marathon®

Severe Duty Motors

Model No: 405TSHFCD9026
Catalog No: W599A

Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 405TS Frame, TEFC

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Product Information Packet: Model No: 405TSHFCD9026, Catalog No: W599A Severe Duty Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 405TS Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**100 Hp**
Output KW	**75.0 kW**	Voltage	**460 V**
Speed	**1785 r/min**	Synchronous RPM	**1800 r/min**
Service Factor	**1.15**	Frame	**405TS**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**95.4 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**113.0 A**
Power Factor	**87**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6316**
Opp Drive End Bearing Size	**6314**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

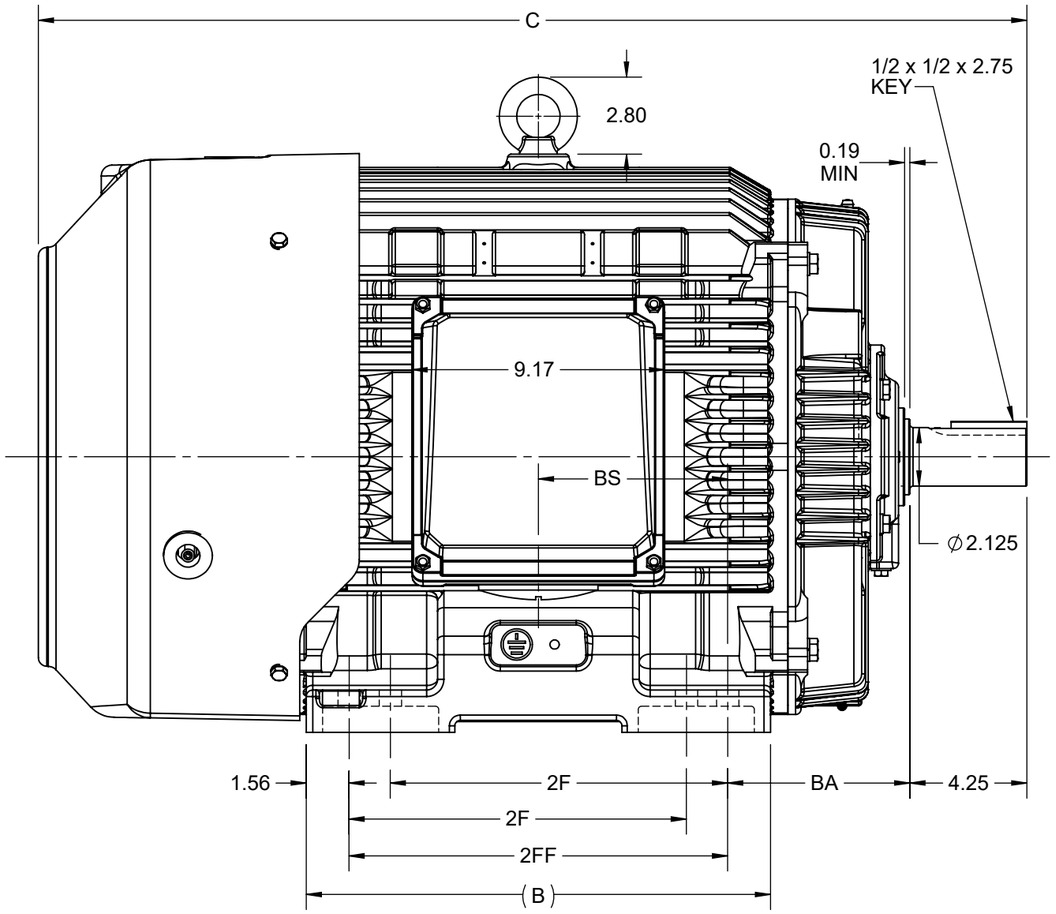
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.0555 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**TS**	Shaft Diameter	**2.125 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

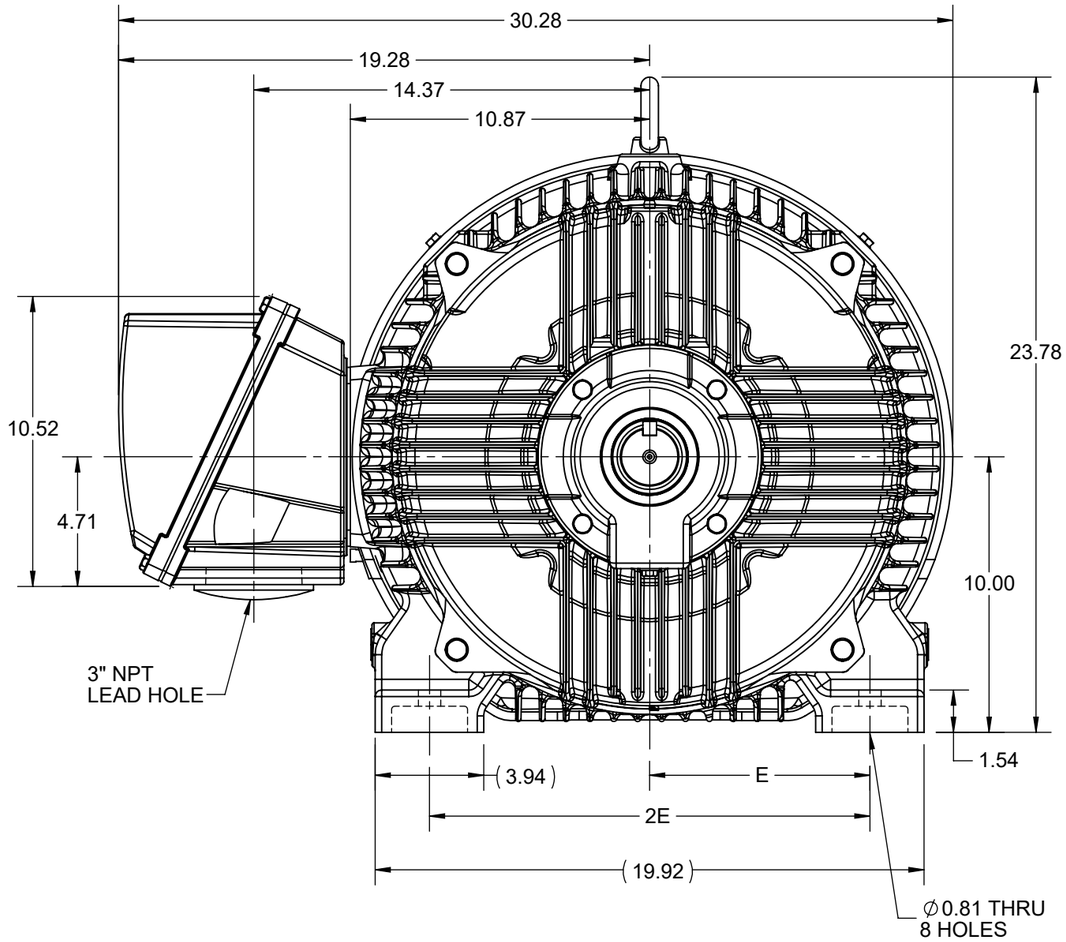
Drawings

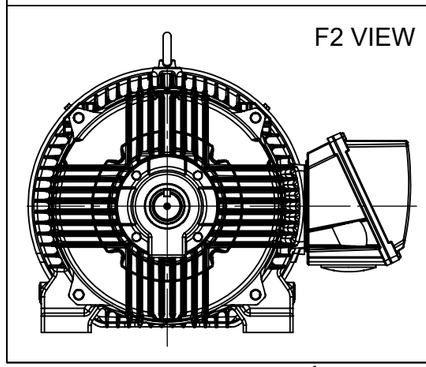
Connection Drawing	**EE7300U**	Outline Drawing	**SS557666**

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B	C	E	2E	2F	2FF	BA	BS	MOUNTING
16.85	35.88	8.00	16.00	12.25	13.75	6.62	6.87	F1 OR F2







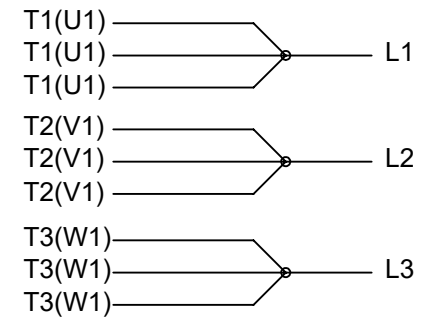
DRAWING REVISION: D	REVISION BY: SB	REV DATE/© DATE: 07/30/2025
REQUEST NUMBER: CR-0023600	APPROVED BY: SBD	DATE: 07/30/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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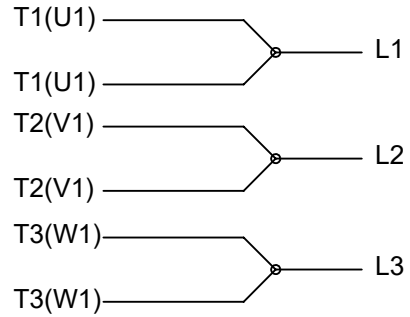
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY: BISWA	marathon™	
DATE: 24/12/2018	DESCRIPTION: OUTLINE 404/405TS FR-NEMA- SD & IEEE841	
APPROVED BY: SBD		
DATE: 24/12/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS557666	SHEET: 1 OF 1

IF MOTOR HAS 9 LEADS

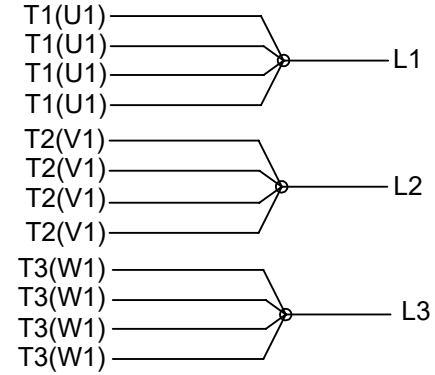


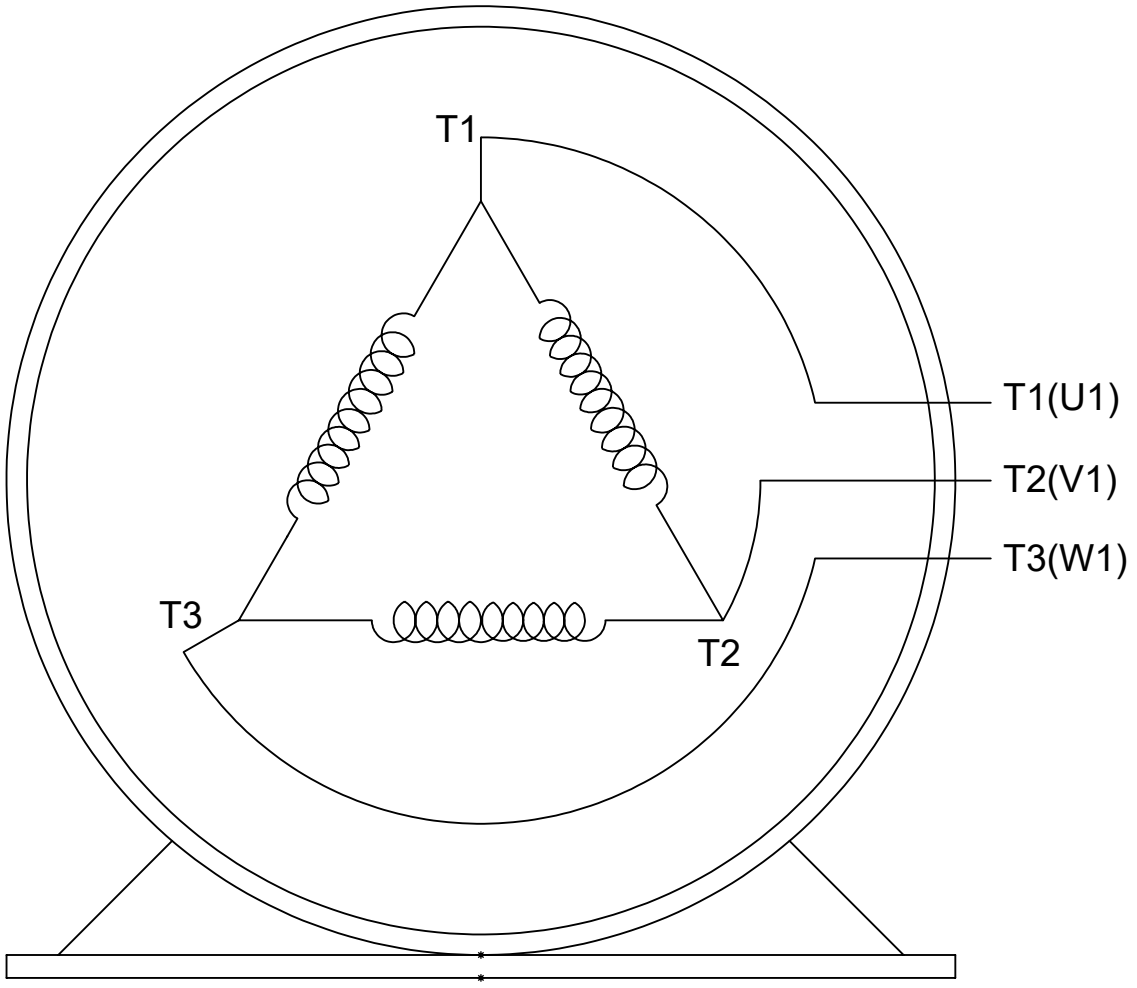
IF MOTOR HAS 6 LEADS



A-9806 DECAL IF CALLED FOR

IF MOTOR HAS 12 LEADS





VIEW OF TERMINAL END

DRAWING REVISION	REVISION BY	REV DATE/© DATE
M	SB	08/01/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023654	SBD	08/01/2025

REQUEST NUMBER DESCRIPTION
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DRAWN BY	DRS
DATE	09-27-1996
APPROVED BY	GK
DATE	09-30-1996
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø SINGLE VOLTAGE

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300U	1 OF 1

Data Sheet

Date: 5/6/2020
Customer:
Attention:
Submitted by:

405TSHFCD9026

Submittal

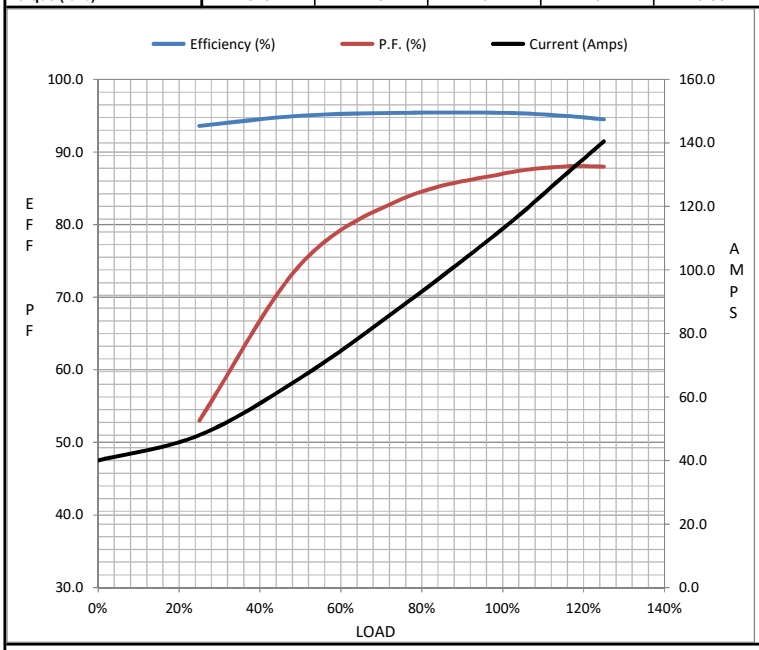
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	40.0	48.0	66.0	88.5	113	130	141	725	
Torque (ft-lb)	0.00	73.0	147	220	294	339	370	529	
RPM	1800	1796	1792	1790	1785	1,782	1780	0	
Efficiency (%)		93.6	95.0	95.4	95.4	95.0	94.5		
P.F. (%)	4.5	53.0	74.5	83.5	87.0	88.0	88.0	32.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1735	1785	1800
Current (Amps)	725	580	410	113	40.0
Torque (ft-lb)	529	445	764	294	0.00



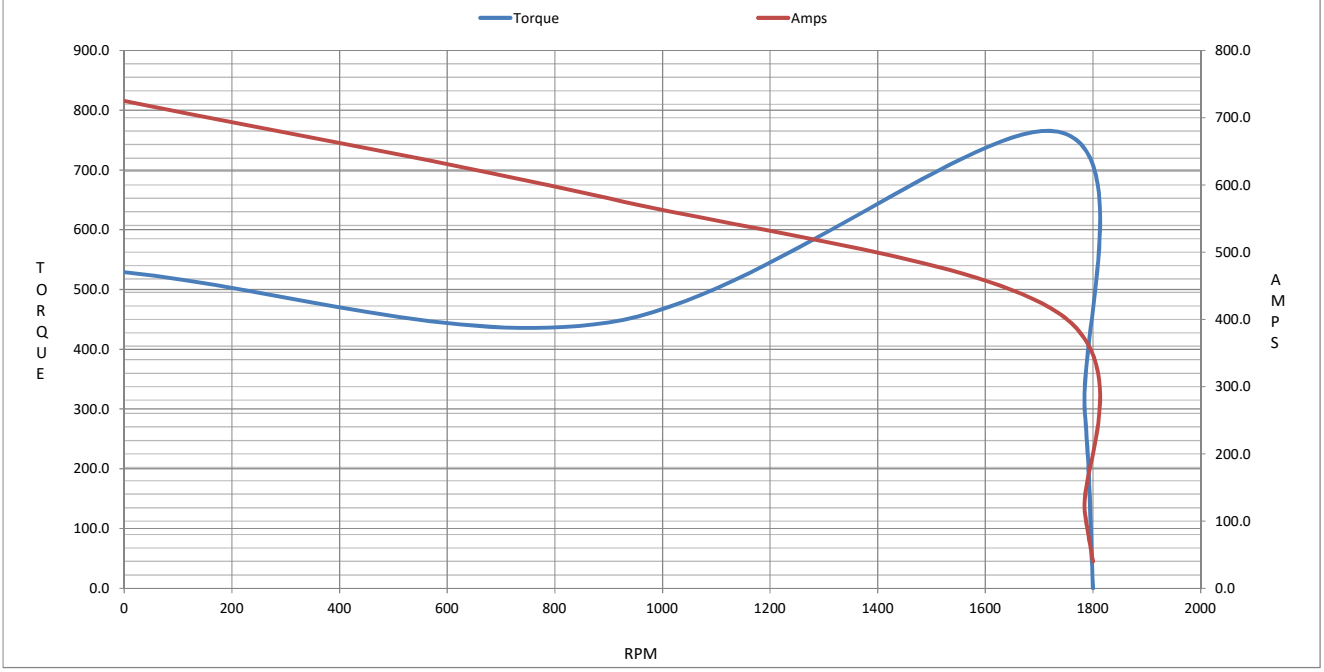
Information Block

HP	100.0	
Sync. RPM	1800	
Frame	405	
Enclosure	TEFC	
Construction	TFC	
Voltage	460	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	65	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	35.0	Lb-Ft²
Ref Wdg	HA32504006 NONE	
Sound Pressure @ 1M	75	dBA
VFD Rating	CONSTANT 2:1/VARIABLE 10:1	
Outline Dwg	SS557666-365TS	
Conn. Diag	EE7300U	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0330	0.0200	0.1700	0.2840	6.5320

Speed -Torque Curve



Uncontrolled Copy

marathon® Motors

DATA VOLTS: 460

CERTIFICATION DATA SHEET

MODEL #: 405TSHFCD9026
CAT #: W599A

CONN. DIAGRAM: EE7300U
OUTLINE: SS557666-365TS
WINDING: HA32504006 NONE 1

MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
100	75	1800	1785	405TS	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	460	113	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	95.4	3/4 LD EFF	95.4	1/2 LD EFF	95.0	GTD EFF	ELECT. TYPE	
F.L. PF	87.0	3/4 LD PF	83.5	1/2 LD PF	74.5	95.0	SQ CAGE INV RATED	

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
294 LB-FT	725	529 LB-FT 180%	764 LB-FT 260%	65	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX. MOTOR
75 dBA	84 dBA	35.0 LB-FT²	575 LB-FT²	25 SEC.	2	570 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	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6316	BALL 6314	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	
0.033	0.02	0.17	0.284	6.532	0.080	

NOTES
*
*

If Inverter equals NONE, contact factory for further information
INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE **PPR**

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

PREPARED BY: ANUSHA M
DATE: 3/31/2020

FORM: 3531 REV_4 2/27/06
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