PRODUCT INFORMATION PACKET

Model No: 213TPFRB10230
Catalog No: SY068
7.50 HP, Permanent Magnet (PMAC) Motors, 3 phase, 1800 RPM, 230/460 V, 213TC Frame, TEFC
Permanent Magnet (PMAC) Motors

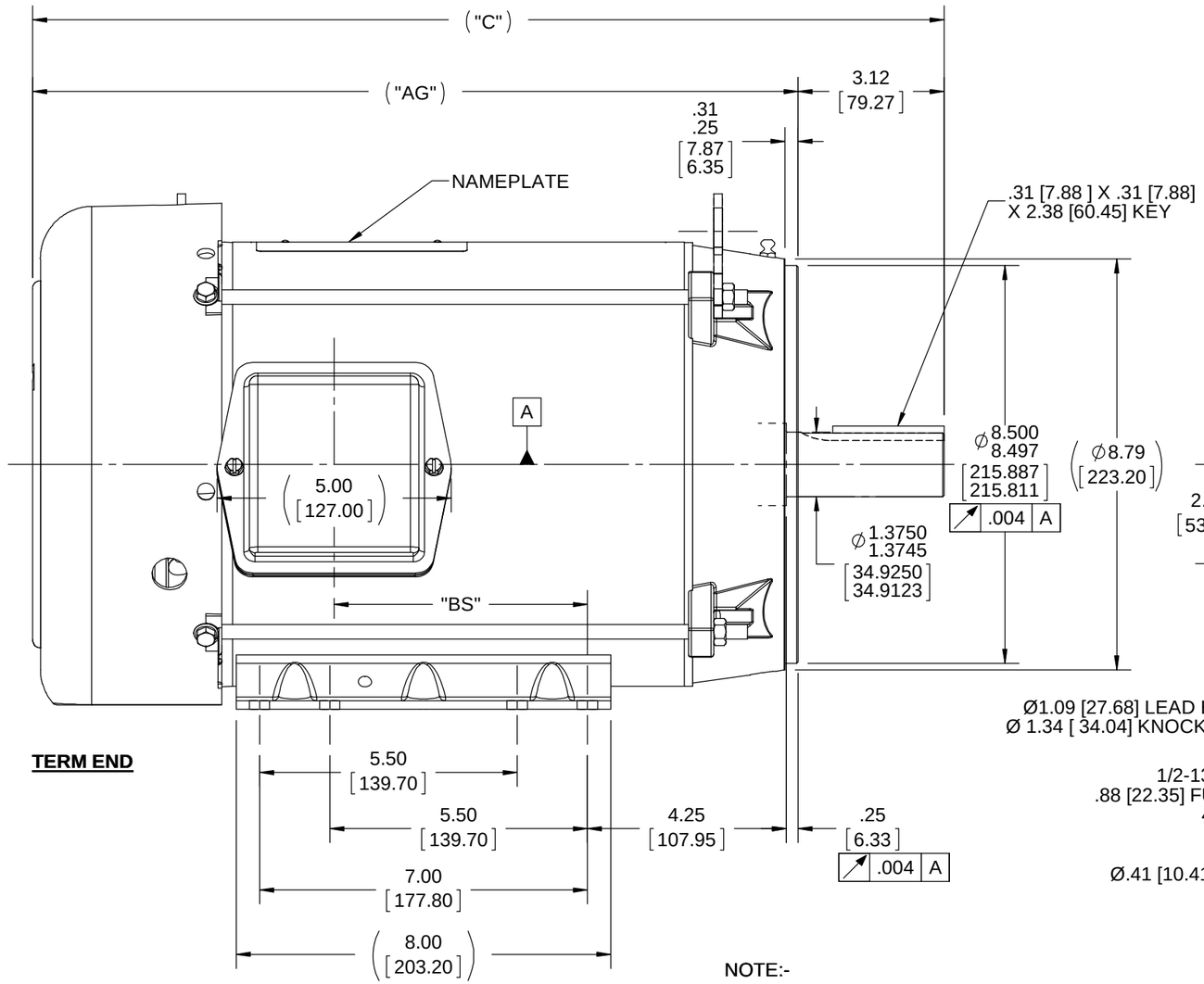
marathon® Motors

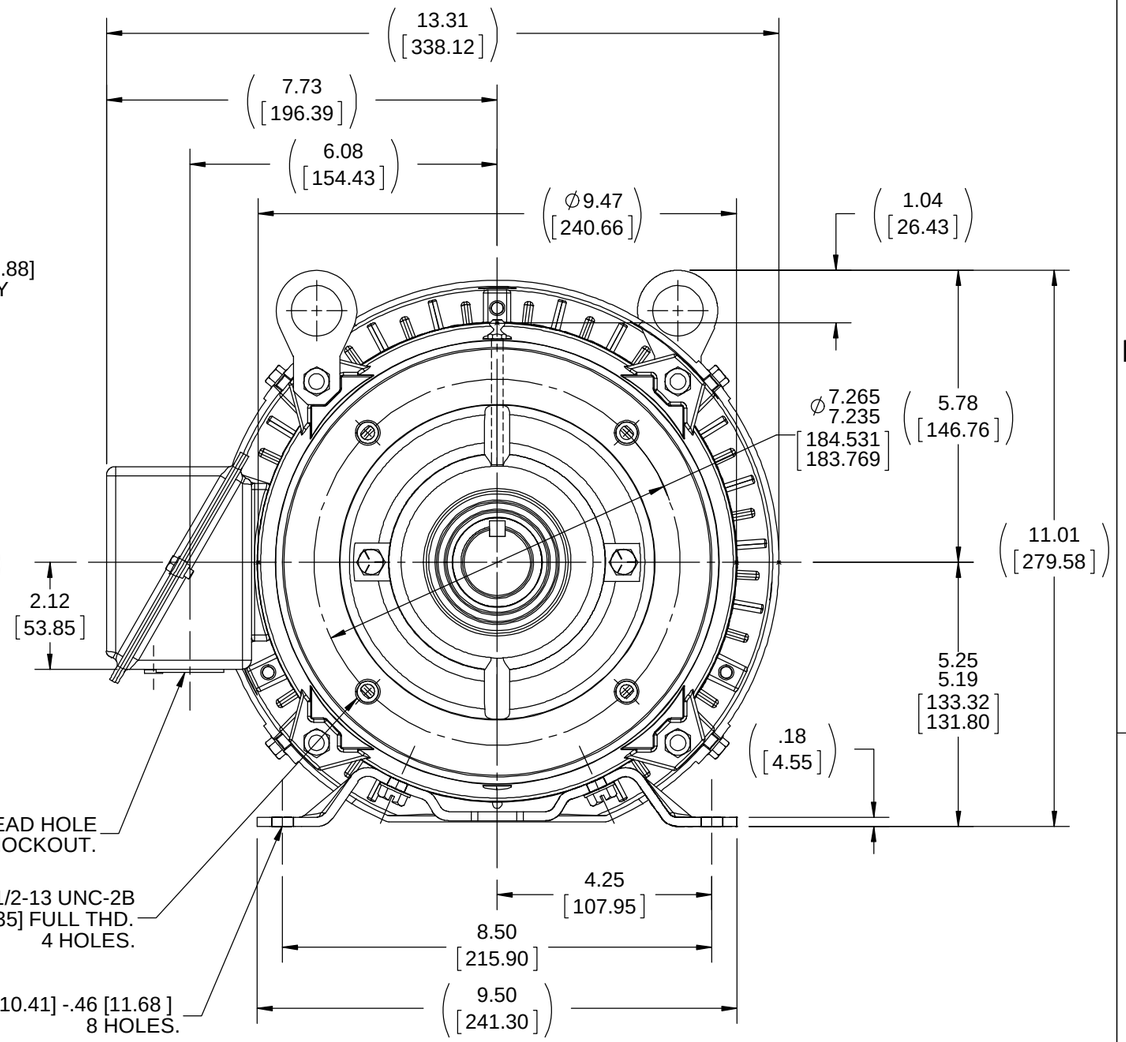
Nameplate Specifications

Output HP	7.50 Hp	Output KW	5.6 kW
Frequency	90 Hz	Voltage	230/460 V
Current	16.6/8.3 A	Speed	1800 rpm
Service Factor	1	Phase	3
Efficiency	94.1 %	Power Factor	88
Duty	Continuous	Insulation Class	F
Design Code	No Design Code	KVA Code	N/A
Frame	213TC	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostats 140 deg. C (N/C)	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	Y
CE	N	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	AC Permament Magnet	Starting Method	Inverter Only
Poles	6	Rotation	Reversible
Resistance Main	1.34 Ohms	Mounting	Bolt-on Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Rolled Steel
Shaft Type	T	Overall Length	19.47 in
Frame Length	9.65 in	Shaft Diameter	1.375 in
Shaft Extension	3.12 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 20:1		
Connection Drawing	EE7308T	Outline Drawing	036394-965





NOTE:-

1) NAMEPLATE TO BE READ FROM C"BOX SIDE OF MOTOR.
2) BOX CAN BE MOUNTED IN 90° STEPS.
3) BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKET AND TURNING FRAME 180°. (EXCEPT AS NOTE).
4) (NOT FIELD MODIFIABLE ON PMAC)

DASH	FR.	"C"	"AG"	"BS"
965	213T	19.47 [494.54]	16.35 [415.29]	5.41 [137.41]

DRAWING REVISION	REVISION BY	DATE
A		
ECO	APPROVED BY	DATE
ECO-0144874		
ECO DESCRIPTION		
OUTLINE CONVERSION PROJECT		

TOLERANCES UNLESS OTHERWISE SPECIFIED:

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

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45 °
CORNER FILLETS: R.02 [.51]
MACHINED SURFACES: 200 INCH / 5.1 mm
mm SHOWN IN [BRACKETS]

DRAWN BY	A.SUPPANNAVAR
DATE	05/07/2018
APPROVED BY	ST
DATE	05/14/2018
REFERENCE	036254
THIRD ANGLE PROJECTION	

Regal Beloit America, Inc.

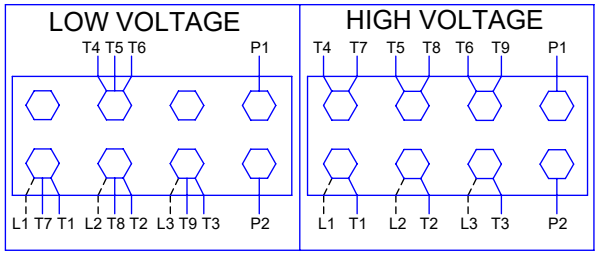
DESCRIPTION: OUTLINE
210T FR.-BB-TS-TEFC-R/S-C' FACE

MATERIAL | PROCESS/FINISH

SIZE: B | DRAWING NUMBER: 036394 | SHEET: 1 OF 1

HIGH VOLTAGE

(U1) T1 — L1
(V1) T2 — L2
(W1) T3 — L3
(U2) T4
(U3) T7
(V2) T5
(V3) T8
(W2) T6
(W3) T9

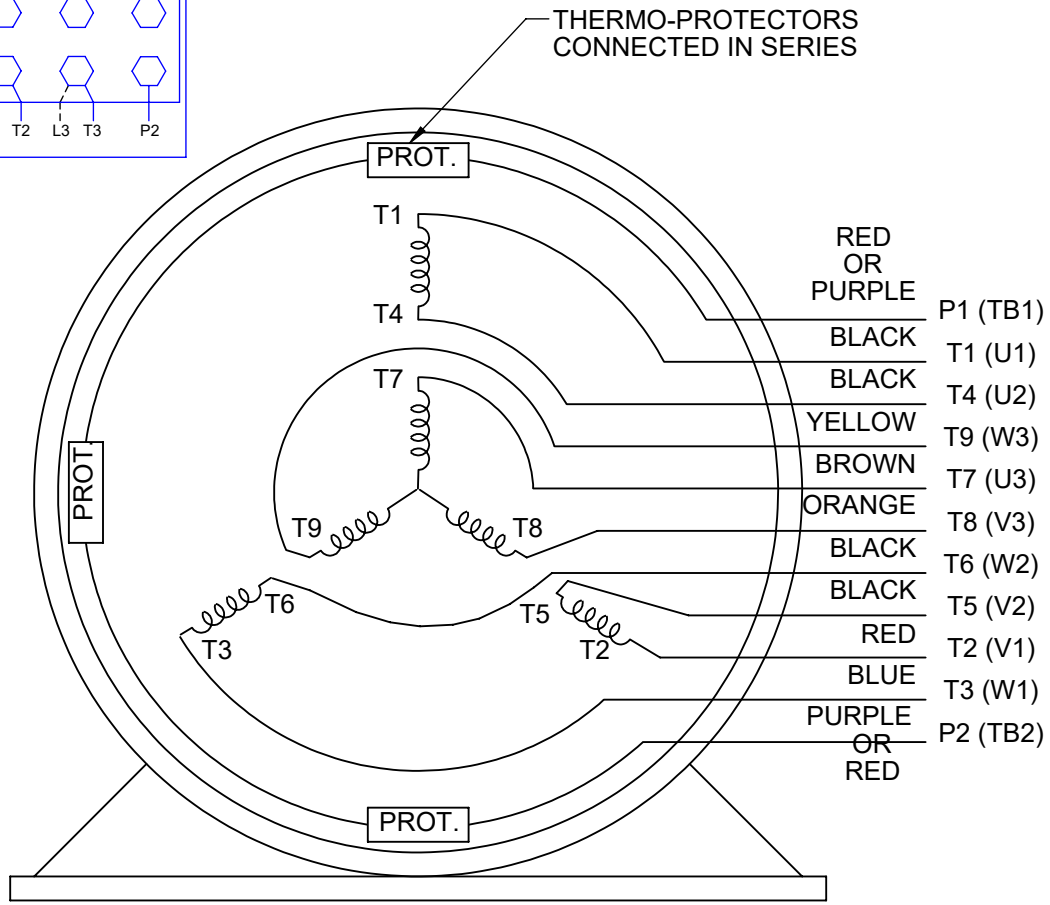


NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE

(U1) T1
(U3) T7 — L1
(V1) T2
(V3) T8 — L2
(W1) T3
(W3) T9 — L3
(U2) T4
(V2) T5
(W2) T6

THREE PHASE DUAL VOLTAGE MOTOR



VIEW OF TERMINAL END

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

DRAWING REVISION: T	REVISION BY: ZR	DATE: 01-14-2019		DRAWN BY: SMC	Regal Beloit America, Inc.
ECO: ECO-0159915	APPROVED BY: DR	DATE: 01-15-2019		DATE: 05-13-1992	
ECO DESCRIPTION: ADDED TERMINAL CONNECTION DIAGRAM				APPROVED BY: TB	DESCRIPTION: CONN DIAGRAM-INTERNAL — 3 PHASE - DUAL VOLTAGE MOTOR
				DATE: 05-13-1992	
				REFERENCE: EE7308/EE7300	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE: A — DRAWING NUMBER: EE7308T — SHEET: 1 OF 1

CERTIFICATION DATA SHEET

Model#:	213TPFRB10230 AA	**WINDING#:**	PM21506025 NONE 2
CONN. DIAGRAM:	EE7308T	**ASSEMBLY:**	F1 ONLY
OUTLINE:	036254-965		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
7 1/2	5.6	1800	1800	213TC	TEFC	NO KVA CODE	PM

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	90	230/460	17.2/8.6	INVERTER ONLY	CONTINUOUS	F1	1.0	40	3300

FULL LOAD EFF: 93.8	3/4 LOAD EFF: -	1/2 LOAD EFF: -	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 86.3	3/4 LOAD PF: -	1/2 LOAD PF: -	92.4	AC PERMANENT MAGNET	.8 / .4

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
21.88 LB-FT	/	- LB-FT -	- LB-FT -	34

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
0 dBA	10 dBA	0.58 LB-FT^2	0 LB-FT^2	0 SEC.	0	94 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0	0.67	15	28.3	226

RM	ZREF	XR	TD	TD0
0	1	0	0	0

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	STANDARD	BOLT-ON	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLACK (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL 6309	BALL 6206	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	ROLLED STEEL

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS 140(N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 20:1
INV. HP SPEED RANGE: 1.2 X BASE SPEED

ENCODER: NONE
NONE NONE
NONE NONE PPR

BRAKE: NONE NONE

* NOTES *

NONE	P/N NONE		
NONE	NONE		
NONE FT-LB		NONE V	NONE Hz

DATE: 06/22/2017 04:15:36 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

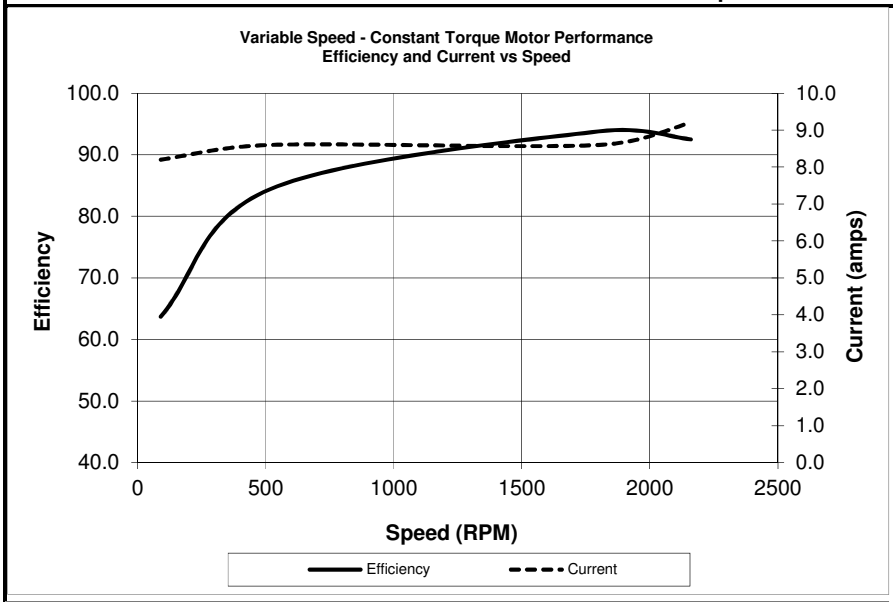
Data Sheet

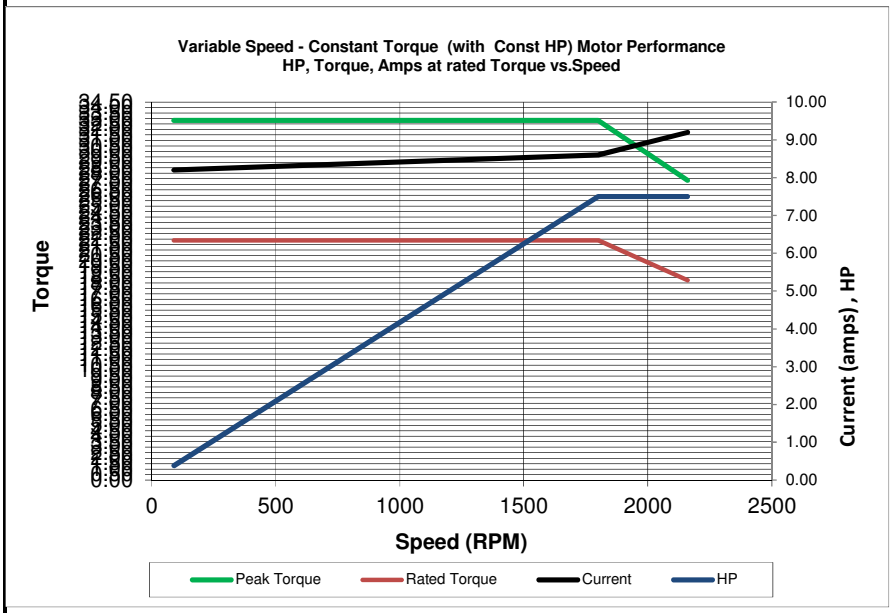
Date:	2/20/2018	**Model:**	213TPFRB10230
Customer:	KENDALL ELECTRIC	**Catalog:**	SY068
Attention:		**Winding:**	PM21506025
Submitted by:	STEVE BERNHARDT	**Submittal Data @**	460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	150%	
Current (Amps)	0.4	2.40	4.20	6.20	8.30	9.40	0.00		
Torque (ft-lb)	0.00	5.47	10.94	16.41	21.88	25.17	0.00	0.00	
Efficiency (%)		88.8	92.5	93.1	93.8	95.3	0.0		

Motor Speed Data





Motor Characteristics

HP	7.50	
Sync. RPM	1800	
Frame	215	
Enclosure	TEFC	
Construction Type	PFR	
Voltage	460	V
Frequency	90	Hz
Motor P.F. (%)	86.3	
Reserve Tq Capability	150	%
Temp Rise @ FL	34	° C
Insulation Class	F	
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Ref Wdg	PM21506025	NONE
Sound Pressure @ 1m	0	dBA
Motor Wgt	94	Lb
Rotor/Shaft wk²	0.58	Lb-Ft²
CT Speed Range	20	:1
VT Speed Range	2000	:1
Outline Dwg	614-0004-005	
Conn. Diag	EE7308	
DE Bearing	6205	
ODE Bearing	6203	

Additional Specifications:

PWM variable frequency electronic drive that is
permanent magnet motor capable required for operation.
Motor efficiency reflects operation on a VFD.

R / phase (ohms)	Ld (mH)	Lq (mH)	BEMF (V/krpm)
0.67	15	28.3	226

Constant Torque (Constant Power) Load Points

Hz	RPM	HP	ft-lb	Amps	Eff	Pk Tq
5	90	0.38	21.88	8.20	63.7	32.82
90	1800	7.5	21.88	8.60	93.8	32.82
108	2160	7.5	18.24	9.20	92.5	27.36