marathon®

Explosion Proof Motors

Model No: 284TSTGCD6503
Catalog No: E546A

Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 3600 RPM, 284TS Frame, EPFC

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Product Information Packet: Model No: 284TSTGCD6503, Catalog No: E546A Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 3600 RPM, 284TS Frame, EPFC

Nameplate Specifications

Phase	**3**	Output HP	**25 & 20 Hp**
Output KW	**18.7 & 14.9 kW**	Voltage	**230/460 & 190/380 V**
Speed	**3555 & 2955 r/min**	Synchronous RPM	**3600 & 3000 r/min**
Service Factor	**1.15 & 1.15**	Frame	**284TS**
Enclosure	**Explosion Proof Fan cooled**	Thermal Protection	**Thermostat**
Efficiency	**91.7 & 91 %**	Ambient Temperature	**40 °C**
Frequency	**60 & 50 Hz**	Current	**60/30 & 58/29 A**
Power Factor	**86**	Duty	**Continuous**
Insulation Class	**F**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6311**
Opp Drive End Bearing Size	**6210**	UL	**UL Listed And CSA Certified**
CSA	**Y**	CE	**N**
IP Code	**54**	Number of Speeds	**1**
Hazardous Location	**DIV 1 EXP PROOF CL I GR CD CL II GR FG T3B**		

Technical Specifications

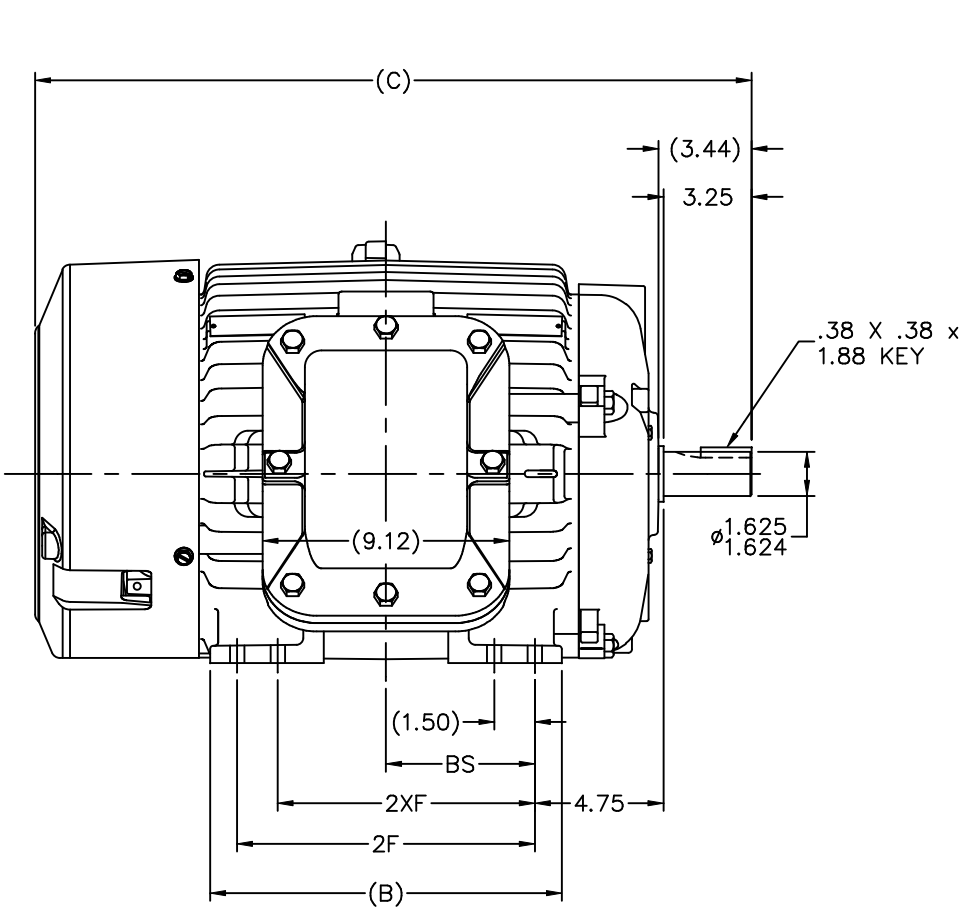
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**2**	Rotation	**Reversible**
Resistance Main	**.395 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**TS**	Shaft Diameter	**1.625 in**
Assembly/Box Mounting	**F1 Only**	Inverter Load	**Constant 10:1/Variable 10:1**

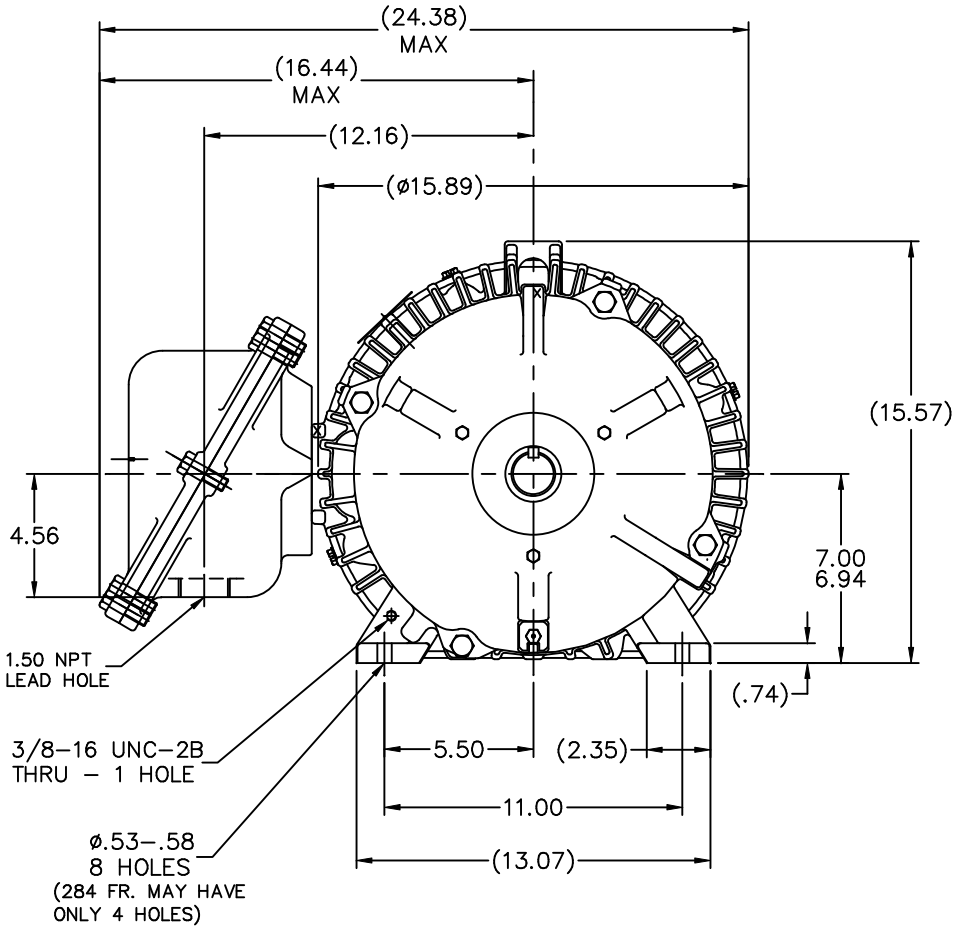
Drawings

Connection Drawing	**EE7308AD**	Outline Drawing	**SS311004-1275**

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SS311004





NOTES:
1. BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.
2. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	2XF	BS
1275	284TS	12.50	24.97	9.50		4.75
1425	286TS	13.00	26.47	11.00	9.50	5.50

NO.	REVISION	BY & DATE	CHK
4	REDRAWN IN AUTOCAD	TAT 07-06-2004	ML
3	REV'D C' BOX GEOMETRY PER CAST. CHANGE CN 29010	DRS 01-31-2000	
2	REVISED 'C' DIMENSION FOR C.I. FAN GUARD	DA 07-12-1999	
	REVISED CONDUIT BOX CN 2400-235		
1	NEW DRAWING – DES/DEV	DA 04-14-1999	

TOLERANCES UNLESS SPECIFIED: DEC. INCHES; .X ±.1; .XX ±.03; .XXX ±.005; .XXXX ±.0005; ANG ±7'30"

MARATHON ELECTRIC

TITLE OUTLINE – EXP.PR. – TGN
280TS FR. – BB – STD – 12.50 LAM.

MAT'L.

FINISH

CAD FILE ss311004

RFP

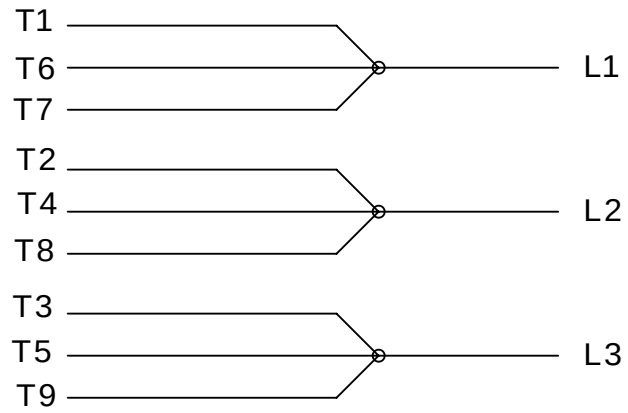
DIST LB–BR

DRAWN	DA 03-12-1999
CHK	ML 04-14-1999
APPD	SW 04-14-1999
SCALE	7=32
REF	
FMF	
PREV	

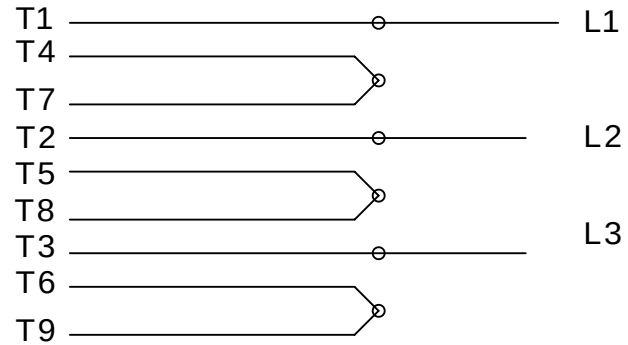
SIZE B | DRAWING NO. SS311004 | PAGE OF | REV. 4

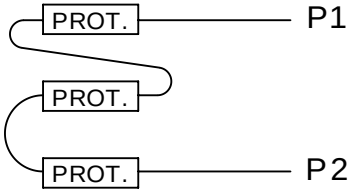
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LOW VOLTAGE

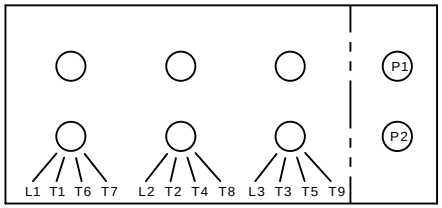


HIGH VOLTAGE

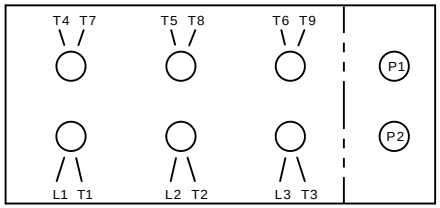


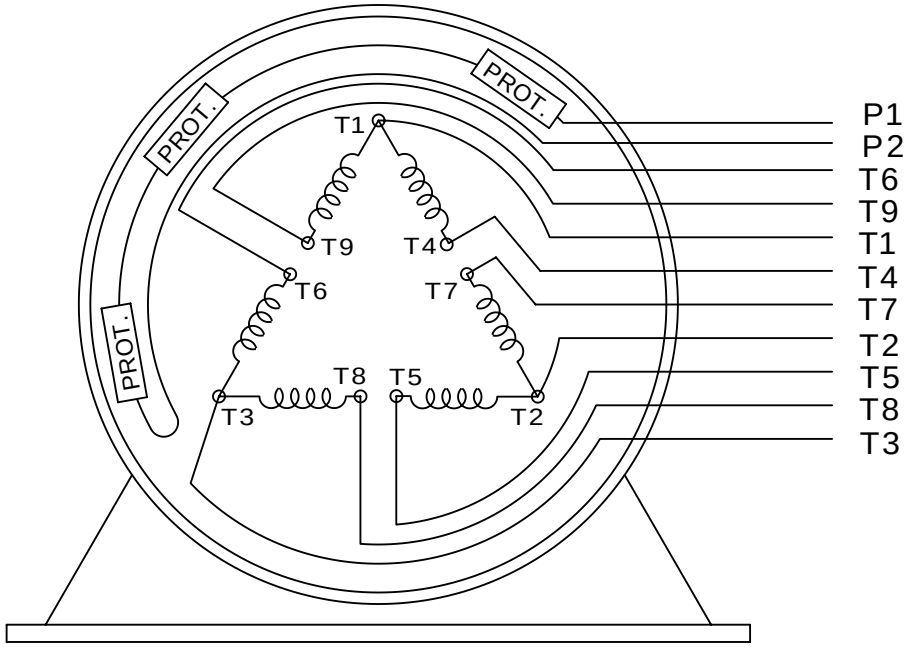


LOW VOLTAGE



HIGH VOLTAGE





VIEW OF TERMINAL END

WHEN MORE THAN ONE PROT. IS USED; PROT. ARE CONNECTED IN SERIES

DRAWING REVISION M	REVISION BY SB	REV DATE/© DATE 06/03/2026	PRIMARY DIMENSIONS ARE INCH mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY	DRAWN BY MJD	marathon™
REQUEST NUMBER CR-0026504	APPROVED BY RMS	DATE 06/03/2026		DATE 12-19-1997	
REQUEST NUMBER DESCRIPTION DRAWING TITLE BLOCK UPDATED				APPROVED BY GK	DESCRIPTION CONN DIAGRAM-EXTERNAL
				DATE 01-07-1998	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE A / DRAWING NUMBER ee7308ad / SHEET 1 OF 1

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Data Sheet

Date: 8/30/2021
Customer:
Attention:
Submitted by:

marathon® Motors

284TSTGCD6503

Submittal

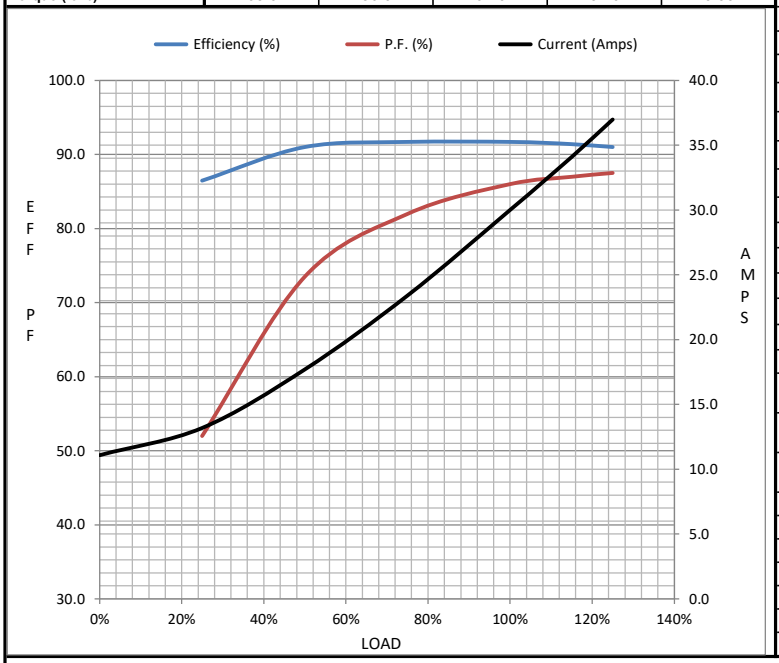
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	11.1	13.2	17.7	23.4	30.0	34.1	37.0	181	
Torque (ft-lb)	0.00	9.2	18.5	27.5	37.0	42.5	46.3	65.0	
RPM	3600	3588	3578	3565	3555	3,546	3540	0	
Efficiency (%)		86.5	91.0	91.7	91.7	91.4	91.0		
P.F. (%)	8.0	52.0	73.5	82.0	86.0	87.0	87.5	35.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3330	3555	3600
Current (Amps)	181	166	105	30.0	11.1
Torque (ft-lb)	65.0	56.0	94.0	37.0	0.00



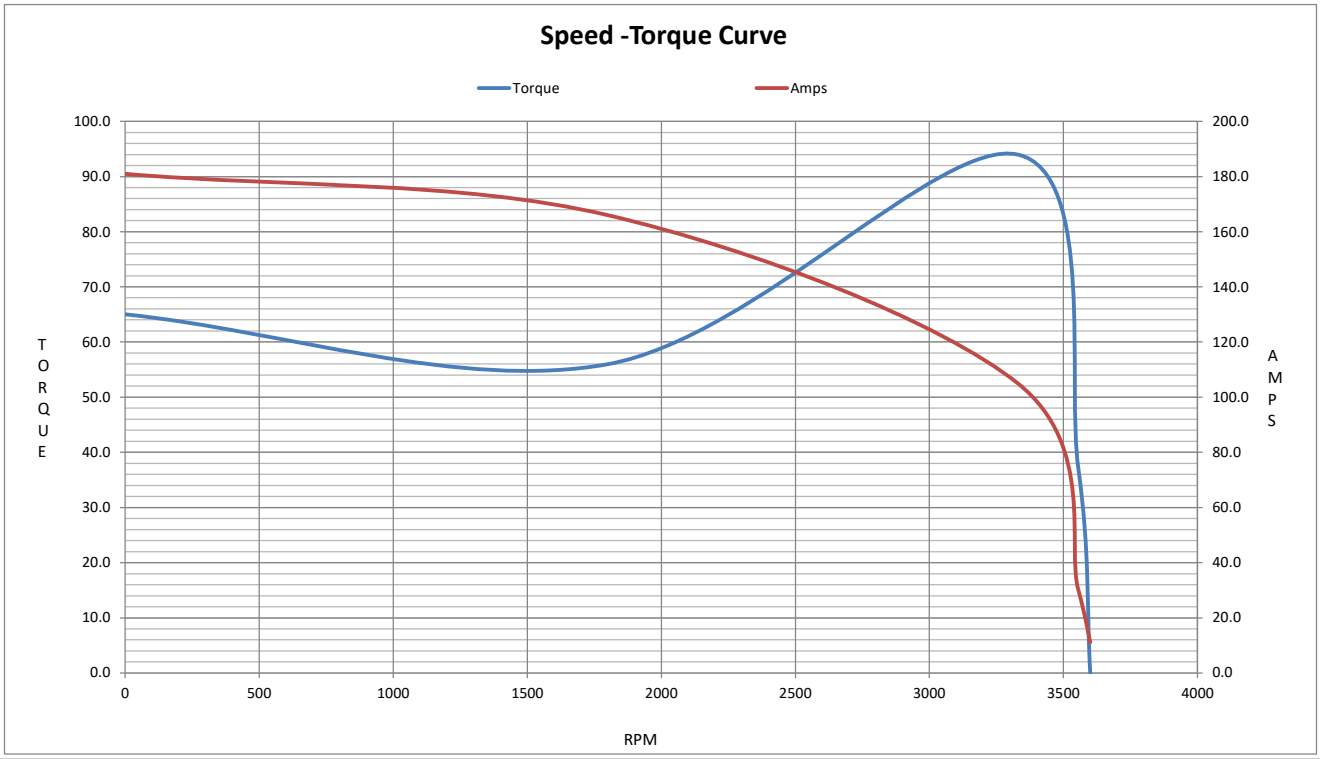
Information Block

HP	25.0	
Sync. RPM	3600	
Frame	284	
Enclosure	EPFC	
Construction	TFC	
Voltage	230/460#190/380	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	55	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	2.90	Lb-Ft²
Ref Wdg	HA31802004 NONE	
Sound Pressure @ 1M	75	dBA
VFD Rating	CONSTANT 10:1	
Outline Dwg	B-SS311004-1275	
Conn. Diag	EE7308AD	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.2610	0.1130	0.8260	0.8640	24.3810

Speed -Torque Curve



P.O. BOX 8003
WAUSAU, WI 54401-8003
PH. 715-675-3311

marathon® Motors

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #:
CONN. DIAGRAM: EE7308AD
OUTLINE: B-SS311004-1275
WINDING: HA31802004 NONE 2
SPEED:

CUSTOMER P.O. #:
REFERENCE MODEL #: 284TSTGCD6503
CAT #: E546A
CUSTOMER PART #:
MOUNTING: F1 ONLY

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
25	18.7	3600	3555	284TS	EPFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#190/380	60/30&58/29	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.7	3/4 LD EFF	91.7	1/2 LD EFF	91.0	GTD EFF	ELECT. TYPE
F.L. PF	86.0	3/4 LD PF	82.0	1/2 LD PF	73.5	91.0	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
37.0 LB-FT	181	65.0 LB-FT 176%	94.0 LB-FT 254%	55	

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX. MOTOR WGT
75 dBA	84 dBA	2.90 LB-FT²	30 LB-FT²	20 SEC.	2	460 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	ROOF CL I GR C&D CL II	NO	NONE	BLUE - RAL 5003 (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL	BALL	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6311	6210						

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
TSTATS (N/C)	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.261	0.113	0.826	0.864	24.381	0.080	ODE

* NOTES *

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE PPR

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE HZ:

UL: NO LETTER - ALL BRANDS-UL LISTED AND CSA CERTIFIED DIV. 1 XP MOTORS

PREPARED BY:
DATE: 8/30/2021

FORM: 3531 REV_4 2/27/06