marathon®

Severe Duty Motors

Model No: 286THFCD19077
Catalog No: W556A

Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 575 V, 1200 RPM, 286T Frame, TEFC

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Product Information Packet: Model No: 286THFCD19077, Catalog No: W556A Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 575 V, 1200 RPM, 286T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**20 Hp**
Output KW	**14.9 kW**	Voltage	**575 V**
Speed	**1180 r/min**	Synchronous RPM	**1200 r/min**
Service Factor	**1.15**	Frame	**286T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**91.7 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**20.8 A**
Power Factor	**79**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6311**
Opp Drive End Bearing Size	**6211**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

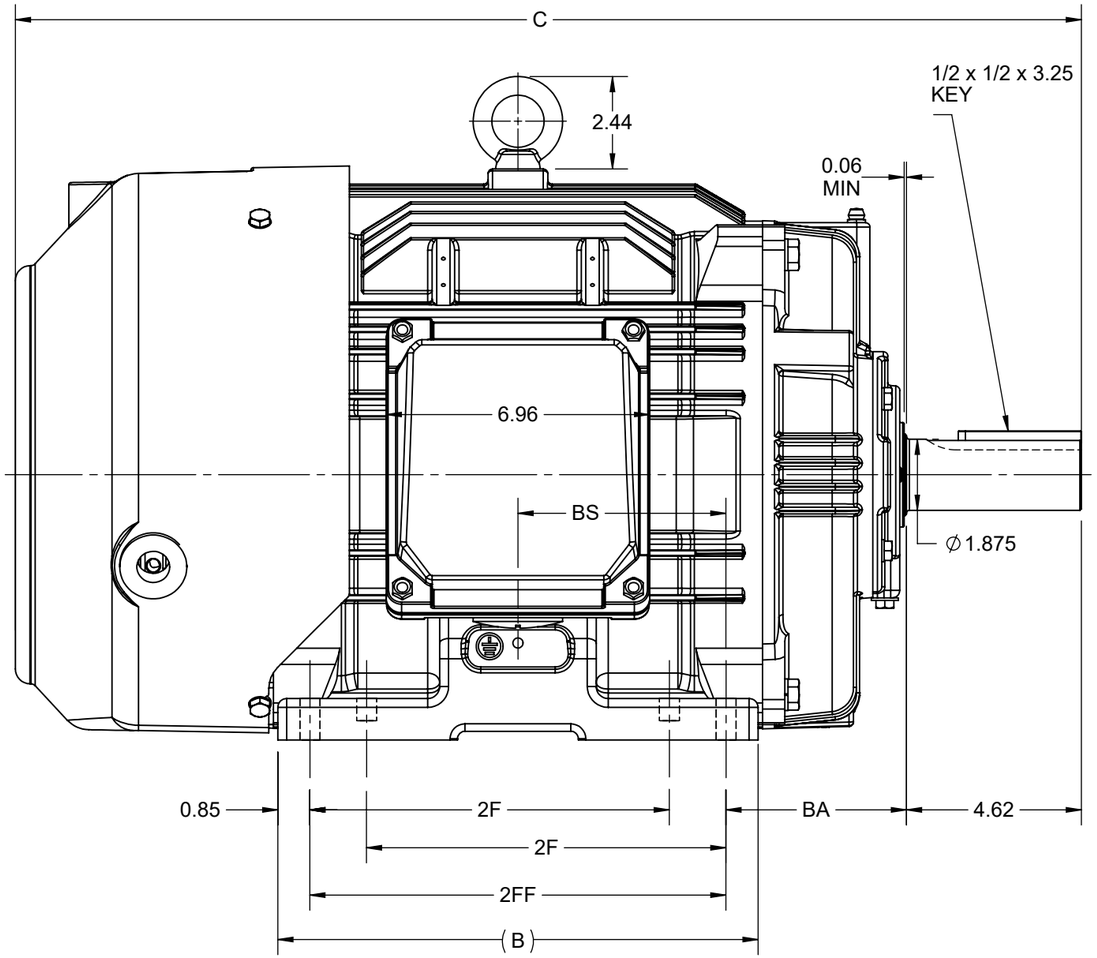
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**6**	Rotation	**Reversible**
Resistance Main	**.5617 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**1.875 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 10:1/Variable 10:1**

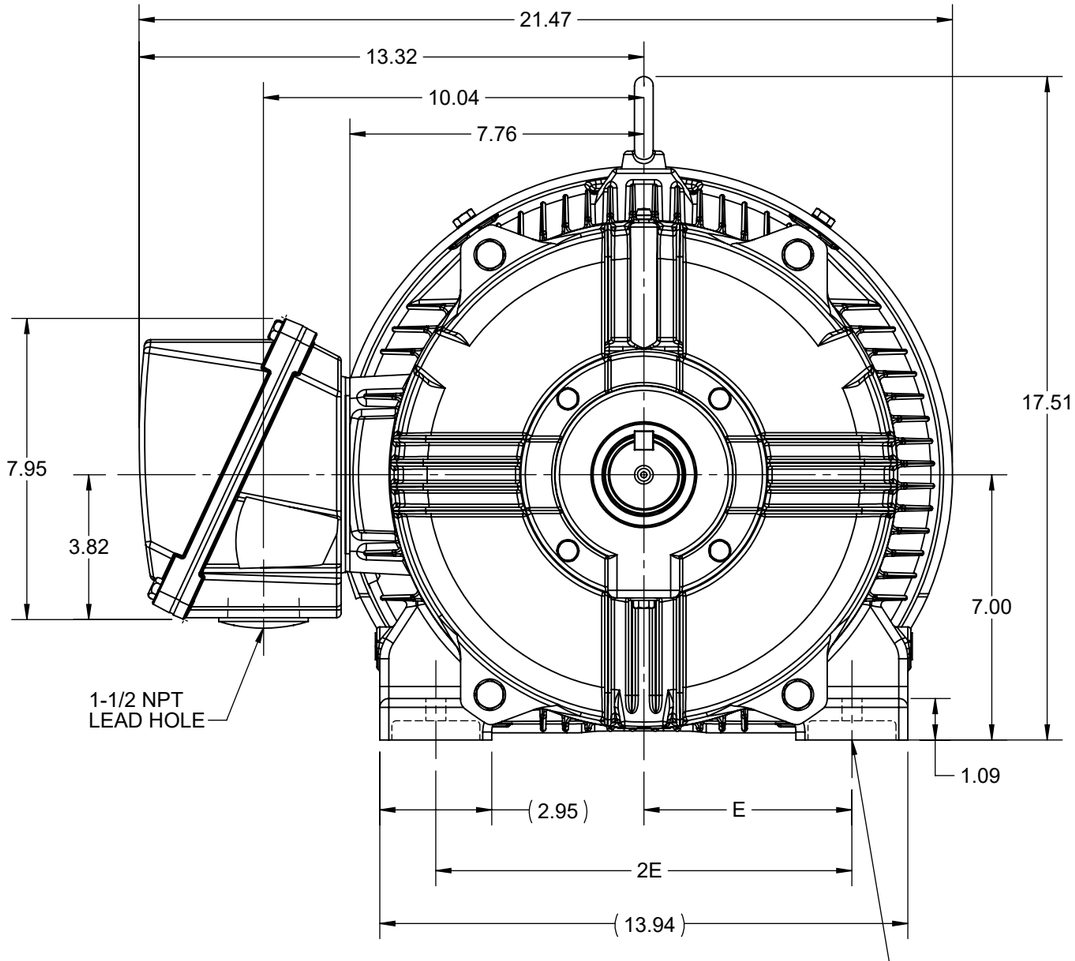
Drawings

Connection Drawing	**EE7300**	Outline Drawing	**SS312942-200**

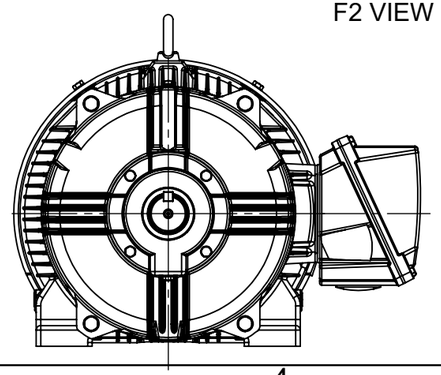
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DASH NO.	B	C	E	2E	2F	2FF	BA	BS	MOUNTING	FRAME
100	10.83	26.64	5.50	11.00	---	9.50	4.75	4.75	F1 OR F2	284T
200	12.68	28.14			9.50	11.00		5.50		284/286T





F2 VIEW



DRAWING REVISION: E	REVISION BY: SB	REV DATE/© DATE: 07/23/2025
REQUEST NUMBER: CR-0023556	APPROVED BY: SBD	DATE: 07/23/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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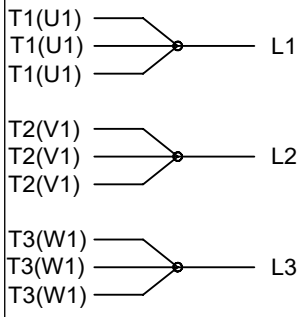
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY: BISWA	marathon™	
DATE: 24/12/2018	DESCRIPTION: OUTLINE 284/286T FR-NEMA-SD & IEEE841	
APPROVED BY: SBD		
DATE: 24/12/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS312942	SHEET: 1 OF 1

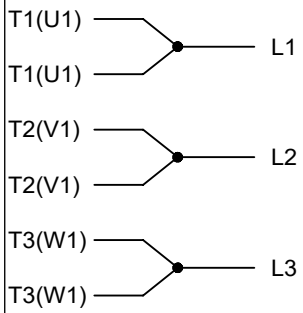
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

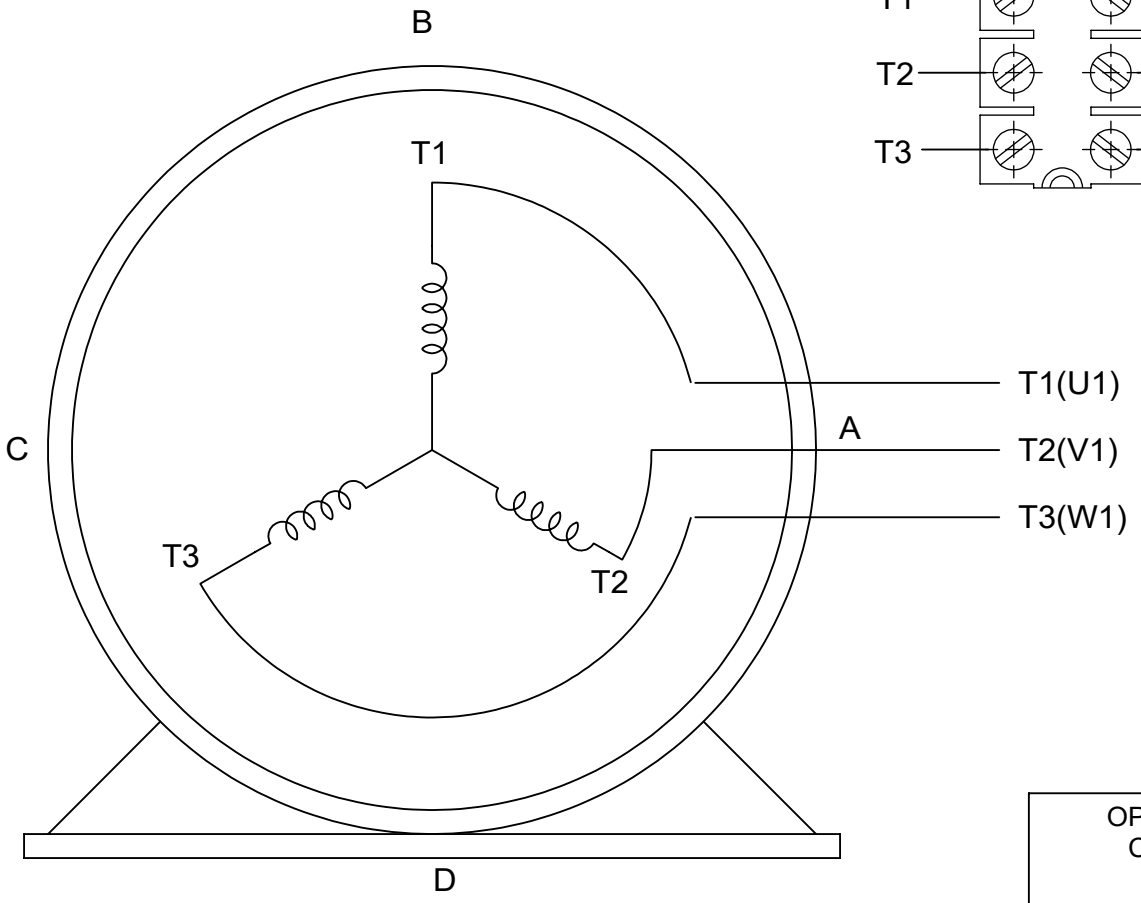
IF MOTOR HAS
9 LEADS



IF MOTOR HAS
6 LEADS



A-9806 DECAL



VIEW OF TERMINAL END

TERMINAL BLOCK WHEN SPECIFIED

OPTIONAL CORD
CONNECTION

L1	WHITE
L2	RED
L3	BLACK

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

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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DRAWN BY: DA	
DATE: 03-26-1993	
APPROVED BY: TB	
DATE: 03-26-1993	
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300	1 OF 1

Data Sheet

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

marathon® Motors

286THFCD19077

Submittal

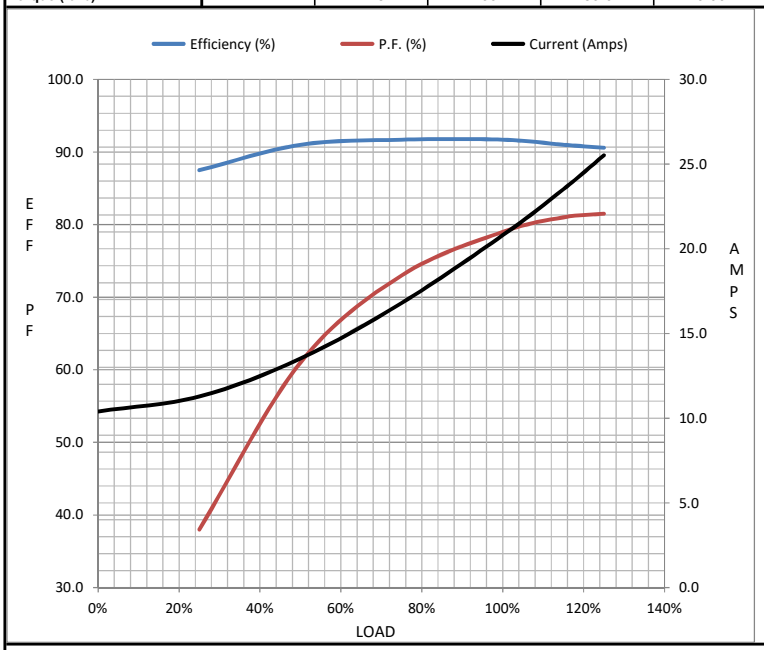
Data @ 575 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	10.4	11.3	13.5	16.8	20.8	23.5	25.5	116	
Torque (ft-lb)	0.00	22.0	44.0	66.5	89.0	102	112	172	
RPM	1200	1195	1190	1185	1180	1,178	1175	0	
Efficiency (%)		87.5	91.0	91.7	91.7	91.0	90.6		
P.F. (%)	4.5	38.0	61.0	73.0	79.0	81.0	81.5	40.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1095	1180	1200
Current (Amps)	116	106	64.8	20.8	10.4
Torque (ft-lb)	172	128	199	89.0	0.00



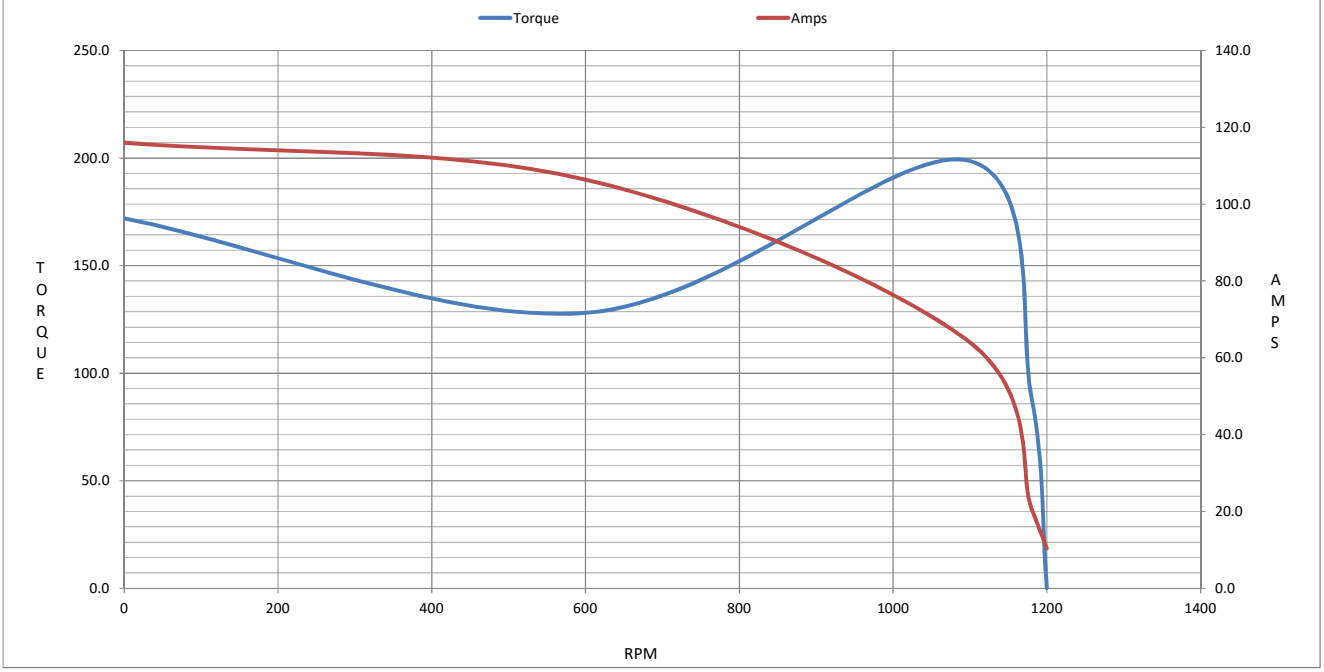
Information Block

HP	20.0	
Sync. RPM	1200	
Frame	286	
Enclosure	TEFC	
Construction	TFC	
Voltage	575	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	75	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	6.5	Lb-Ft²
Ref Wdg	HA31806005 NONE	
Sound Pressure @ 1M	56	dBA
VFD Rating	CONSTANT 10:1/VARIABLE 10:1	
Outline Dwg	SS312942	
Conn. Diag	EE7300	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.5810	0.2860	1.5510	2.3050	31.8870

Speed -Torque Curve



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marathon® Motors

DATA VOLTS: 575

CERTIFICATION DATA SHEET

MODEL #: 286THFCD19077
CAT #: W556A

CONN. DIAGRAM: EE7300
OUTLINE: SS312942
WINDING: HA31806005 NONE 3

MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	1200	1180	286T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	575	20.8	LINE OR INVERTER	CONT	H	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	79.0	3/4 LD PF	73.0	1/2 LD PF	61.0	91.0	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
89.0 LB-FT	116	152 LB-FT 171%	199 LB-FT 224%	65	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
56 dBA	65 dBA	6.50 LB-FT²	250 LB-FT²	20 SEC.	2	491 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	EMIUM SEVERE D	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6311	BALL 6211	POLYREX EM	T	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)	
0.9078125	0.446875	2.4234375	3.6015625	49.8234375	0.080	

NOTES
*
*

If Inverter equals NONE, contact factory for further information
INVERTER TORQUE: CONSTANT 10:1/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: 4/2/2020

FORM: 3531 REV_4 2/27/06
** Subject to change without notice.

UL: NO LETTER - ME,WUXI TEFC BLUEWHALE CLASS 1 DIV. 2 UL LIST