

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W40 NEMA Premium Efficiency Three-Phase Product code : 14284972
Catalog # : 12518OT3G405TS-W40

Frame	: 404/5TS	Locked rotor time	: 18s (cold) 10s (hot)
Output	: 125 HP	Temperature rise	: 80 K
Poles	: 4	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 138 A	Protection degree	: IP23
L. R. Amperes	: 952 A	Cooling method	: IC01 - ODP
LRC	: 6.9x(Code G)	Mounting	: F-1
No load current	: 47.0 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 1780 rpm	Noise level ²	: 69.0 dB(A)
Slip	: 1.11 %	Starting method	: Direct On Line
Rated torque	: 369 ft.lb	Approx. weight ³	: 1010 lb
Locked rotor torque	: 270 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 25.5 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	94.9	95.0	95.4	95.4	Max. traction	: 2900 lb
Power Factor	0.50	0.75	0.83	0.86	Max. compression	: 3910 lb

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6314 C3	6212 Z C3
Sealing	:	Without Bearing Seal	Without Bearing Seal
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	27 g	13 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		Page 1 / 6 Revision		
Checked by				
Date	10/04/2020			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

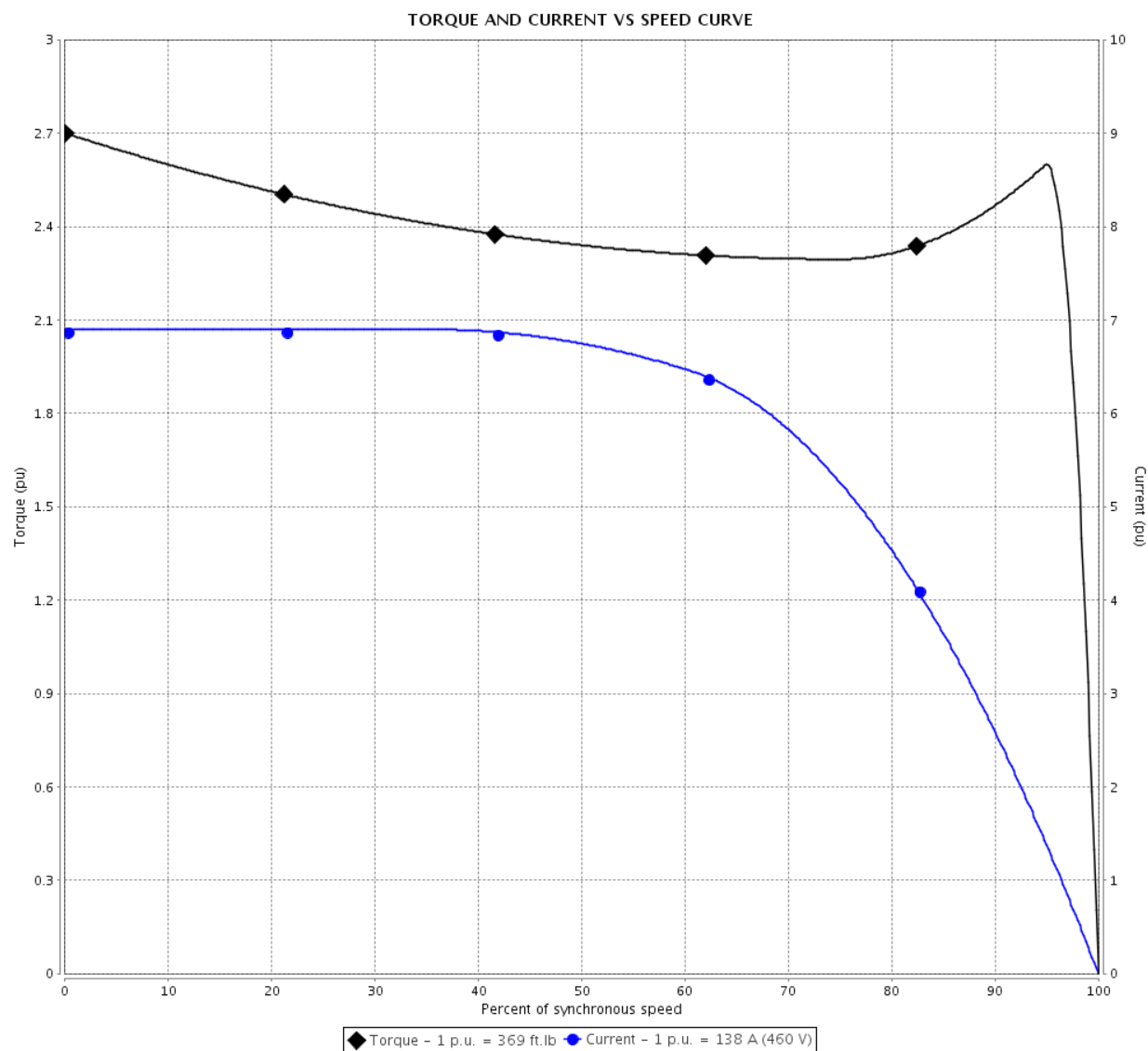


Customer :

Product line : W40 NEMA Premium Efficiency
Three-Phase

Product code : 14284972

Catalog # : 12518OT3G405TS-W40



Performance : 460 V 60 Hz 4P

Rated current	: 138 A	Moment of inertia (J)	: 25.5 sq.ft.lb
LRC	: 6.9	Duty cycle	: Cont.(S1)
Rated torque	: 369 ft.lb	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1780 rpm	Design	: B

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		<div style="display: flex; justify-content: space-between;"> <div>Page 2 / 6</div> <div>Revision</div> </div>		
Checked by				
Date	10/04/2020			

LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

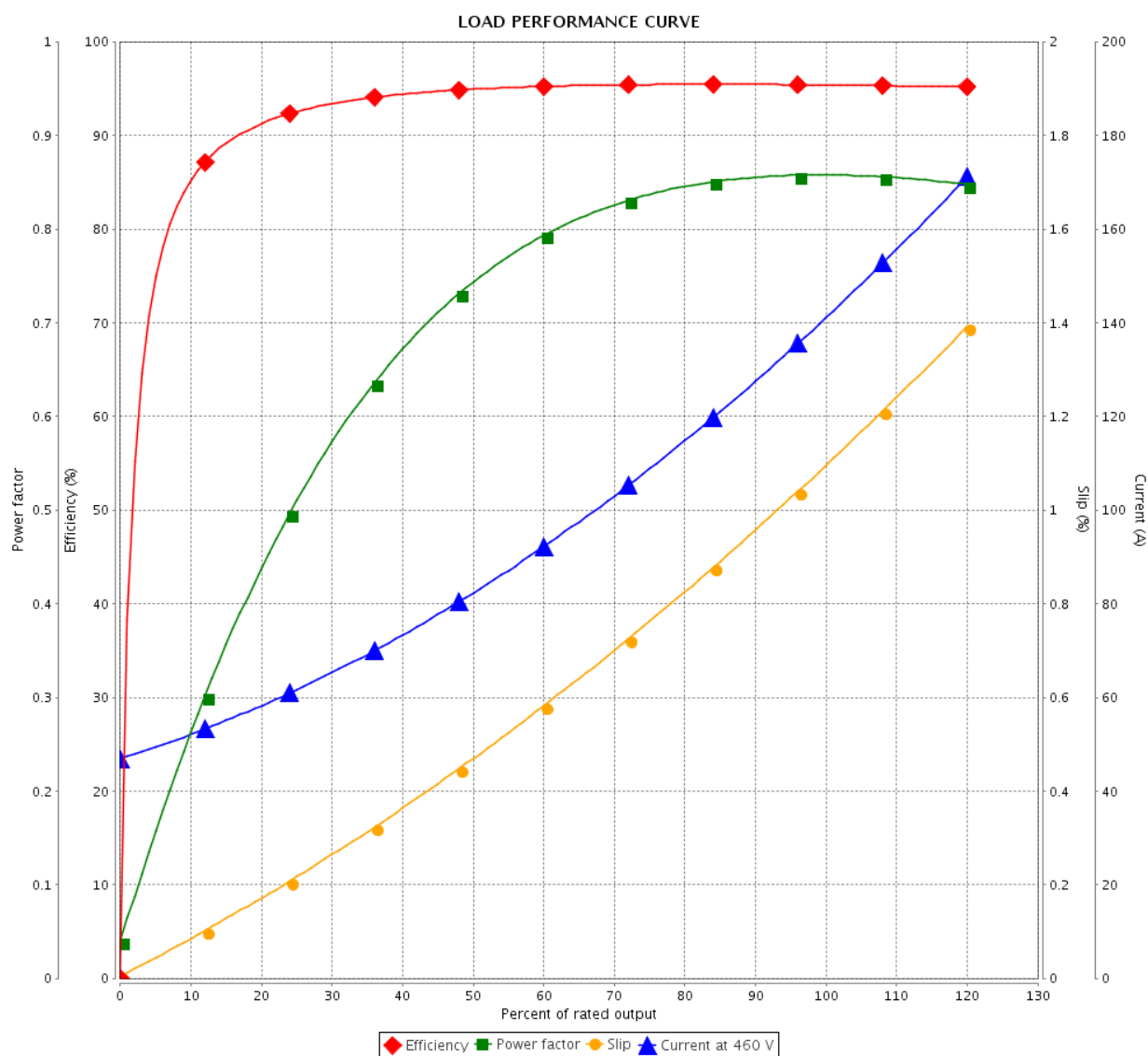


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		Revision		

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer

:

Product line

: W40 NEMA Premium Efficiency
Three-Phase

Product code :

14284972

Catalog # :

12518OT3G405TS-W40

Performance : 460 V 60 Hz 4P

Rated current

: 138 A

LRC

: 6.9

Rated torque

: 369 ft.lb

Locked rotor torque

: 270 %

Breakdown torque

: 260 %

Rated speed

: 1780 rpm

Moment of inertia (J)

: 25.5 sq.ft.lb

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

Performed by

Checked by

Date

10/04/2020

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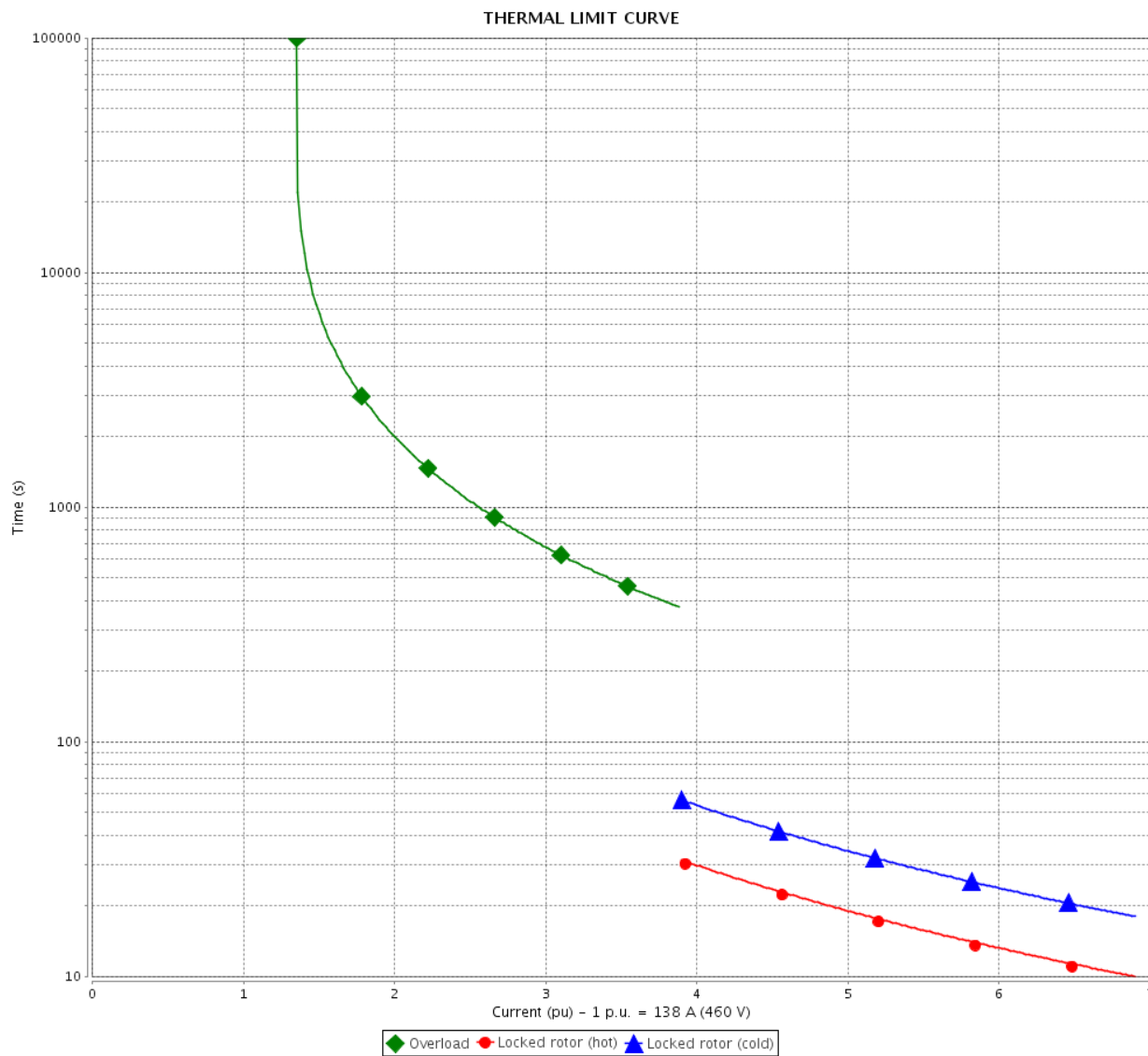
Revision

THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



Rev.	Changes Summary		Performed	Checked	Date
Performed by					
Checked by					
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

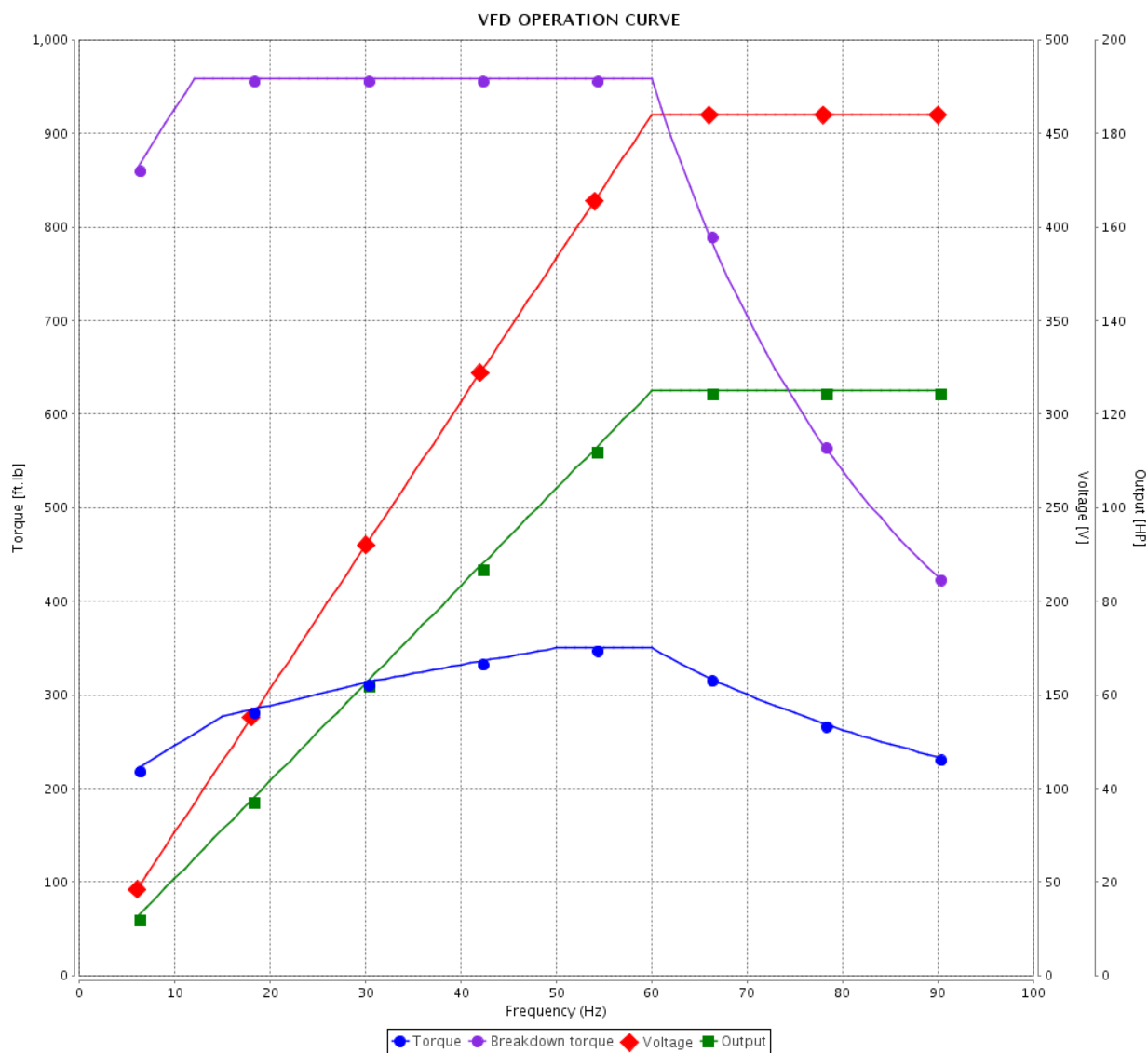


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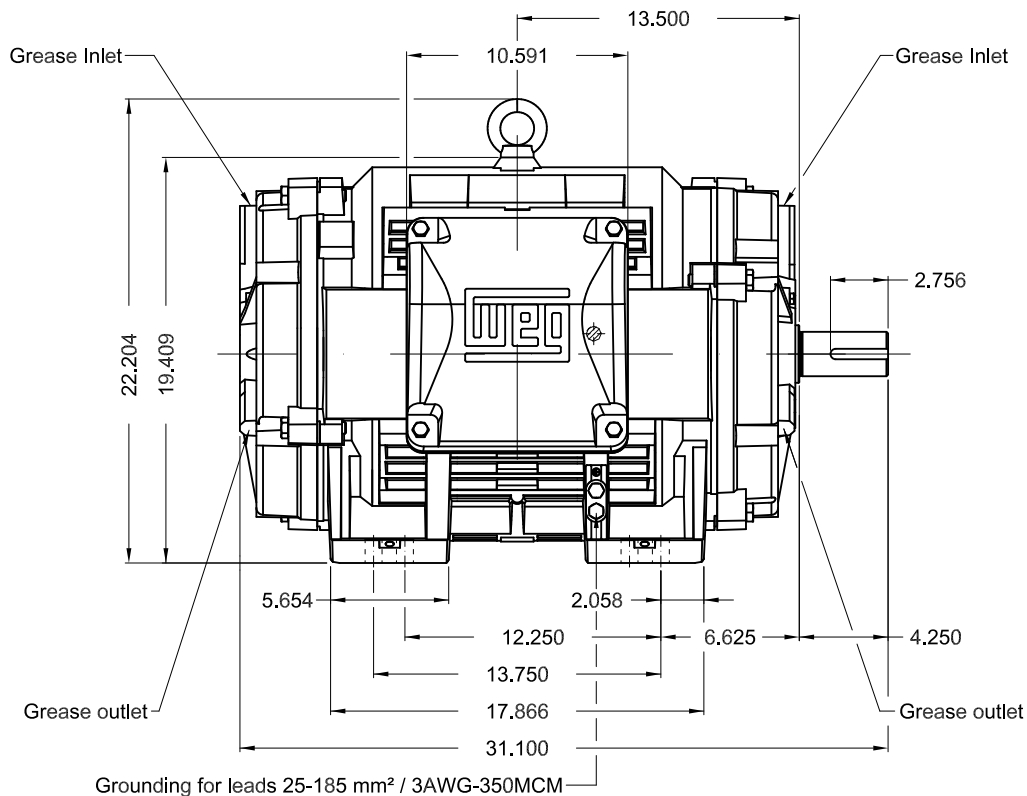




Performance : 460 V 60 Hz 4P

Rated current : 138 A
LRC : 6.9
Rated torque : 369 ft.lb
Locked rotor torque : 270 %
Breakdown torque : 260 %
Rated speed : 1780 rpm

Moment of inertia (J) : 25.5 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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125 HP 04 Poles 60Hz										A	
										1:9	
ECM		LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED		PIRWUSER		THREE PHASE W40 MOTOR NEMA PREMIUM EFF FRAME 404/5TS IP23 ODP				PREVIEW WDD			
CHECKED											
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 125180T3G405TS-W40
MADE IN BRAZIL
14284972



IEC 60034-1
MOD.T01#FOXON



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

PH 3	FR 404/5TS	HP(kW) 125(90)		Hz 60	PART-WINDING						WYE-DELTA					
V 460		A 138		IP23	START			RUN			START			RUN		
					○T12 ○T7	○T10 ○T8	○T11 ○T9	○T12 ○T7	○T10 ○T8	○T11 ○T9	○T12 ○T6	○T10 ○T4	○T11 ○T5	○T12 ○T6	○T10 ○T4	○T11 ○T5
					○T6 ○T1	○T4 ○T2	○T5 ○T3	○T6 ○T1	○T4 ○T2	○T5 ○T3	○T7 ○T1	○T8 ○T2	○T9 ○T3	○T7 ○T1	○T8 ○T2	○T9 ○T3
					L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
ENCL ODP		DUTY CONT.		INS. CL. F ΔT 80 K	 → 6314-C3(27g) MOBIL POLYREX EM → 6212-Z-C3(13g) 20000 h											
PF 0.86		DES B		CODE G AMB. 40°C												
SF 1.25		SFA 173		ALT 1000 m.a.s.l.	1012 Lbs											
100HP 75kW 50Hz 380V 138A 1480RPM SF1.00 EFF 95.0% (IE3)																