

PRODUCT INFORMATION PACKET

Model No: 256TPFSA10087

Catalog No: SY011

SyMAX® Fan & Blower Motor, 20 HP, 3 Ph, 120 Hz, 460 V, 1800 RPM, 256TC Frame, TEFC



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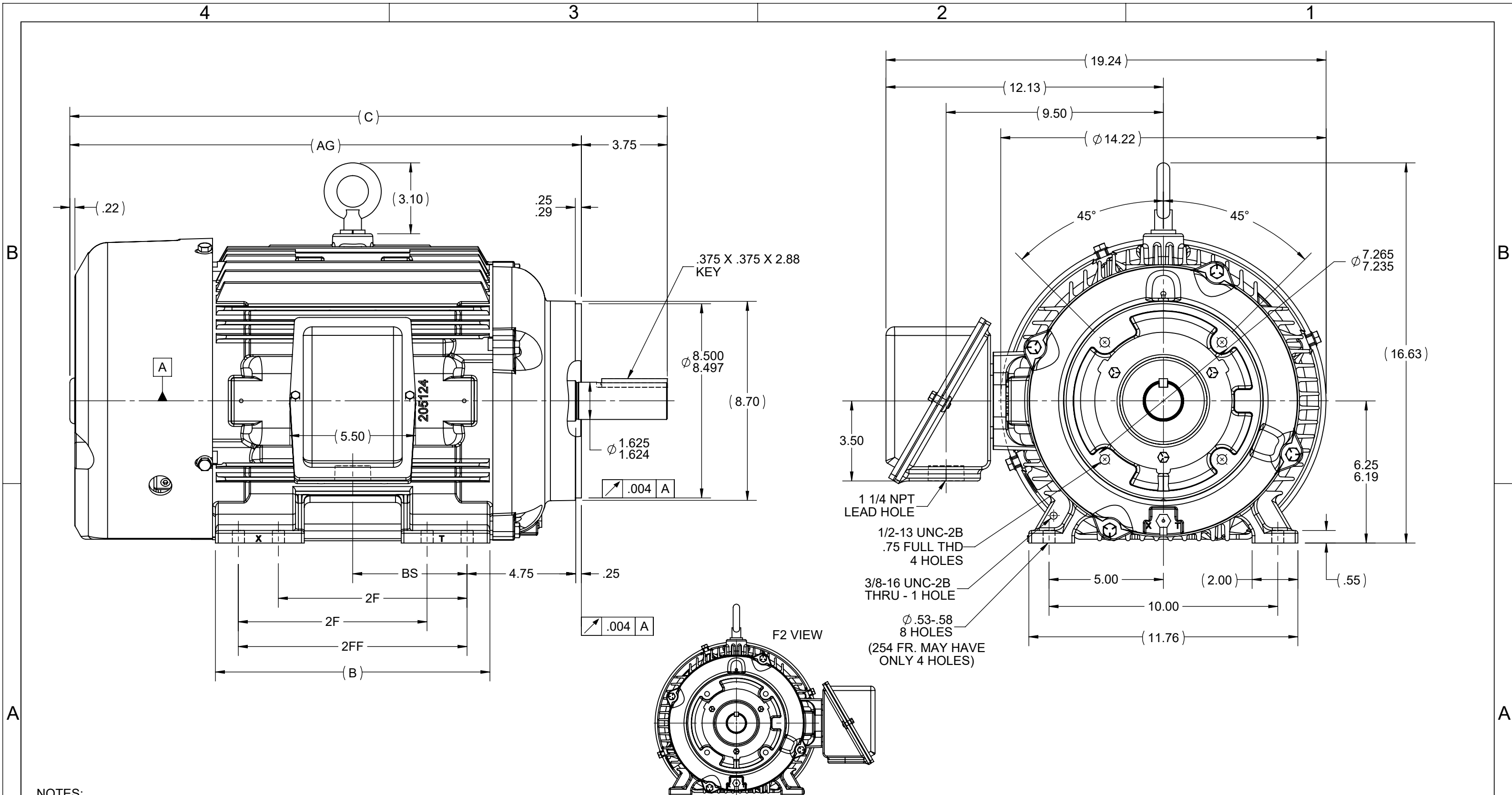
Nameplate Specifications

Phase	3	Output HP	20 Hp
Output KW	14.9 kW	Voltage	460 V
Speed	1800 rpm	Service Factor	1
Frame	256TC	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostat	Efficiency	94.5 %
Ambient Temperature	40 °C	Frequency	120 Hz
Current	24.0 A	Power Factor	80
Duty	Continuous	Insulation Class	H
Design Code	No Design Code	KVA Code	N/A
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6210
UL	Recognized	CSA	Y
CE	Y	IP Code	54
Number of Speeds	1		

Technical Specifications

Electrical Type	AC Permanent Magnet	Starting Method	Inverter Only
Poles	8	Rotation	Reversible
Resistance Main	0 Ohms	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	1.625 in
Shaft Extension	3.75 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 20:1		
Connection Drawing	A-EE7300T	Outline Drawing	B-SS203152-1225

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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.

DRAWING REVISION J	REVISION BY VS	REV DATE/© DATE 23rd Jan 23
REQUEST NUMBER NMR-0219676	APPROVED BY VS	DATE 23rd Jan 23
REQUEST NUMBER DESCRIPTION FAN GUARD POSITION CORRECTED C & AG UPDATED		
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TOLERANCES (EXCEPT AS NOTED):

DEC.	INCH	mm	ANGLE
.X	±0.1	[±3]	±7' 30"
.XX	±0.03	[±0.8]	
.XXX	±0.005	[±0.13]	
.XXXX	±0.0005	[±0.013]	

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°
CORNER FILLETS: R.02 [.5]
MACHINED SURFACES: 200/5.1 INCH/mm
mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

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

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

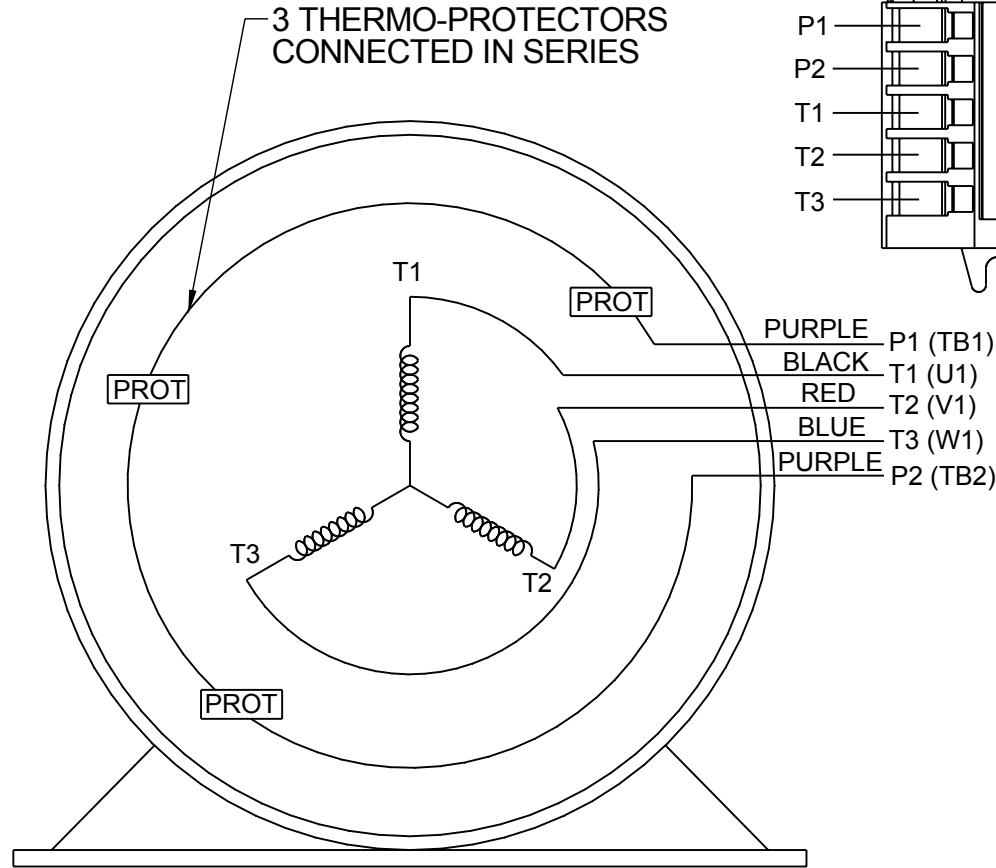
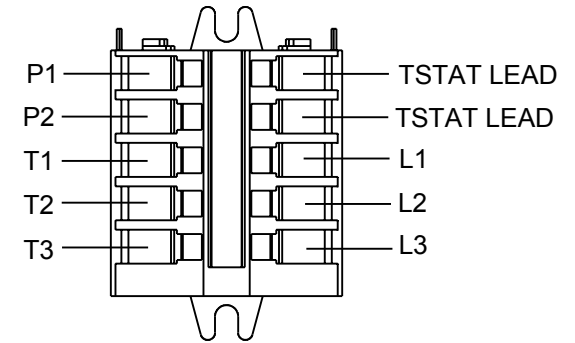
DASH	FRAME	B	C	AG	2F	2FF	BS
1050	254TC	10.25	24.37	20.61	8.25	-----	4.12
1225	254/256TC	12.00	26.12	22.36	8.25	10.00	5.00

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

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

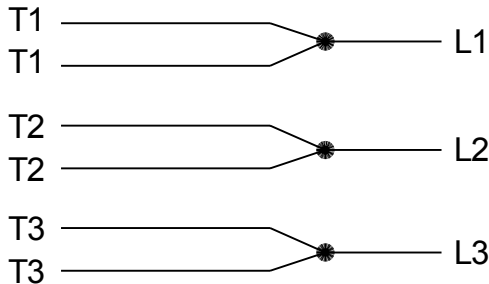
**NOTE FOR FACTORY USE ONLY:
TO SURGE TEST:
FOR 3 LEAD COMMON CONNECT:
CONNECT P1 TO T1 THEN P2 TO L1
FOR 6 LEAD COMMON CONNECT:
CONNECT P1 TO BOTH T1
THEN P2 TO L1**

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

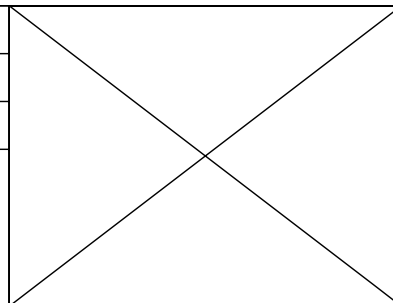
**IF MOTOR HAS MULTIPLE
T'S PER LEAD CONNECT
TOGETHER LIKE T'S**



A-9806 DECAL

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

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

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
** Subject to change without notice.

Data Sheet



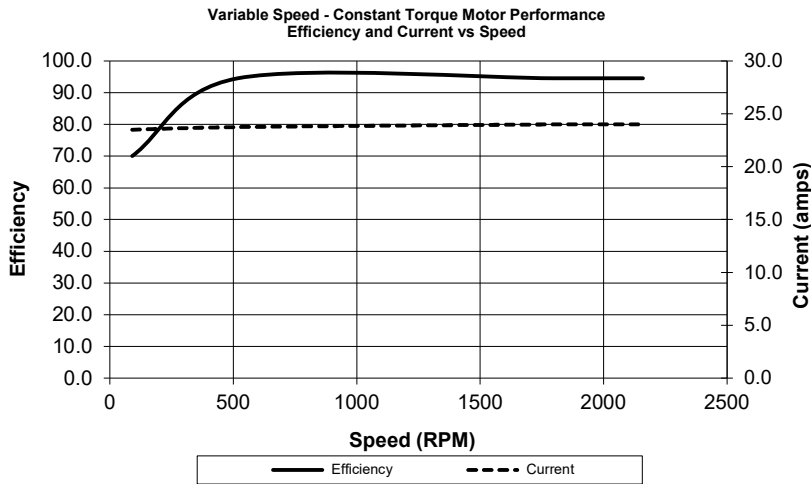
Date: 2/14/2017
 Customer: _____
 Attention: _____
 Submitted by: SHERYL KUEHMICHEL

Model: _____
 Catalog: _____
 Winding: PM25608011
 Submittal Data @ 460 V

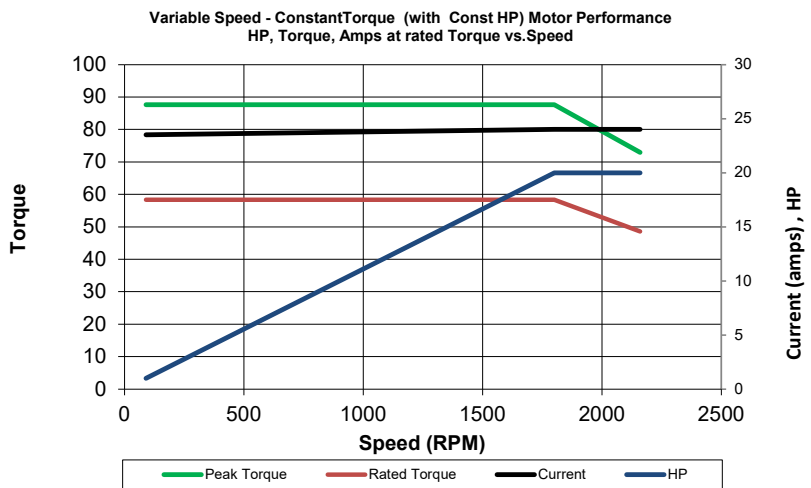
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	150%
Current (Amps)	2	6.2	11.8	17.5	24	27.8	30.5	40.5
Torque (ft-lb)	0.0	14.6	29.2	43.8	58.4	67.2	73.0	87.6
Efficiency (%)		91.5	94.0	94.6	94.5	94.1	94.0	93.0

Motor Speed Data



Motor Characteristics	
HP	20.00
Sync. RPM	1800
Frame	256
Enclosure	TEFC
Construction Type	TFS
Voltage	460 V
Frequency	120 Hz
Motor P.F. (%)	80.0
Reserve Tq Capability	150 %
Temp Rise @ FL	50 ° C
Insulation Class	H
Duty	CONT
Ambient	40 ° C
Elevation	3,300 feet



Ref Wdg	PM25608011
Sound Pressure @ 1m	65 dBA
Motor Wgt	322 Lb
Rotor/Shaft wk ²	2.53 Lb-Ft ²
CT Speed Range	20 :1
VT Speed Range	2000 :1
Outline Dwg	B-SS203152-1225
Conn. Diag	EE7300T
DE Bearing	6309
ODE Bearing	6210

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)
0.18	6.9	11.3	224

Constant Torque (Constant Power) Load Points

Hz	RPM	HP	ft-lb	Amps	Eff	Pk Tq
6	90	1.00	58.4	23.5	70	87.60
120	1800	20.0	58.4	24	94.5	87.60
144	2160	20.0	48.6	24	94.5	72.90

EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 256TPFSA10087

(Model No. may contain prefix and/or suffix characters)

Catalog No : SY011

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22