

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase Product code : 14272905  
Catalog # : 07512OT3E405T-W40G

Frame	: 404/5T	Locked rotor time	: 19s (cold) 11s (hot)
Output	: 75 HP (55 kW)	Temperature rise	: 80 K
Poles	: 6	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 230/460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 172/85.9 A	Protection degree	: IP23
L. R. Amperes	: 1151/576 A	Cooling method	: IC01 - ODP
LRC	: 6.7x(Code G)	Mounting	: F-1
No load current	: 60.0/30.0 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 1185 rpm	Noise level <sup>2</sup>	: 68.0 dB(A)
Slip	: 1.25 %	Starting method	: Direct On Line
Rated torque	: 332 ft.lb	Approx. weight <sup>3</sup>	: 1008 lb
Locked rotor torque	: 240 %		
Breakdown torque	: 270 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 31.6 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	94.0	94.1	94.5	94.5	Max. traction	: 2374 lb
Power Factor	0.47	0.72	0.81	0.85	Max. compression	: 3382 lb

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6316 C3	6212 Z C3
Sealing	:	Without Bearing Seal	Without Bearing Seal
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	34 g	13 g
Lubricant type	:	Mobil Polyrex EM	

Notes  
USABLE @208V 190A SF 1.15 SFA 218A

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

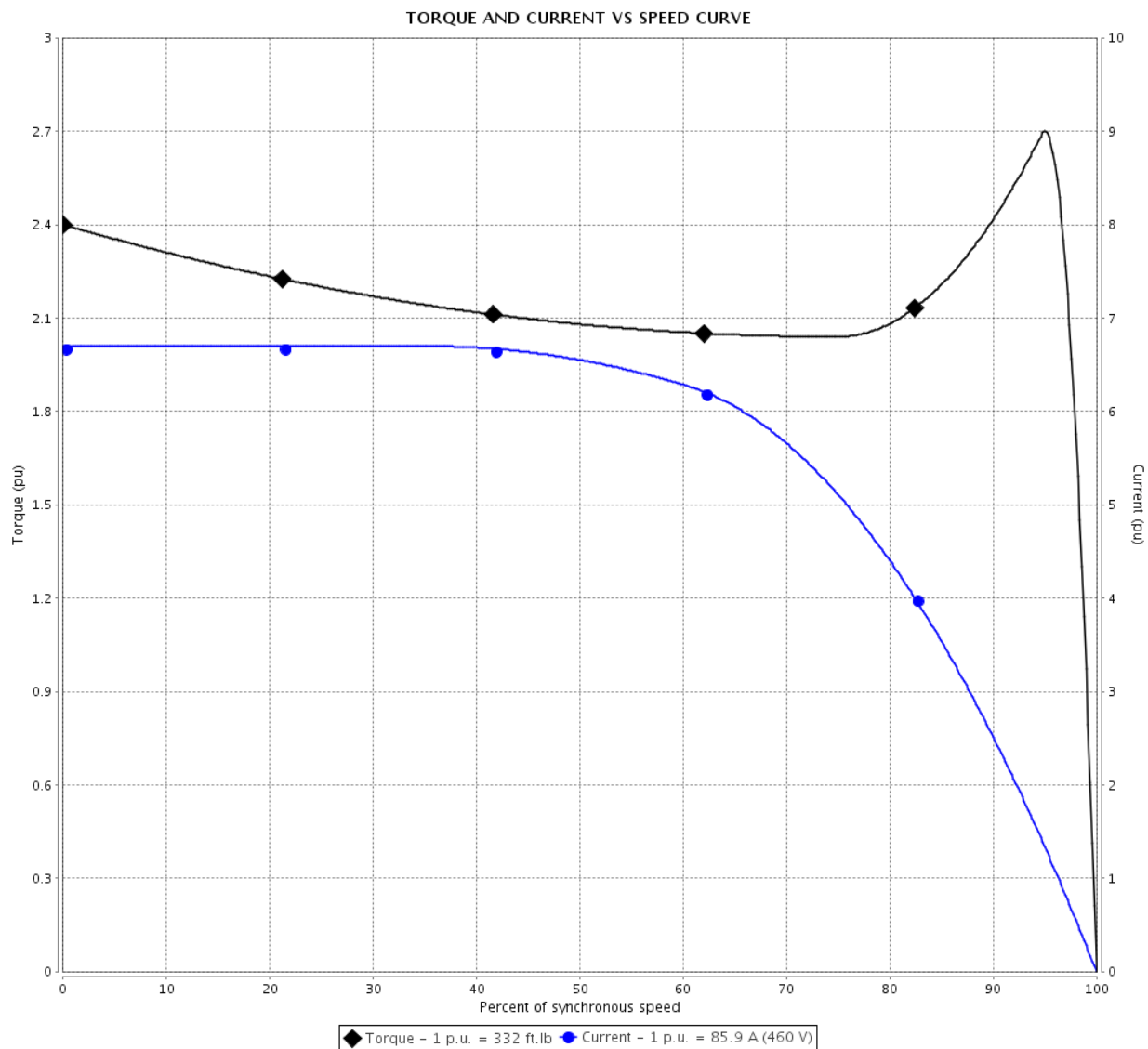


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272905

Catalog # : 075120T3E405T-W40G



Performance : 230/460 V 60 Hz 6P

Rated current : 172/85.9 A  
LRC : 6.7  
Rated torque : 332 ft.lb  
Locked rotor torque : 240 %  
Breakdown torque : 270 %  
Rated speed : 1185 rpm

Moment of inertia (J) : 31.6 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Temperature rise : 80 K  
Design : B

Locked rotor time : 19s (cold) 11s (hot)

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Date	10/04/2020			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

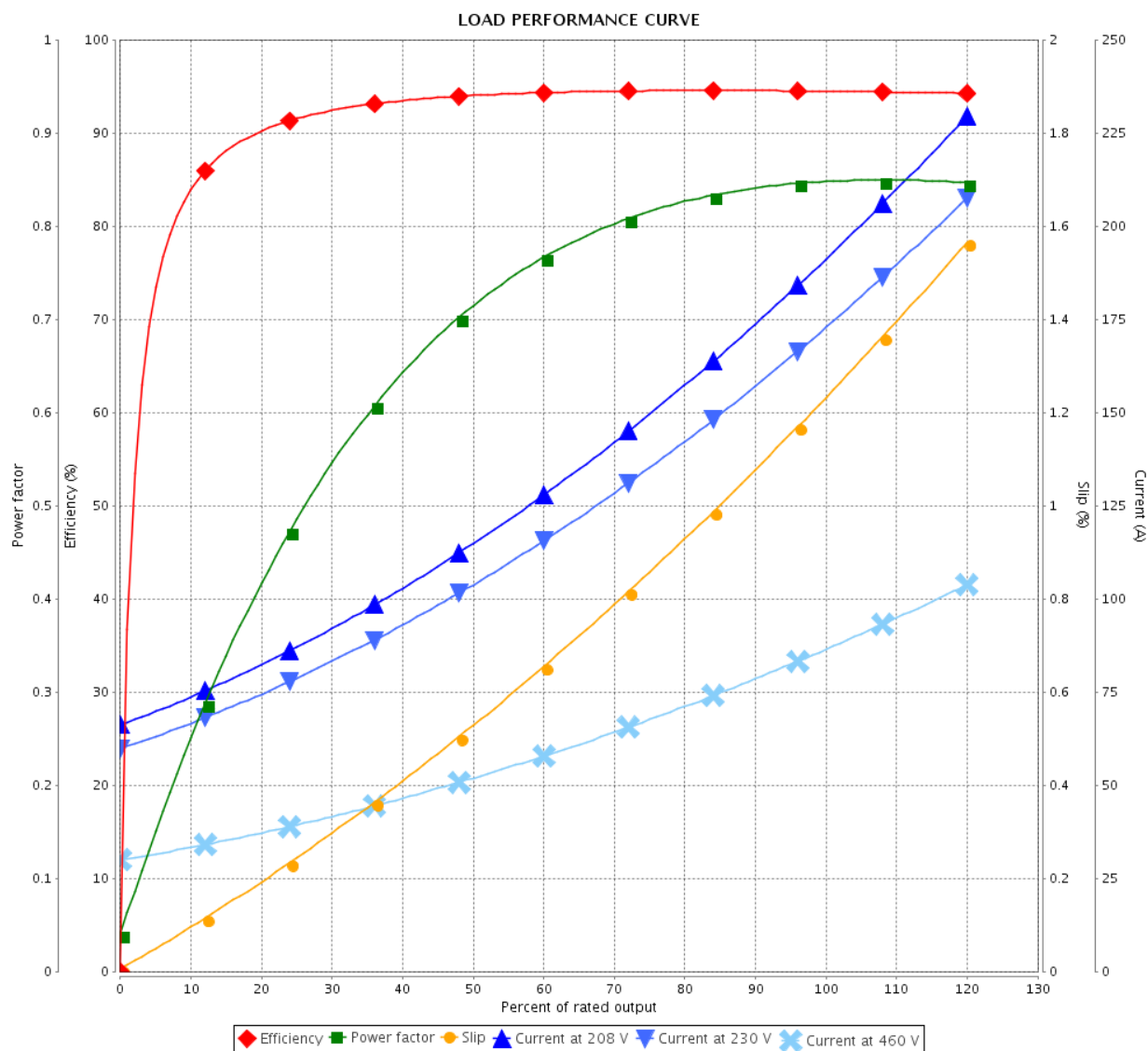


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Service factor : 1.25  
Temperature rise : 80 K  
Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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Three-Phase

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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

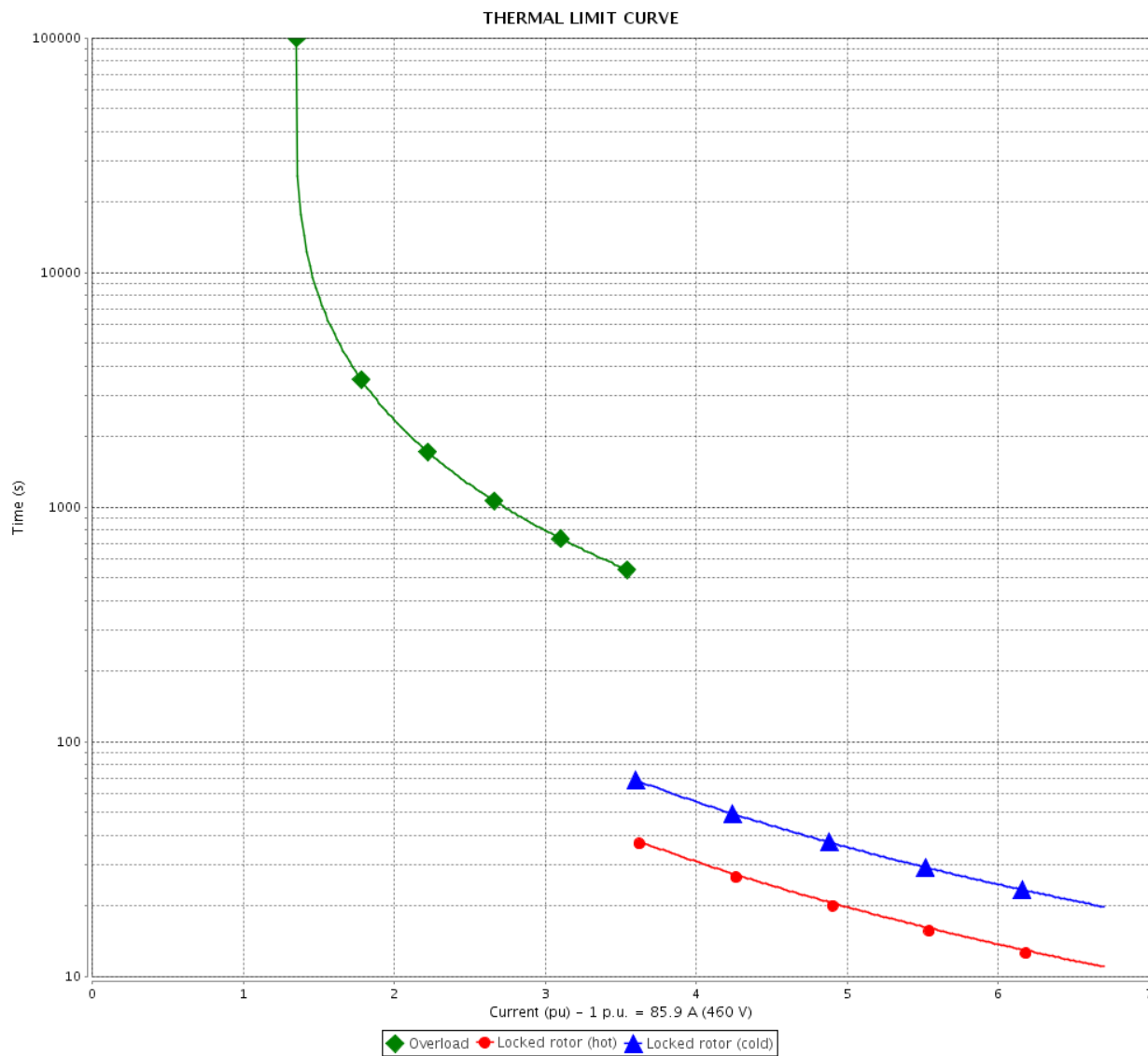
Rev.	Changes Summary		Performed	Checked	Date
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Date	10/04/2020				

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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



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Date	10/04/2020				

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

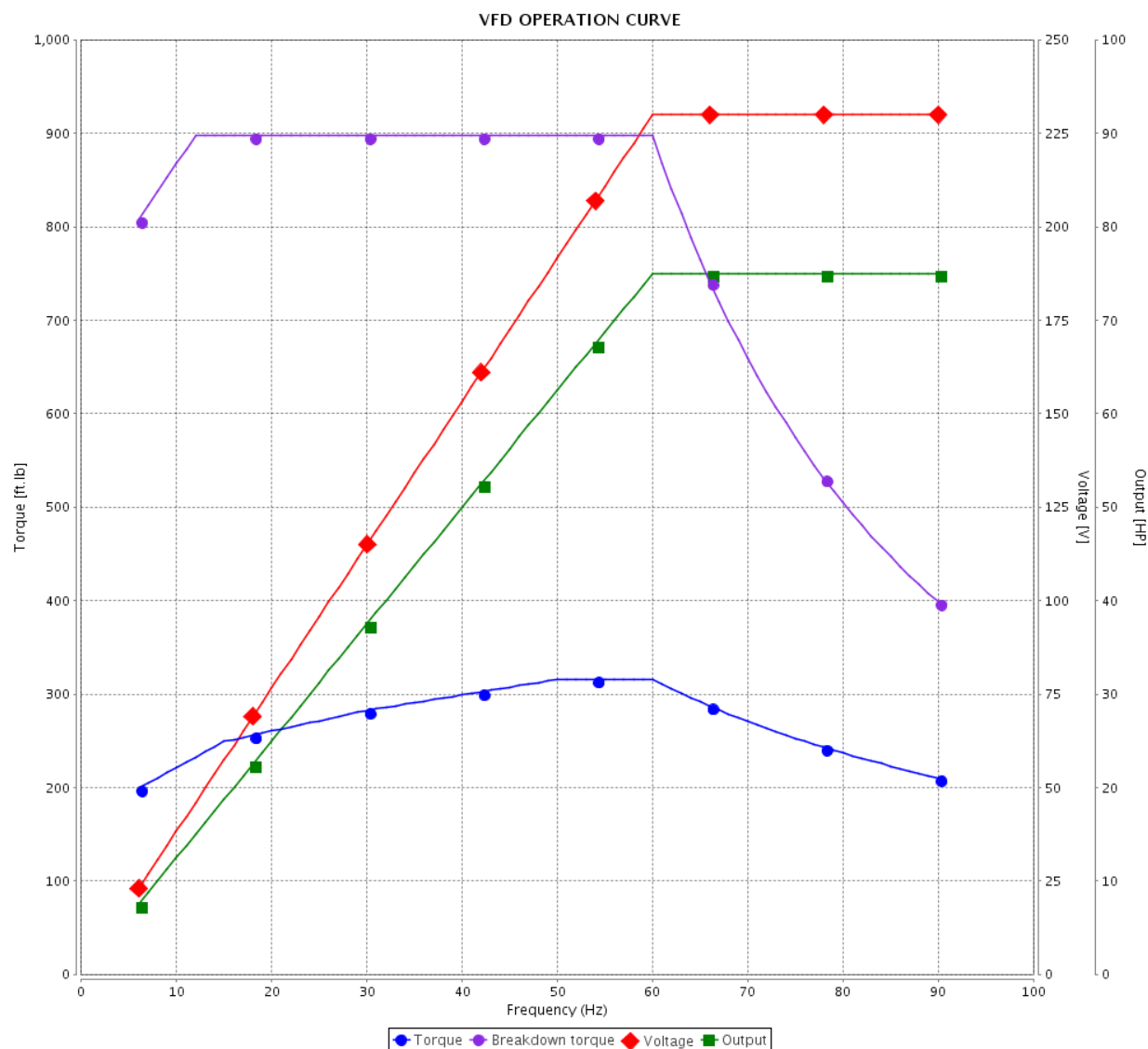


Customer :

Product line : W40 NEMA Premium Efficiency  
Three-Phase

Product code : 14272905

Catalog # : 075120T3E405T-W40G

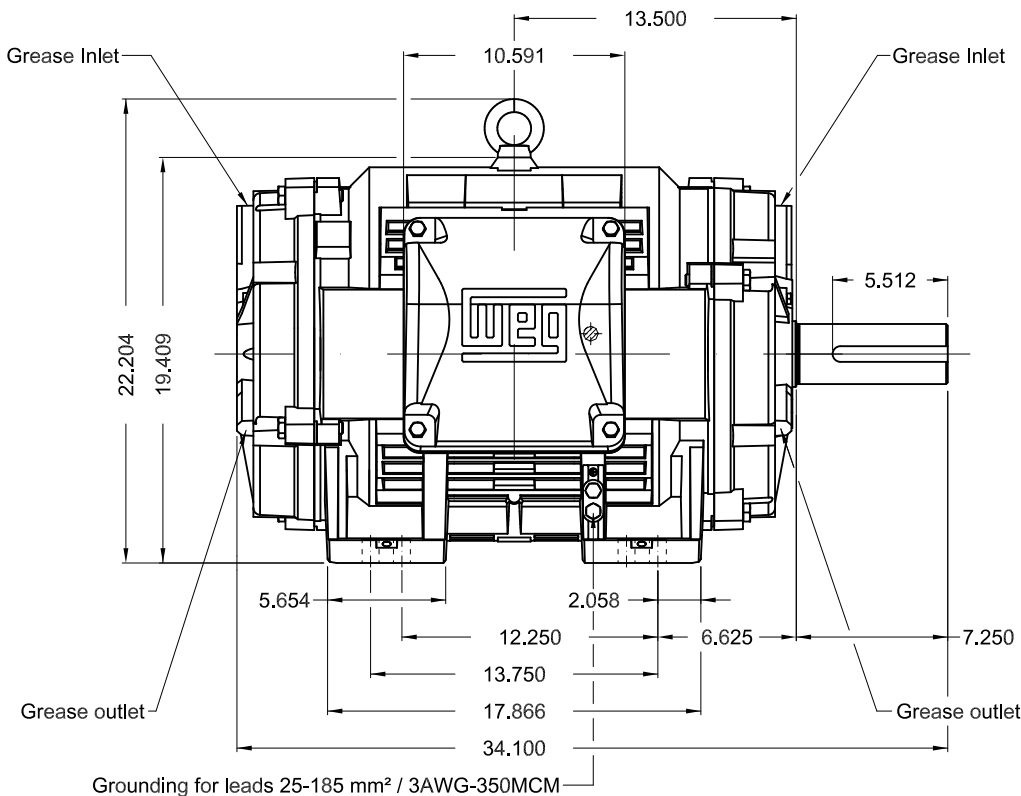




Performance : 230/460 V 60 Hz 6P

Rated current : 172/85.9 A  
LRC : 6.7  
Rated torque : 332 ft.lb  
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Rated speed : 1185 rpm

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Design : B

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75 HP 06 Poles 60Hz										A
										1:9
ECM	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER		THREE PHASE W40 MOTOR NEMA PREMIUM EFF				<div>PREVIEW</div> <div>WDD</div>			
CHECKED			FRAME 404/5T IP23 ODP							
RELEASED										
REL DT.		WMO	Jaragua do Sul		Product Engineering	SHEET		1 / 1		

Dimensions in inches

Model	RMSE	A3
Model 1	0.0000	0.0000
Model 2	0.0000	0.0000
Model 3	0.0000	0.0000
Model 4	0.0000	0.0000
Model 5	0.0000	0.0000
Model 6	0.0000	0.0000
Model 7	0.0000	0.0000
Model 8	0.0000	0.0000
Model 9	0.0000	0.0000
Model 10	0.0000	0.0000
Model 11	0.0000	0.0000
Model 12	0.0000	0.0000
Model 13	0.0000	0.0000
Model 14	0.0000	0.0000
Model 15	0.0000	0.0000
Model 16	0.0000	0.0000
Model 17	0.0000	0.0000
Model 18	0.0000	0.0000
Model 19	0.0000	0.0000
Model 20	0.0000	0.0000
Model 21	0.0000	0.0000
Model 22	0.0000	0.0000
Model 23	0.0000	0.0000
Model 24	0.0000	0.0000
Model 25	0.0000	0.0000
Model 26	0.0000	0.0000
Model 27	0.0000	0.0000
Model 28	0.0000	0.0000
Model 29	0.0000	0.0000
Model 30	0.0000	0.0000
Model 31	0.0000	0.0000
Model 32	0.0000	0.0000
Model 33	0.0000	0.0000
Model 34	0.0000	0.0000
Model 35	0.0000	0.0000
Model 36	0.0000	0.0000
Model 37	0.0000	0.0000
Model 38	0.0000	0.0000
Model 39	0.0000	0.0000
Model 40	0.0000	0.0000
Model 41	0.0000	0.0000
Model 42	0.0000	0.0000
Model 43	0.0000	0.0000
Model 44	0.0000	0.0000
Model 45	0.0000	0.0000
Model 46	0.0000	0.0000
Model 47	0.0000	0.0000
Model 48	0.0000	0.0000
Model 49	0.0000	0.0000
Model 50	0.0000	0.0000
Model 51	0.0000	0.0000
Model 52	0.0000	0.0000
Model 53	0.0000	0.0000
Model 54	0.0000	0.0000
Model 55	0.0000	0.0000
Model 56	0.0000	0.0000
Model 57	0.0000	0.0000
Model 58	0.0000	0.0000
Model 59	0.0000	0.0000
Model 60	0.0000	0.0000
Model 61	0.0000	0.0000
Model 62	0.0000	0.0000
Model 63	0.0000	0.0000
Model 64	0.0000	0.0000
Model 65	0.0000	0.0000
Model 66	0.0000	0.0000
Model 67	0.0000	0.0000
Model 68	0.0000	0.0000
Model 69	0.0000	0.0000
Model 70	0.0000	0.0000
Model 71	0.0000	0.0000
Model 72	0.0000	0.0000
Model 73	0.0000	0.0000
Model 74	0.0000	0.0000
Model 75	0.0000	0.0000
Model 76	0.0000	0.0000
Model 77	0.0000	0.0000
Model 78	0.0000	0.0000
Model 79	0.0000	0.0000
Model 80	0.0000	0.0000
Model 81	0.0000	0.0000
Model 82	0.0000	0.0000
Model 83	0.0000	0.0000
Model 84	0.0000	0.0000
Model 85	0.0000	0.0000
Model 86	0.0000	0.0000
Model 87	0.0000	0.0000
Model 88	0.0000	0.0000
Model 89	0.0000	0.0000
Model 90	0.0000	0.0000
Model 91	0.0000	0.0000
Model 92	0.0000	0.0000
Model 93	0.0000	0.0000
Model 94	0.0000	0.0000
Model 95	0.0000	0.0000
Model 96	0.0000	0.0000
Model 97	0.0000	0.0000
Model 98	0.0000	0.0000
Model 99	0.0000	0.0000

MODEL 075120T3E405T-W40G

MADE IN BRAZIL

14272905


**W40 NEMA**  
**CC029A Premium**

Inverter Duty Motor


 3PT9  
 LISTED

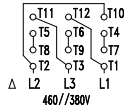
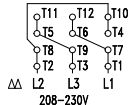
IEC 60034-1

MOD.T01#FOXON


 C US  
 Energy Verified

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

PH 3	FR 404/5T	HP(kW) 75.0(55.0)	Hz 60
V 230/460	A 172/85.9	RPM 1185	DES B
NEMA NOM EFF	94.5 %	INS. CL. F $\Delta$ T 80 K	IP23
ENCL ODP	DUTY	CONT.	AMB. 40°C
CODE G	PF 0.85	SF 1.25	SFA 215/107
USABLE @208V	190 A	SF 1.15	SFA 218
60HP 45kW 50Hz 380V 84.8A 985RPM SF1.00 EFF 93.7% (IE3)			


 → 6316-C3(34g)  
 → 6212-Z-C3(13g)

 MOBIL POLYREX EM  
 20000 h

ALT 1000 m.a.s.l. 966 Lbs