

PRODUCT INFORMATION PACKET

Model No: LM21204

Catalog No: LM21204

Speed Ratio Motors, TEFC, 20 HP, 3 Ph, 60 Hz, 230/460 V, 3530 RPM, 256T Frame



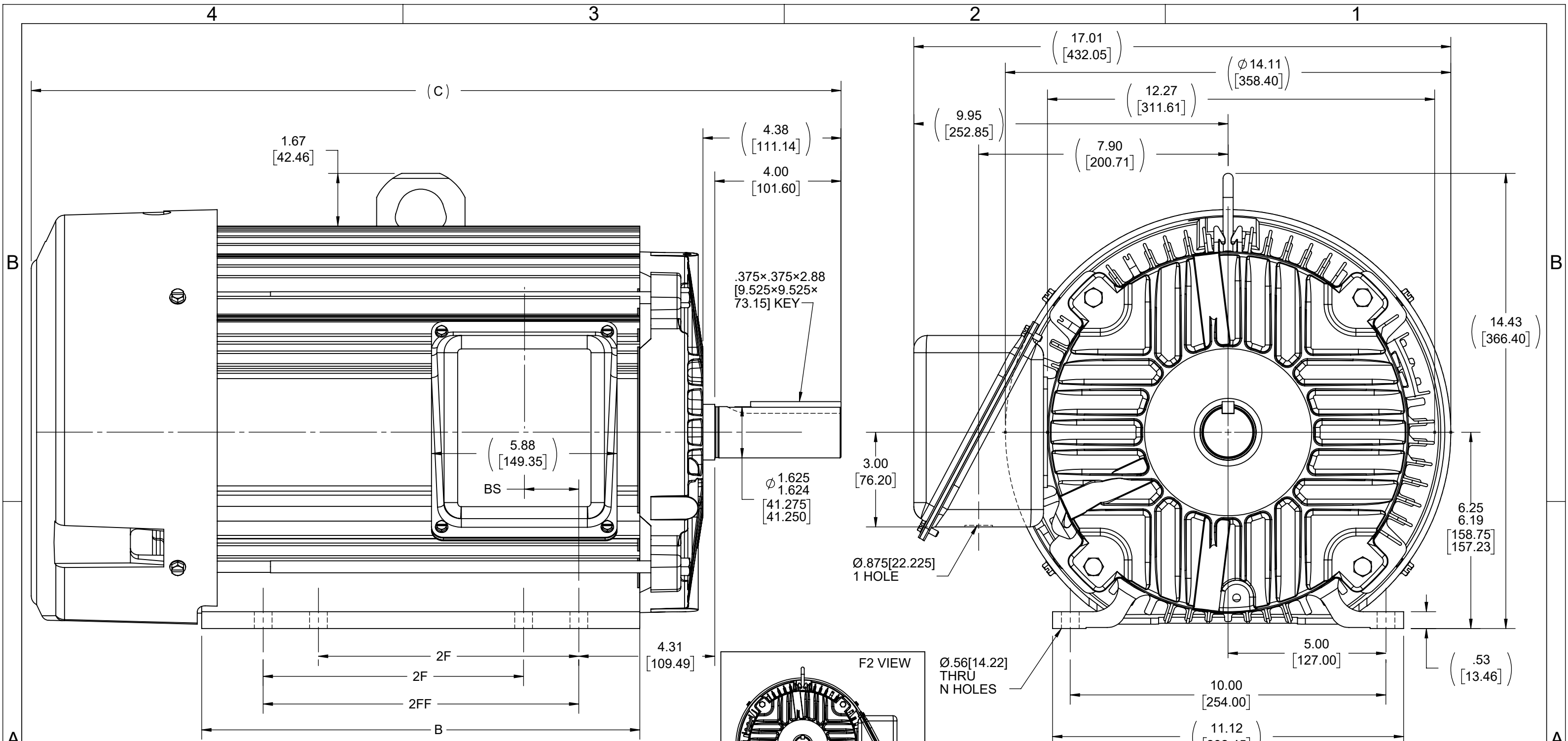
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Nameplate Specifications

Output HP	20 Hp	Output KW	14.9 kW
Frequency	60 Hz	Voltage	230/460 V
Current	47.0/23.5 A	Speed	3530 rpm
Service Factor	1	Phase	3
Efficiency	90.2 %	Power Factor	87.5
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	256T	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6208
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Duty	Starting Method	Inverter Only
Poles	2	Rotation	Reversible
Resistance Main	.398 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Aluminum
Shaft Type	T	Overall Length	25.26 in
Frame Length	13.88 in	Shaft Diameter	1.625 in
Shaft Extension	4 in	Assembly/Box Mounting	F1/F2 CAPABLE
Inverter Load	CONSTANT 4:1		
Outline Drawing	B-SS321100-1375	Connection Drawing	A-EE7308T-LN



- NOTES:
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
 2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	C	B	2F	2FF	BS	N
1200	254T	23.78 [603.90]	12.13 [308.10]	8.25 [209.55]	-----	1.73 [43.94]	4
1375	254/6T	25.66 [651.65]	13.88 [352.55]	8.25 [209.55]	10.00 [254.00]	1.73 [43.94]	8

DRAWING REVISION D	REVISION BY SP	DATE 05-26-2021
ECO CR-0001205	APPROVED BY AS	DATE 05-26-2021
ECO DESCRIPTION REPLACED FAN GUARD 3C223-E3 TO 205016B		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:

DEC.	INCH	mm	ANGLE
.X	± 0.1	[± 2.5]	$\pm 7' 30''$
.XX	± 0.03	[± 0.76]	
.XXX	± 0.005	[± 0.127]	
.XXXX	± 0.0005	[± 0.0127]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45°
 CORNER FILLETS: R.02 [51]
 MACHINED SURFACES: 200 INCH $\sqrt{\text{mm}}$ 5.1
 mm SHOWN IN [BRACKETS]

DRAWN BY
RJW

DATE
02-01-2005

APPROVED BY
BW

DATE
02-01-2005

REFERENCE

THIRD ANGLE PROJECTION

REGAL™ Regal Beloit America, Inc.

DESCRIPTION
OUTLINE
250T FR.-ALUM. FR.-TEFC

MATERIAL
PROCESS/FINISH

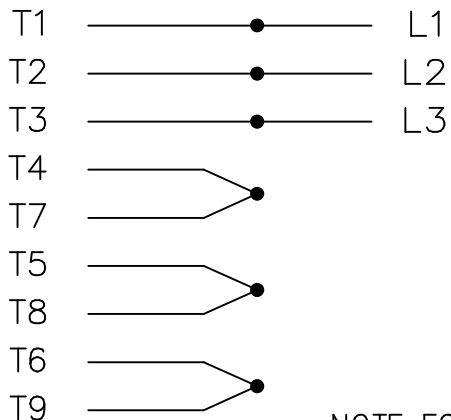
SIZE
B

DRAWING NUMBER
SS321100

SHEET
1 OF 1

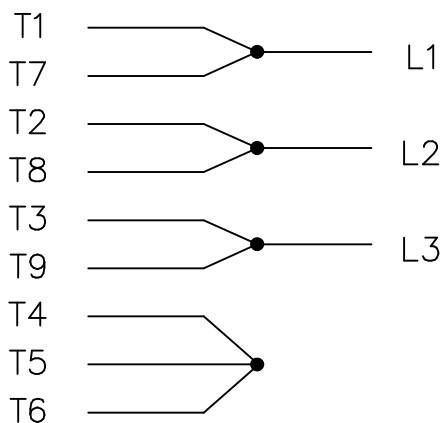
THREE PHASE
DUAL VOLTAGE MOTOR

HIGH VOLTAGE

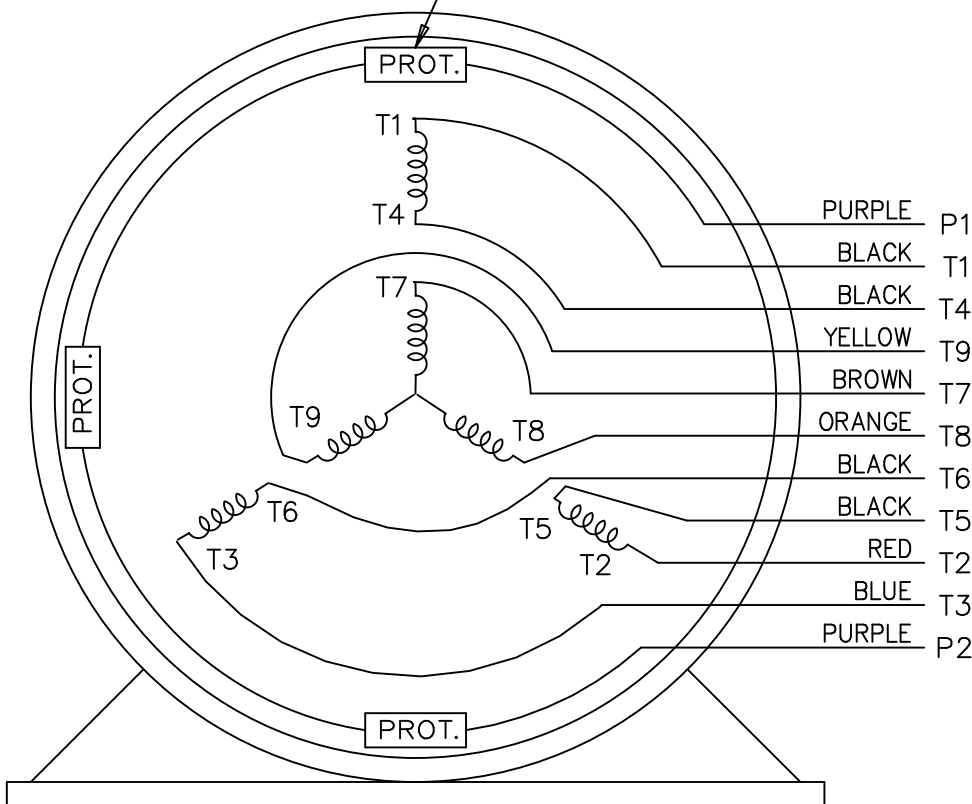


NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE



THREMO-PROTECTORS
CONNECTED IN SERIES.



VIEW OF TERMINAL END

				TOLERANCES UNLESS SPECIFIED			DRAWN BJK 07-16-2002			
				DEC.	INCHES		CHK DRS 07-18-2002			
				.X	±.1		APPD GK 07-18-2002			
				.XX	±.02		SCALE 1=1			
2	ADDED COLORS TO "T & P" LEADS	CN 40494	MSG 08-08-2006	ML	.XXX	±.005	TITLE CONNECTION DIAGRAM 3 PHASE - DUAL VOLTAGE MOTOR		REF	
1	NEW DRAWING		BJK 07-18-2002	DRS	.XXXX	±.0005			MAT'L.	FMF
NO.	REVISION	BY & DATE	CHK	ANG	±7'30"		FINISH	PREV		
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	CAD FILE ee7308t_ln			SIZE	DRAWING NO. PAGE OF	REV.
				DIST	LB			A	EE7308T-LN	2



1051 CHEYENNE AVE.
GRAFTON, WI 53024
PH. 262-277-8810

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CONN. DIAGRAM: A-EE7308T-LN
OUTLINE: B-SS321100-1375
WINDING: K2562124

CAT #: LM21204

R10 6

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	3600	3530	256T	TEFC	TFY	G	INC

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	230/460	47/23.5	INVERTER ONLY	CONT	F	1.15	40	3300

F.L. EFF	90.2	3/4 LD EFF	91.0	1/2 LD EFF	90.2	GTD EFF	ELECT. TYPE
F.L. PF	87.5	3/4 LD PF	85.0	1/2 LD PF	78.5	88.5	SQ CAGE INV DUTY

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
30.0 LB-FT	145	52.0 LB-FT 173%	87.0 LB-FT 290%	50

PRESSURE @ 3	SOUND	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
75 dBA	84 dBA		1.25 LB-FT²	0 LB-FT²	0 SEC.	0	350 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	NO	NONE	NO	NONE	WATTSAVER

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	ALUMINUM
BALL	BALL						
6309	6208						

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
0.268	0.22	1.093	0.923	38.624	0.080	ODE

* N O T E S *	INVERTER TORQUE: CONSTANT 4:1 INV. HP SPEED RANGE: NONE					
	ENCODER: NONE NONE NONE					
	BRAKE: NONE NONE NONE					
	FT-LB: NA VOLTAGE: NONE					
	HZ: NONE PPR					

DATE:	9/10/2018	UL: V - LI,ME-INS,CONST UL REC
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Data Sheet

Date: 9/10/2018

LM21204



Data @ **460 V**

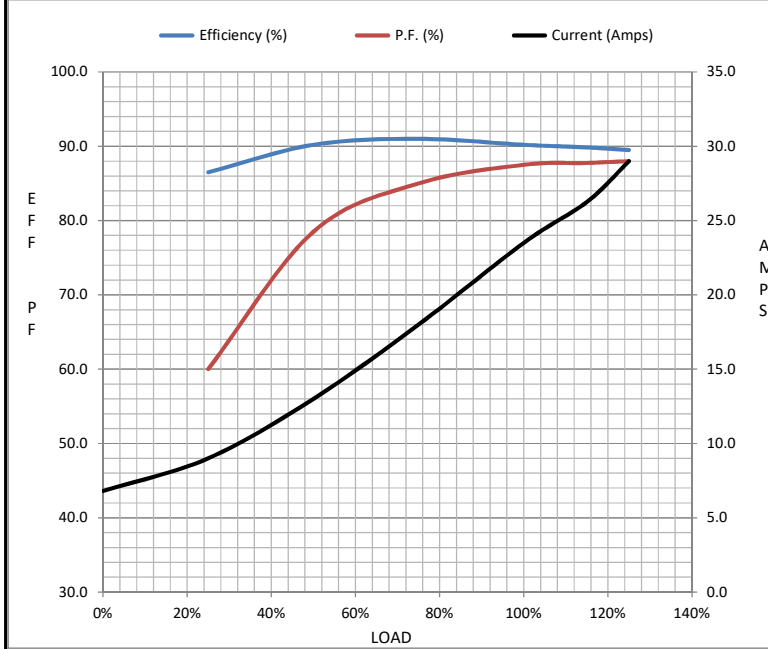
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	6.8	9.0	13.0	18.0	23.5	26.3	29.0	145
Torque (ft-lb)	0.00	7.4	14.8	22.2	30.0	33.8	37.5	52.0
RPM	3600	3585	3570	3550	3530	3,522	3510	0
Efficiency (%)		86.5	90.2	91.0	90.2	89.9	89.5	
P.F. (%)	9.5	60.0	78.5	85.0	87.5	87.8	88.0	36.5

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3200	3530	3600
Current (Amps)	145	135	90.0	23.5	6.8
Torque (ft-lb)	52.0	50.0	87.0	30.0	0.00

Information Block				
HP	20.0			
Sync. RPM	3600			
Frame	256			
Enclosure	TEFC			
Construction	TFY			
Voltage	230/460 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	50 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	1.25 Lb-Ft ²			
Ref Wdg	K2562124 R10			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 4:1			
Outline Dwg	B-SS321100-1375			
Conn. Diag	A-EE7308T-LN			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2680	0.2200	1.0930	0.9230	38.6240



Speed - Torque Curve

