

PRODUCT INFORMATION PACKET

marathon[®]
Motors

Model No: 256TPFSA10087
Catalog No: SY011
20,1800,TEFC,256TC,3/60/460
SyMAX - Permanent Magnet AC Motors



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REGAL[®]

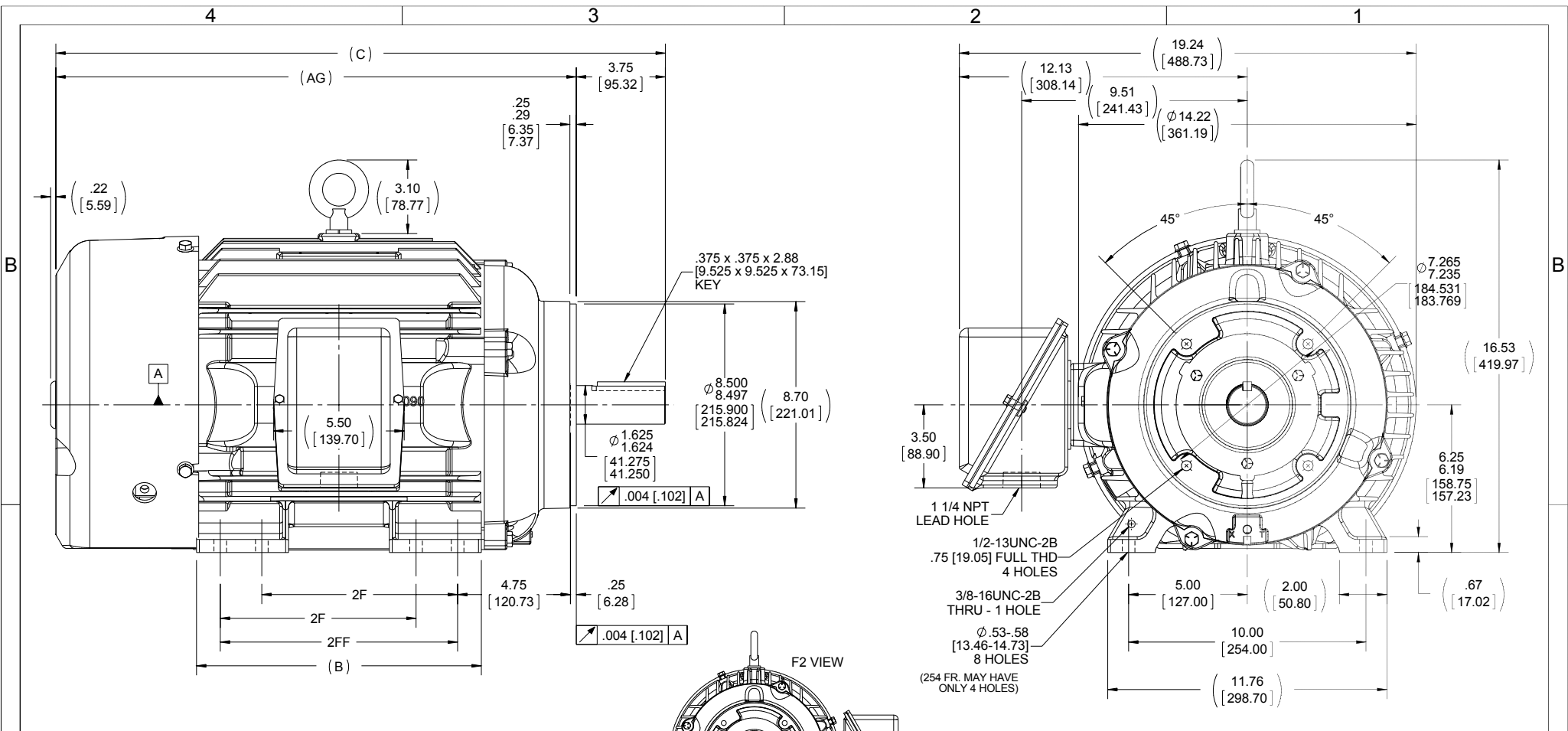
Nameplate Specifications

Output HP	20 Hp	Output KW	14.9 kW
Frequency	120 Hz	Voltage	460 V
Current	24.0 A	Speed	1800 rpm
Service Factor	1	Phase	3
Efficiency	94.5 %	Duty	Continuous
Insulation Class	H	Design Code	No Design Code
KVA Code	NO KVA CODE	Frame	256TC
Enclosure	Totally Enclosed Fan Cooled	Overload Protector	No
Ambient Temperature	40 °C	Drive End Bearing Size	6309
Opp Drive End Bearing Size	6210	UL	Recognized
CSA	Y	CE	Y
IP Code	54		

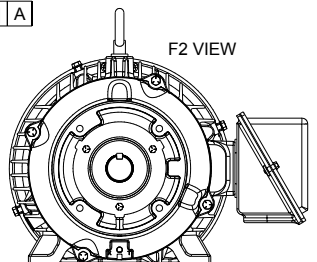
Technical Specifications

Electrical Type	AC Permanent Magnet	Starting Method	Inverter Only
Poles	8	Rotation	Reversible
Mounting	Rigid Base	Motor Orientation	Horizontal
Drive End Bearing	Ball	Opp Drive End Bearing	Ball
Frame Material	Cast Iron	Shaft Type	T
Overall Length	25.68 in	Frame Length	12.25 in
Shaft Diameter	1.5 in	Shaft Extension	3.75 in
Assembly/Box Mounting	F1/F2 Capable		
Outline Drawing	B-SS203152-1225	Connection Diagram	A-EE7300T

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



DASH	FRAME	B	C	AG	2F	2FF	BS
1050	254TC	10.25 [260.35]	23.93 [607.82]	20.18 [512.57]	8.25 [209.55]		4.12 [104.65]
1225	254/256TC	12.00 [304.80]	25.68 [652.27]	21.93 [557.02]	8.25 [209.55]	10.00 [254.00]	5.00 [127.00]

DRAWING REVISION G	REVISION BY JHA	DATE 10-21-2015
ECO-0087068	APPROVED BY TDB	DATE 10-22-2015
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS		

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TOLERANCES UNLESS OTHERWISE SPECIFIED:		
DEC.	INCH	mm
.X	+0.1	[+2.5]
.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 $\sqrt{\text{mm}}$ 5.1 $\sqrt{\text{INCH}}$		
mm SHOWN IN [BRACKETS]		

DRAWN BY PKG	DATE 09-03-1996
APPROVED BY BW	DATE 09-06-1996
REFERENCE	THIRD ANGLE PROJECTION

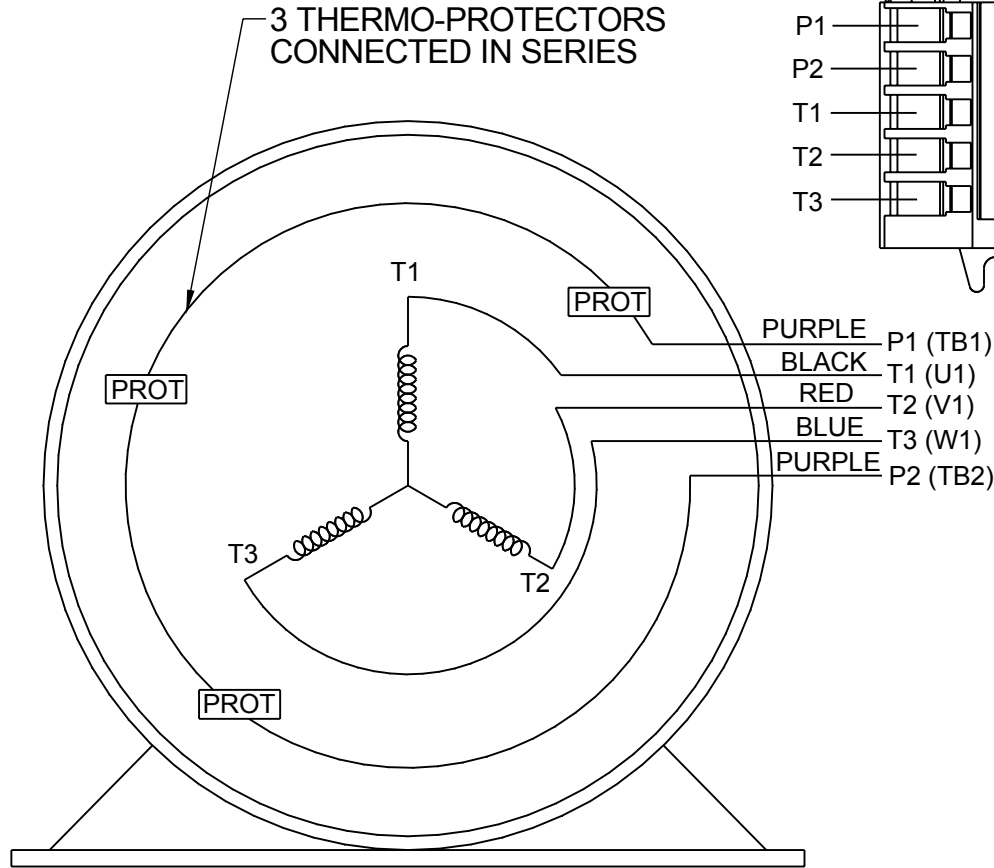
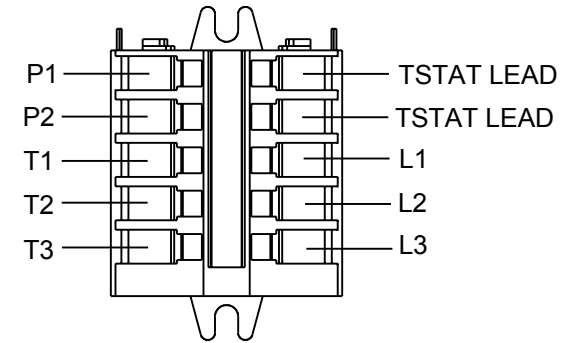
Regal Beloit America, Inc.	
DESCRIPTION OUTLINE 250TC FR - TEFC - BB - TS - C'FACE - TFNA - CAST C'BOX	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER SS203152
	SHEET 1 OF 1

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

**TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS**

**NOTE FOR FACTORY USE ONLY:
TO SURGE TEST:
FOR 3 LEAD COMMON CONNECT:
CONNECT P1 TO T1 THEN P2 TO L1
FOR 6 LEAD COMMON CONNECT:
CONNECT P1 TO BOTH T1
THEN P2 TO L1**

TERMINAL BLOCK WHEN SPECIFIED

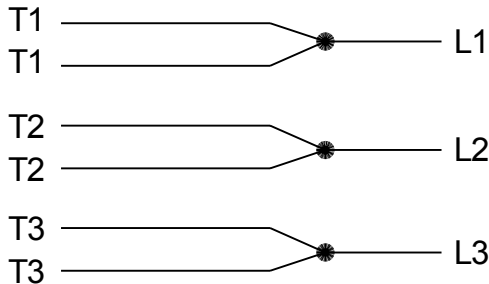


VIEW OF TERMINAL END

- PURPLE P1 (TB1)
- BLACK T1 (U1)
- RED T2 (V1)
- BLUE T3 (W1)
- PURPLE P2 (TB2)

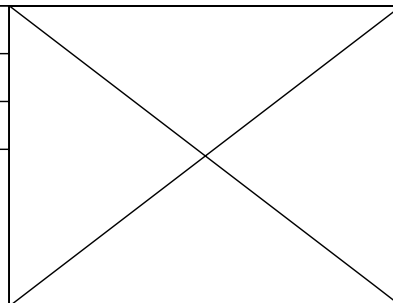
- T2BM
- T6AW
- T6AL
- T6Z
- T4EG
- T4BF
- T8A
- T6H
- T6A
- T4AX
- T4A
- T2A
- T2F

**IF MOTOR HAS MULTIPLE
T'S PER LEAD CONNECT
TOGETHER LIKE T'S**



A-9806 DECAL

DRAWING REVISION AB	REVISION BY AJW	DATE 07-17-2015
ECO ECO-0081632	APPROVED BY T.VUE	DATE 07-17-2015
ECO DESCRIPTION REV'D IEC MARKINGS PER IEC-60034-8		
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DRAWN BY LZ	Regal Beloit America, Inc.	
DATE 01-04-1994		
APPROVED BY GK	DESCRIPTION CONN DIAGRAM-EXTERNAL 3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR	
DATE 01-20-1994	MATERIAL	
REFERENCE	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER EE7300T
		SHEET 1 OF 1

CERTIFICATION DATA SHEET

Model#: 256TPFSA10087 A **WINDING#:** PM25608011 NONE 1
CONN. DIAGRAM: A-EE7300T **ASSEMBLY:** F1/F2 CAPABLE
OUTLINE: B-SS203152-1225

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20	14.9	1800	1800	256TC	TEFC	NO KVA CODE	PM

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	120	460	24	INVERTER ONLY	CONTINUOUS	H1	1.0	40	3300

FULL LOAD EFF: 94.5	3/4 LOAD EFF: 94.6	1/2 LOAD EFF: 94	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 80	3/4 LOAD PF: 80.5	1/2 LOAD PF: 80	94.5	AC PERMANENT MAGNET	2

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
58.4 LB-FT	-	- LB-FT -	- LB-FT -	50

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
65 dBA	75 dBA	2.53 LB-FT^2	0 LB-FT^2	0 SEC.	0	322 LBS.

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0	0.18	6.9	11.3	224

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	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	6210						

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

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N
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T
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S
*

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

DATE: 06/23/2017 05:00:27 AM
FORM 3531 REV.3 02/07/99
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