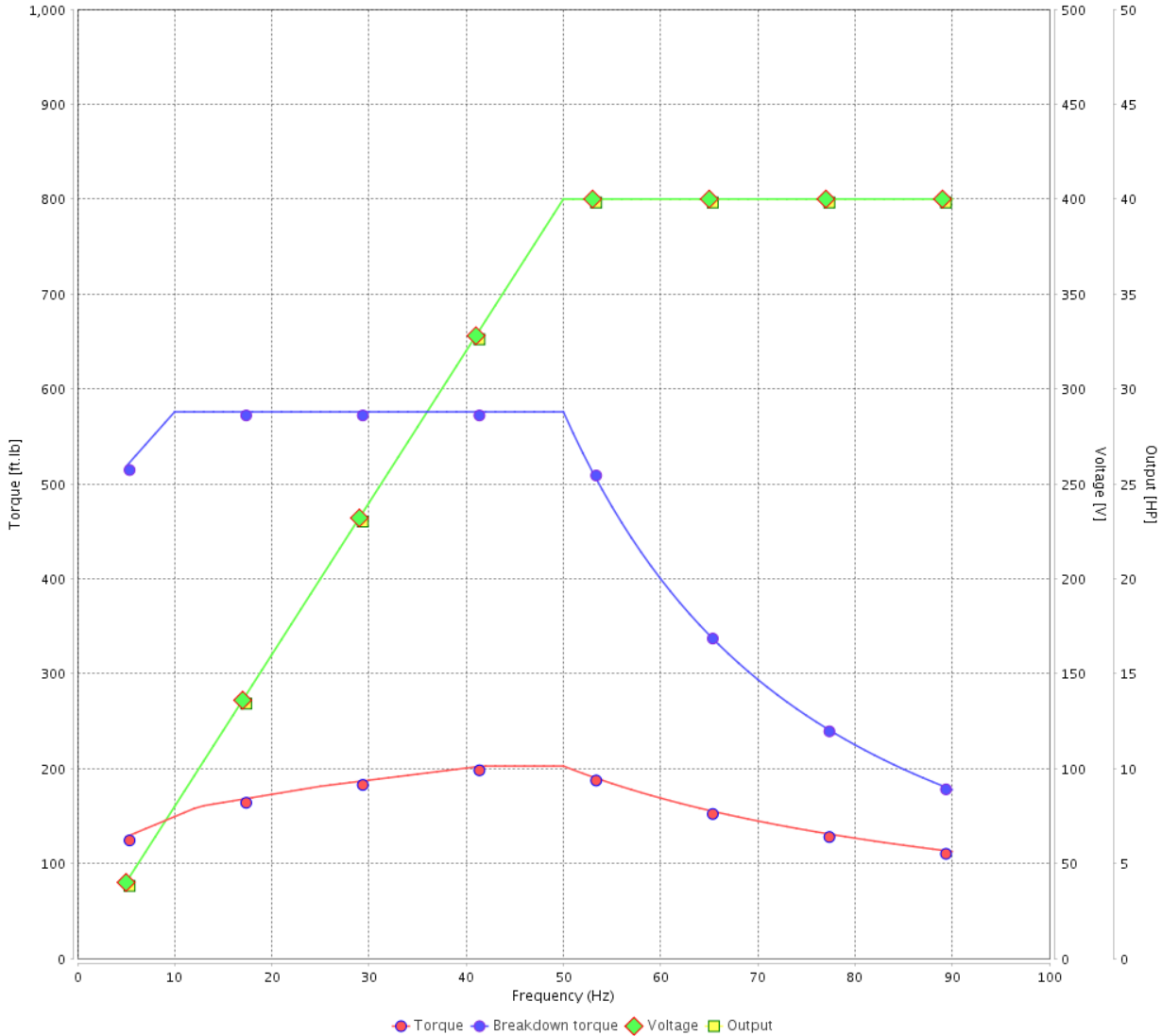
Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase

Product code : 14272484

Catalog # : 05012OT3E365TC-W40

VFD OPERATION CURVE



Performance : 400 V 50 Hz 6P IE3

Rated current : 54.8 A
 LRC : 7.2
 Rated torque : 213 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 270 %
 Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Date	12/04/2022			

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

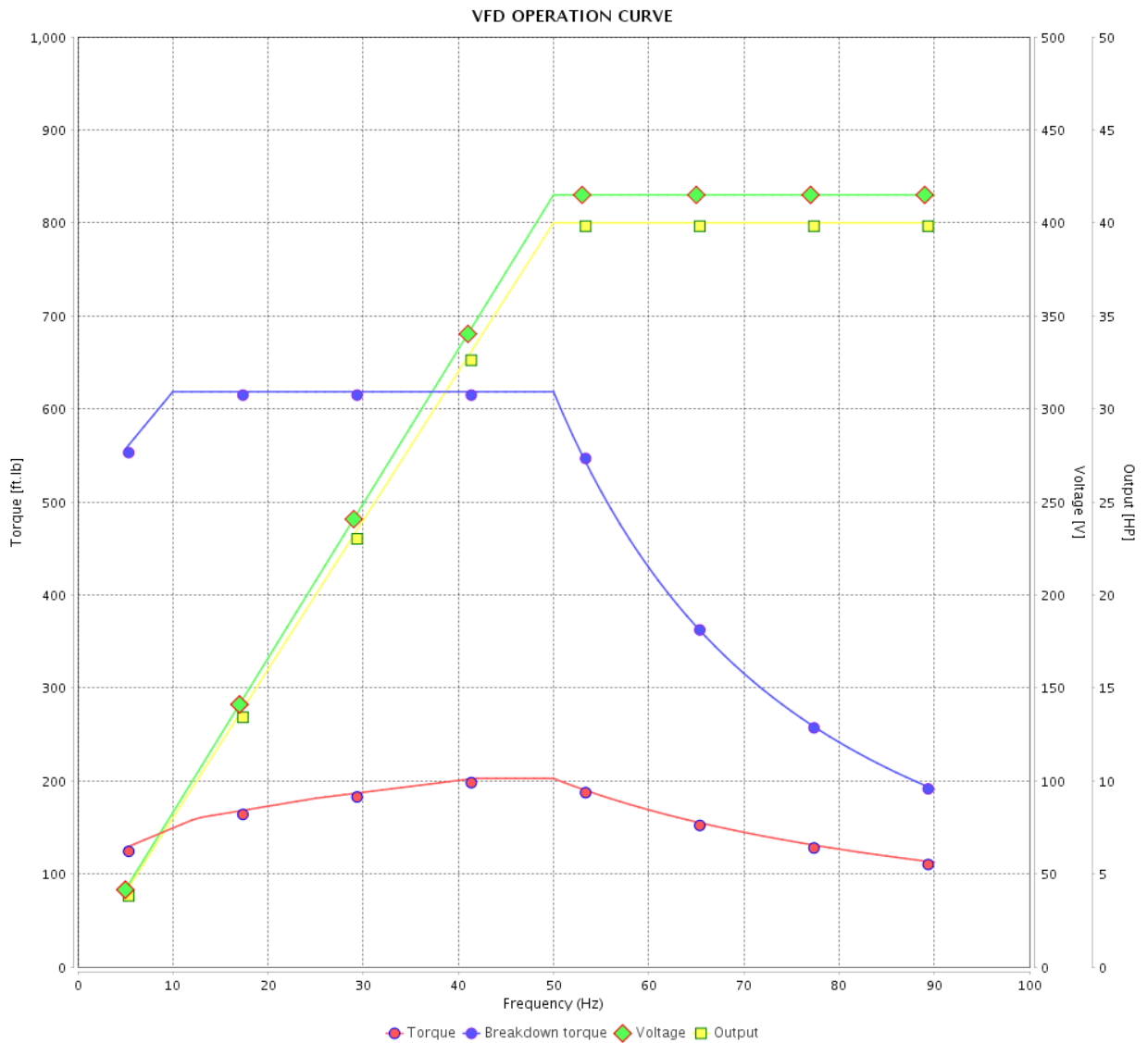


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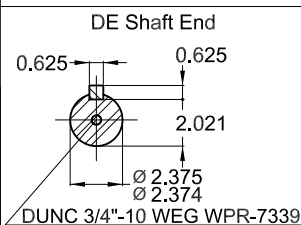
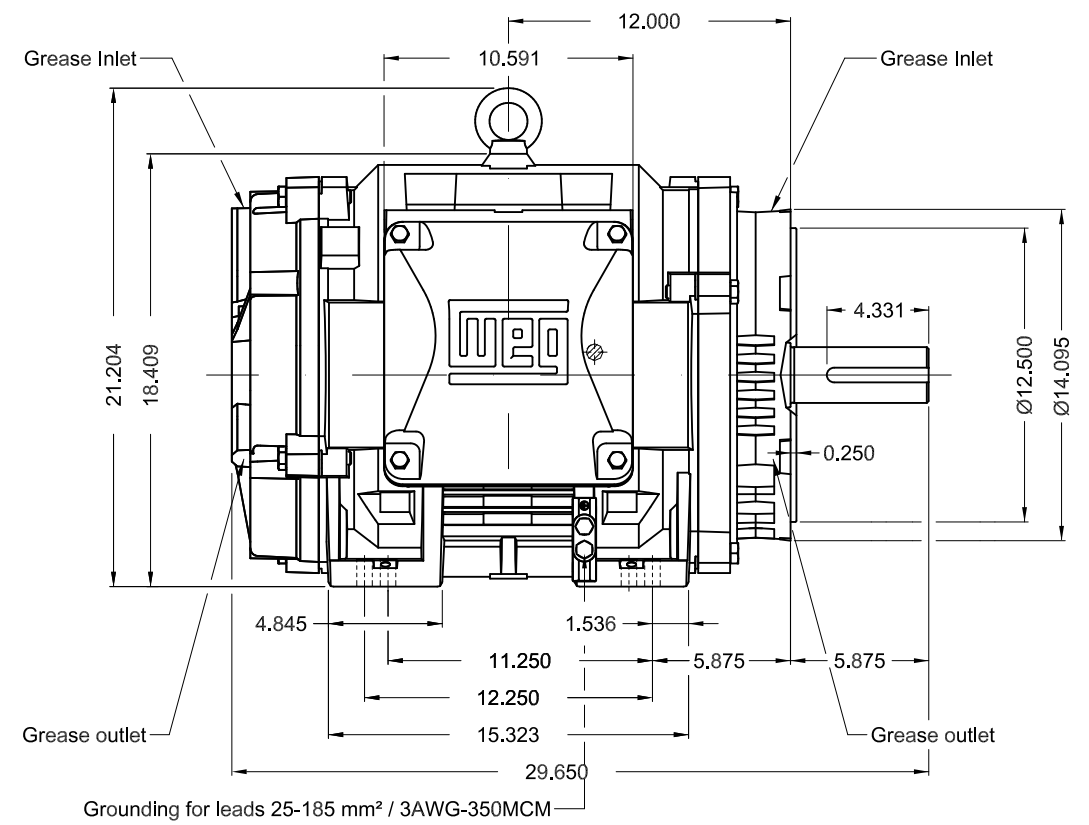
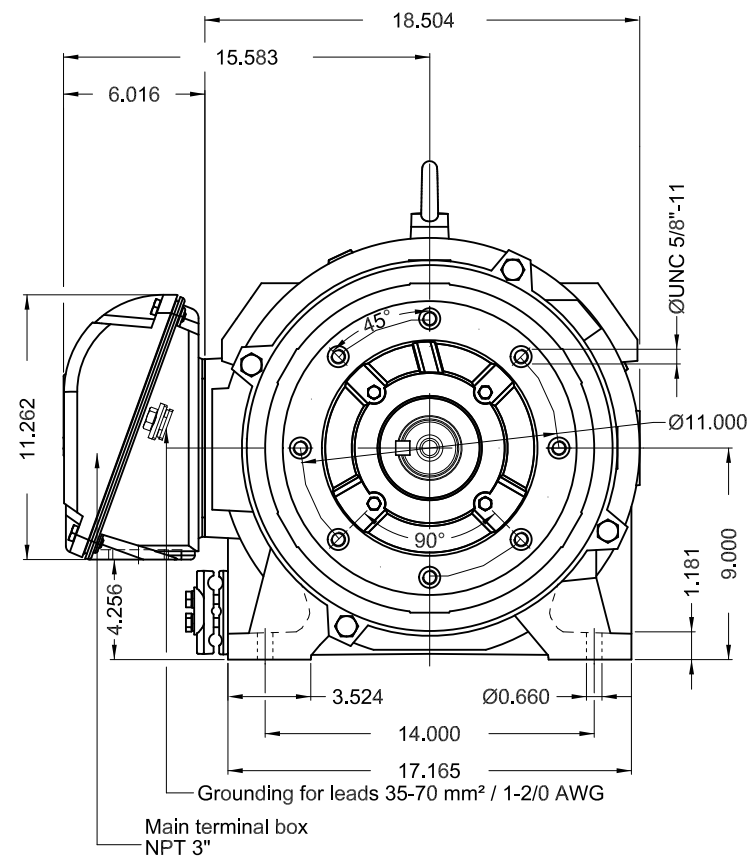


Performance : 415 V 50 Hz 6P IE3

Rated current : 53.5 A
LRC : 7.7
Rated torque : 213 ft.lb
Locked rotor torque : 250 %
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Rated speed : 985 rpm

Moment of inertia (J) : 23.9 sq.ft.lb
Duty cycle : Cont.(S1)
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Service factor : 1.00
Temperature rise : 80 K
Design : B

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

50 HP 06 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



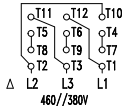
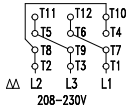
IEC 60034-1
 MOD.T01#FOXON




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

MODEL 050120T3E365TC-W40
 MADE IN BRAZIL
 14272484

PH 3	FR 364/5TC	HP(kW) 50.0(37.0)	Hz 60
V 230/460	A 116/58.1	RPM 1185	DES B
NEMA NOM EFF 94.1 %	INS. CL. F ΔT 80 K	IP23	
ENCL ODP	DUTY CONT.	AMB. 40°C	
CODE G	PF 0.85	SF 1.25	SFA 145/72.6
USABLE @208V	128 A	SF 1.15	SFA 147
40HP 30kW 50Hz 380V 57.1A 985RPM SF1.00 EFF 92.9% (IE3)	ALT 1000 m.a.s.l.		



-  → 6314-C3(27g)
- 6212-Z-C3(13g)

MOBIL POLYREX EM
 20000 h