marathon®

Severe Duty Motors

Model No: 256TTFCD16855
Catalog No: E621A-P

Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 256T Frame, TEFC

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Product Information Packet: Model No: 256TTFCD16855, Catalog No: E621A-P Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 256T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**20 Hp**
Output KW	**14.9 kW**	Voltage	**460 V**
Speed	**1768 r/min**	Synchronous RPM	**1800 r/min**
Service Factor	**1.15**	Frame	**256T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**93 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**24.2 A**
Power Factor	**83.5**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6309**
Opp Drive End Bearing Size	**6209**	UL	**Recognized**
CSA	**Y**	CE	**Y**
IP Code	**55**	Number of Speeds	**1**

Technical Specifications

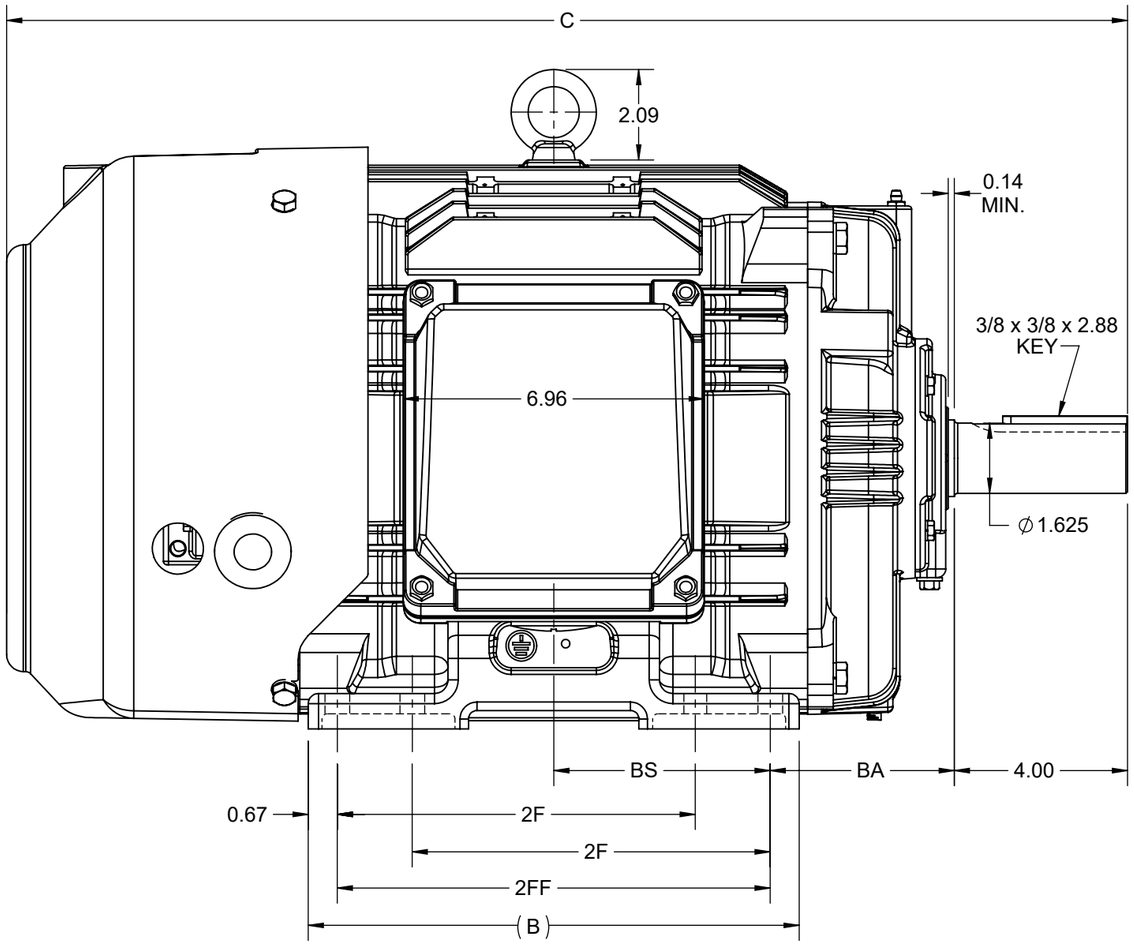
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**4**	Rotation	**Reversible**
Resistance Main	**.513 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**1.625 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 10:1/Variable 10:1**

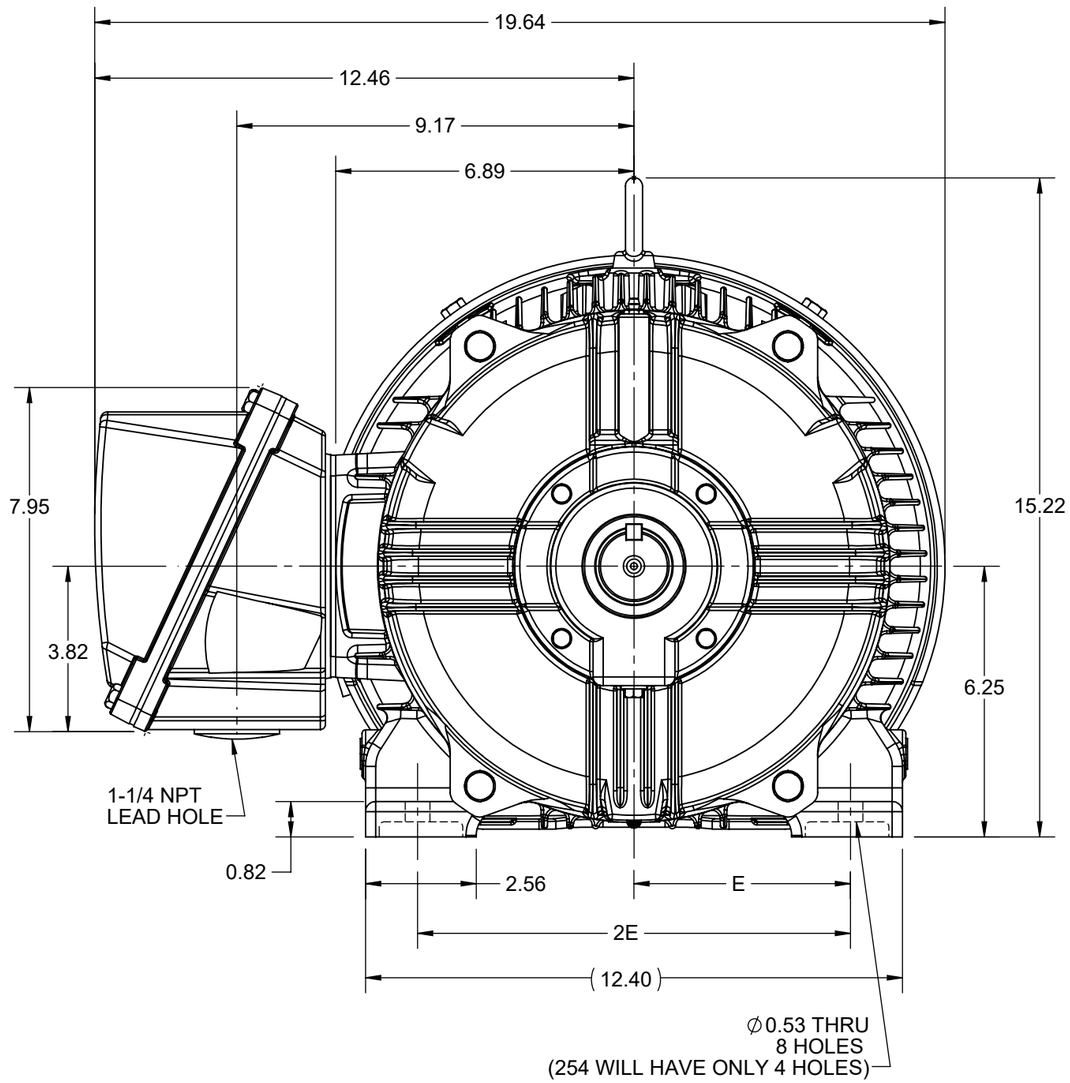
Drawings

Connection Drawing	**EE7300**	Outline Drawing	**SS208560-200**

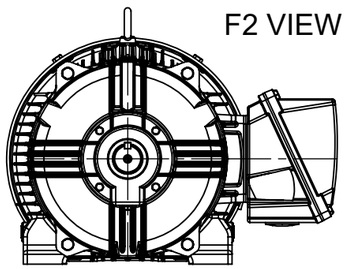
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DASH NO.	B	C	E	2E	2F	2FF	BA	BS	MOUNTING	FRAME
100	9.60	24.15	5.00	10.00	-	8.25	4.25	4.13	F1 OR F2	254T
200	11.34	25.89			8.25	10.00		5.00		254/256T





F2 VIEW



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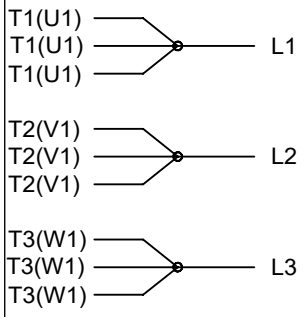
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY BISWA	marathon™	
DATE 26/09/2018	DESCRIPTION: OUTLINE 254T/256T FR-NEMA-SD & IEEE841	
APPROVED BY SBD		
DATE 26/09/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER SS208560	SHEET 1 OF 1

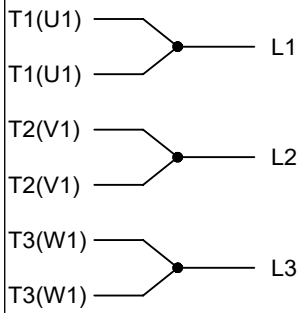
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

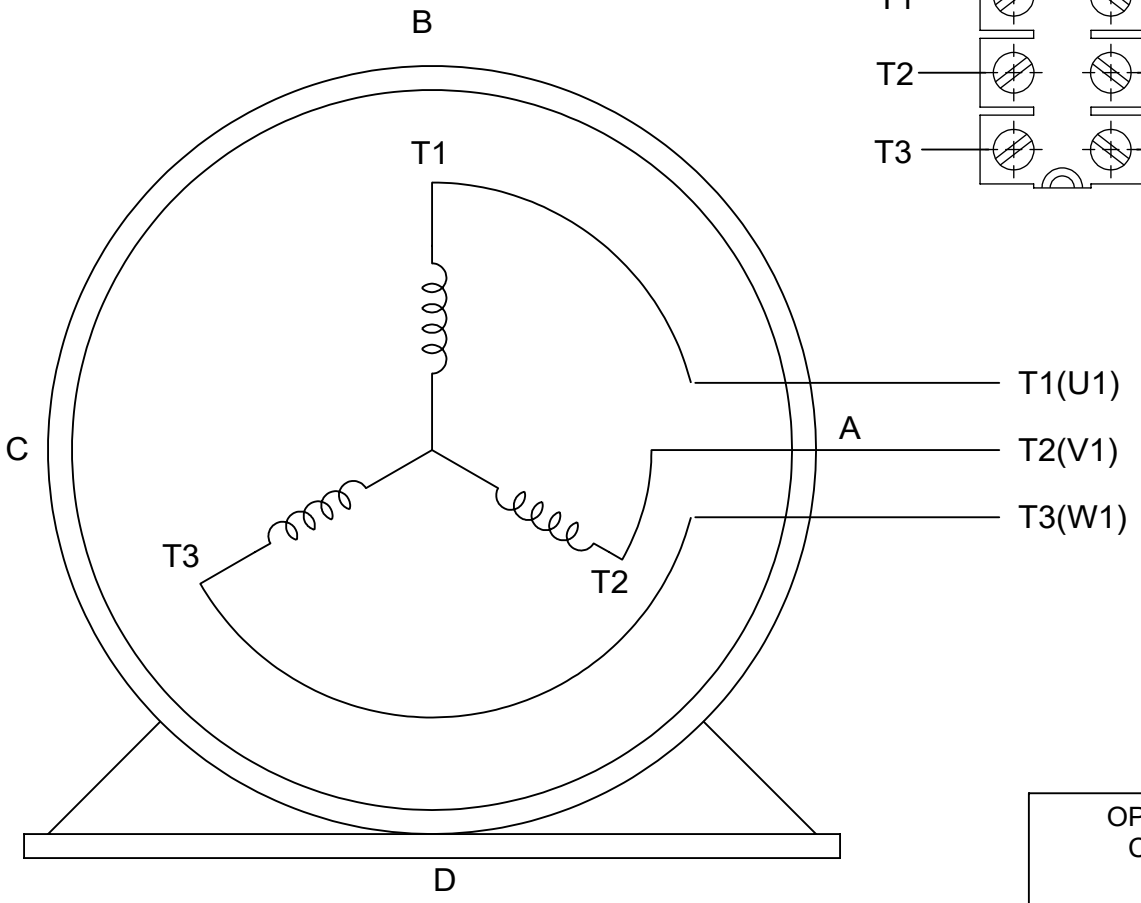
IF MOTOR HAS
9 LEADS



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

Uncontrolled Copy

Data Sheet

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

marathon® Motors

256TTFCD16855

Submittal

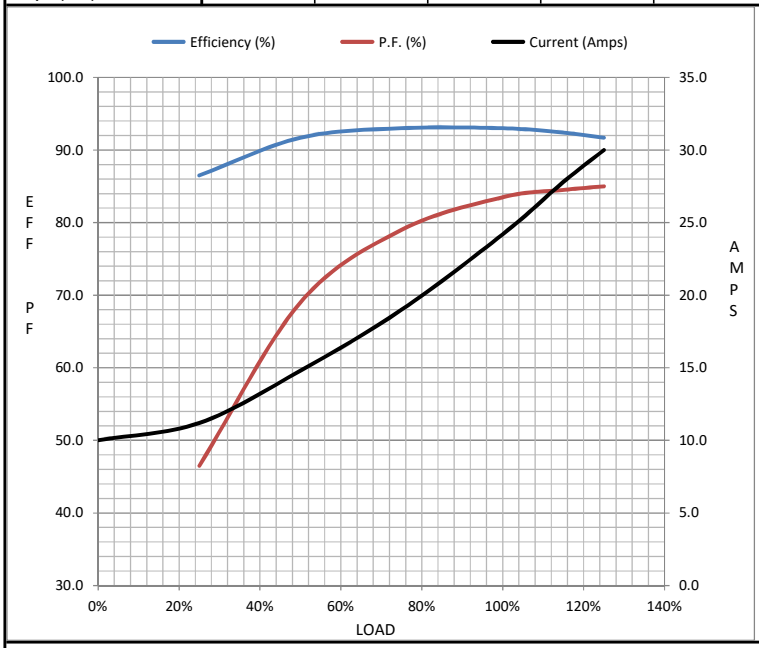
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	10.0	11.2	14.8	19.0	24.2	27.8	30.0	144	
Torque (ft-lb)	0.00	14.6	29.5	44.4	59.4	68.5	74.7	119	
RPM	1800	1792	1785	1778	1768	1,762	1760	0	
Efficiency (%)		86.5	91.7	93.0	93.0	92.4	91.7		
P.F. (%)	5.0	46.5	69.0	79.0	83.5	84.5	85.0	42.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1618	1768	1800
Current (Amps)	144	131	81.0	24.2	10.0
Torque (ft-lb)	119	99.0	146	59.4	0.00



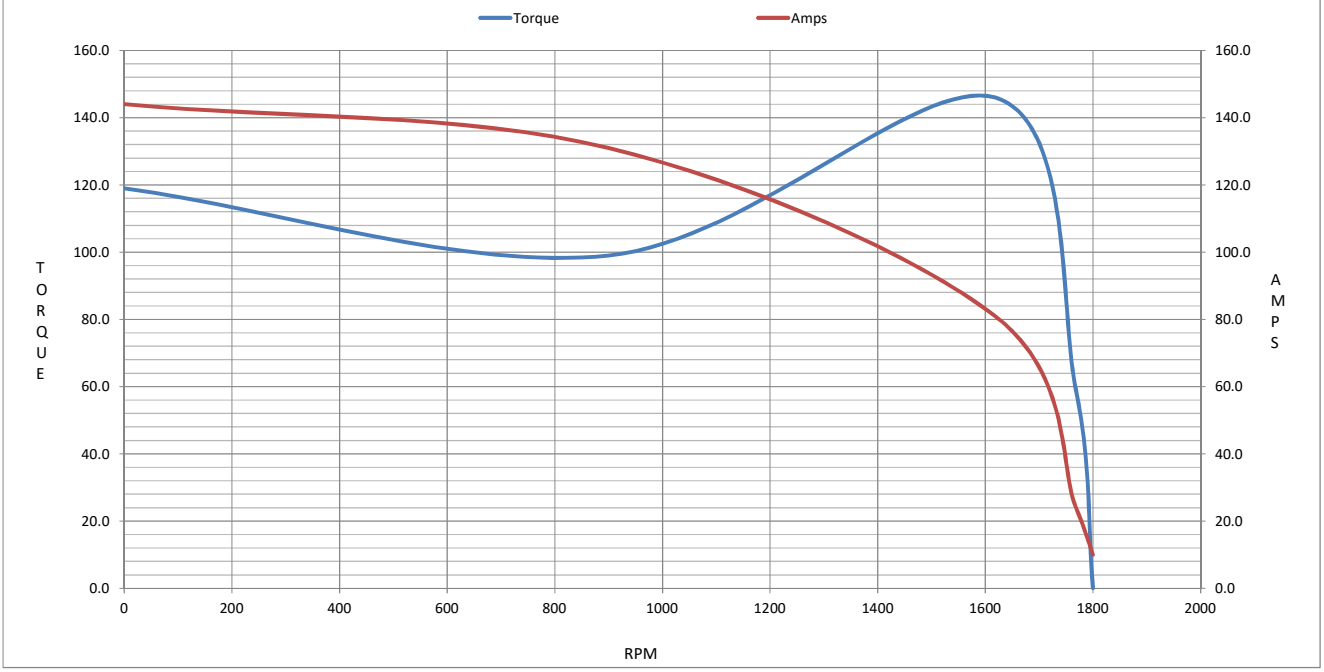
Information Block

HP	20.0	
Sync. RPM	1800	
Frame	256	
Enclosure	TEFC	
Construction	TFC	
Voltage	460	V
Frequency	60	Hz
Design	B	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	60	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	3.8	Lb-Ft²
Ref Wdg	HA31604018 NONE	
Sound Pressure @ 1M	65	dBA
VFD Rating	CONSTANT 10:1/VARIABLE 10:1	
Outline Dwg	SS208560	
Conn. Diag	EE7300	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.3410	0.2030	1.0370	1.2500	26.9800

Speed -Torque Curve



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marathon® Motors

DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 256TTFCD16855
CONN. DIAGRAM: EE7300 **CAT #:** E621A
OUTLINE: SS208560
WINDING: HA31604018 NONE 8 **MOUNTING:** F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	1800	1768	256T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	460	24.2	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	93.0	3/4 LD EFF	93.0	1/2 LD EFF	91.7	GTD EFF	ELECT. TYPE
F.L. PF	83.5	3/4 LD PF	79.0	1/2 LD PF	69.0	92.4	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
59.4 LB-FT	144	119 LB-FT 200%	146 LB-FT 246%	60	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
65 dBA	74 dBA	3.8 LB-FT²	125 LB-FT²	20 SEC.	2	344 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	NONE	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6309	6209						

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)	FLOAT
0.341	0.203	1.037	1.25	26.98	0.080	ODE

* 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:
DATE: 5/13/2020

FORM: 3531 REV_4 2/27/06
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