

# PRODUCT INFORMATION PACKET

**marathon**<sup>®</sup>  
Motors

Model No: 213TPNSB10234  
Catalog No: SY008A  
7 1/2, 1800, TENV, 213TC, 3/60/230/460  
SyMAX - Permanent Magnet AC Motors



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**REGAL**<sup>®</sup>

**Product Information Packet: Model No: 213TPNSB10234, Catalog No:SY008A 7  
1/2,1800,TENV,213TC,3/60/230/460**

**Nameplate Specifications**

Output HP	<b>7.50 Hp</b>	Output KW	<b>5.6 kW</b>
Frequency	<b>90 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>18.6/9.3 A</b>	Speed	<b>1800 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>94.3 %</b>	Duty	<b>Continuous</b>
Insulation Class	<b>H</b>	Design Code	<b>No Design Code</b>
KVA Code	<b>N/A</b>	Frame	<b>213TC</b>
Enclosure	<b>Totally Enclosed Non Ventilated</b>	Overload Protector	<b>No</b>
Ambient Temperature	<b>40 °C</b>	Drive End Bearing Size	<b>6309</b>
Opp Drive End Bearing Size	<b>6208</b>	UL	<b>Recognized</b>
CSA	<b>N</b>	CE	<b>N</b>
IP Code	<b>54</b>		

**Technical Specifications**

Electrical Type	<b>AC Permanent Magnet</b>	Starting Method	<b>Inverter Only</b>
Poles	<b>6</b>	Rotation	<b>Reversible</b>
Mounting	<b>Rigid Base</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>Ball</b>	Opp Drive End Bearing	<b>Ball</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>T</b>
Overall Length	<b>20.41 in</b>	Frame Length	<b>9.12 in</b>
Shaft Diameter	<b>1.3 in</b>	Shaft Extension	<b>3.12 in</b>
Assembly/Box Mounting	<b>F1 Only</b>		
Outline Drawing	<b>037797-912</b>	Connection Diagram	<b>EE7308T</b>

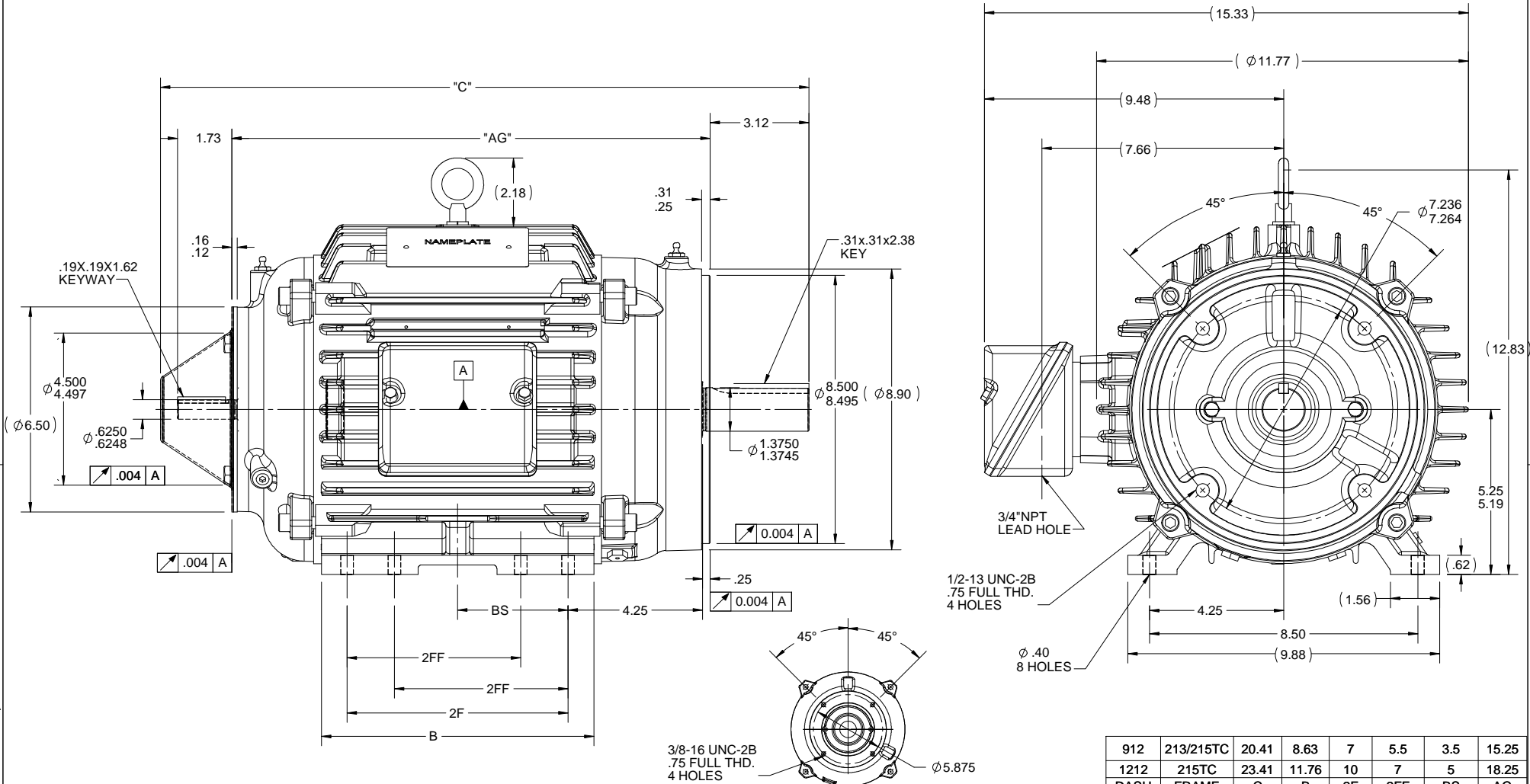
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B

B

A

A



- NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
  2. CONDUIT BOX CAN BE MOUNTED IN OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180° (NOT FIELD MODIFIABLE ON PMAC MOTORS.)
  3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DRAWING REVISION C	REVISION BY NK	DATE 7/31/2018	TOLERANCES UNLESS OTHERWISE SPECIFIED: DEC. INCH mm ANGLE -X ±0.1 [+2.5] ±7-30° .XX ±0.02 [+0.51] .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 5.1 INCH mm mm SHOWN IN [BRACKETS]	DRAWN BY PST
ECO ECO-0149805	APPROVED BY SR	DATE 7/31/2018	DATE 04/22/15	REGAL™ Regal Beloit America, Inc.
ECO DESCRIPTION GD&T ADDED COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.			APPROVED BY SR	DESCRIPTION OUTLINE 210 FR. TENV-8.5" & 4.5" C-FACE
			DATE 04/22/15	MATERIAL
			REFERENCE 037724	PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE B
			DRAWING NUMBER 037797	SHEET 1 OF 1

912	213/215TC	20.41	8.63	7	5.5	3.5	15.25
1212	215TC	23.41	11.76	10	7	5	18.25
DASH	FRAME	C	B	2F	2FF	BS	AG

## HIGH VOLTAGE



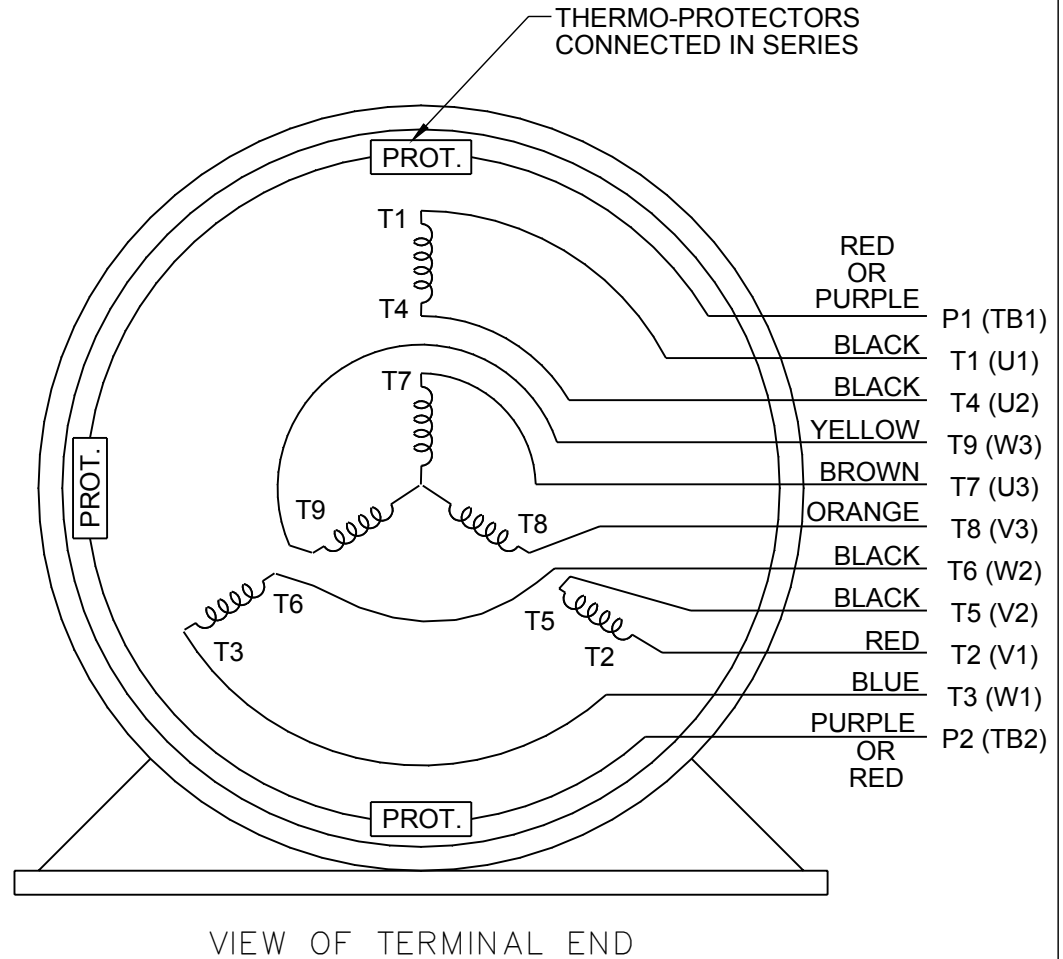
**NOTE FOR FACTORY USE ONLY:  
 TO SURGE TEST FOR COMMON CONNECT:  
 HIGH VOLT: CONNECT P1 TO T1  
 THEN P2 TO L1  
 LOW VOLT: CONNECT P1 TO T1 & T7,  
 THEN P2 TO L1**

## LOW VOLTAGE



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

## THREE PHASE DUAL VOLTAGE MOTOR



DRAWING REVISION <b>R</b>	REVISION BY <b>AJW</b>	DATE <b>07-17-2015</b>		DRAWN BY <b>SMC</b>	<b>Regal Beloit America, Inc.</b>
ECO <b>ECO-0081632</b>	APPROVED BY <b>T. VUE</b>	DATE <b>07-17-2015</b>		DATE <b>05-13-1992</b>	
ECO DESCRIPTION <b>REV'D IEC NOTATIONS PER IEC 60034-8</b>				APPROVED BY <b>TB</b>	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b>
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.                  PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF                  REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY                  INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,                  BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED                  TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT                  AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL                  BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN                  RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				DATE <b>05-13-1992</b>	<b>3 PHASE - DUAL VOLTAGE MOTOR</b>
			REFERENCE <b>EE7308/EE7300</b>	MATERIAL	PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE <b>A</b>	DRAWING NUMBER <b>EE7308T</b>

CERTIFICATION DATA SHEET

Model#: 213TPNSB10234 A WINDING#: PM21506025 R1 2  
 CONN. DIAGRAM: EE7308T ASSEMBLY: F1 ONLY  
 OUTLINE: 037797-912

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN			
7 1/2	5.6	1800	1800	213TC	TENV	N/A	PM			
PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION	
3	90	230/460	18.6/9.3	INVERTER ONLY	CONTINUOUS	H1	1.0	40	3300	
FULL LOAD EFF: 94.3		3/4 LOAD EFF: -		1/2 LOAD EFF: -		GTD. EFF		ELEC. TYPE		NO LOAD AMPS
FULL LOAD PF: 83.2		3/4 LOAD PF: -		1/2 LOAD PF: -		93.6		AC PERMANENT MAGNET		/
F.L. TORQUE		LOCKED ROTOR AMPS		L.R. TORQUE		B.D. TORQUE		F.L. RISE°C		
21.88 LB-FT		/		- LB-FT -		- LB-FT -		78		
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	165 LBS.				

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0	0.66	17.2	36.2	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	ENCODER	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLACK (EPOXY)

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

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: PROVISIONS ONLY
DYNAPAR HS35
NONE NONE PPR
BRAKE: NONE NONE

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N  
O  
T  
E  
S  
\*

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

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