

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA0032AP211GAA009

Catalog No: R452B

Cast Iron Motor, 4 HP, 3 Ph, 60 Hz, 575 V, 1800 RPM, 100L Frame, TEFC



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**RegalRexnord**

## Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	60 Hz	Voltage	575 V
Current	4.2 A	Speed	1765 rpm
Service Factor	1.15	Phase	3
Efficiency	89.5 %	Power Factor	81
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	L
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

## Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	3.18 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	15.67 in
Frame Length	7.87 in	Shaft Diameter	1.102 in
Shaft Extension	2.36 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Outline Drawing	SS600216	Connection Drawing	8442000685

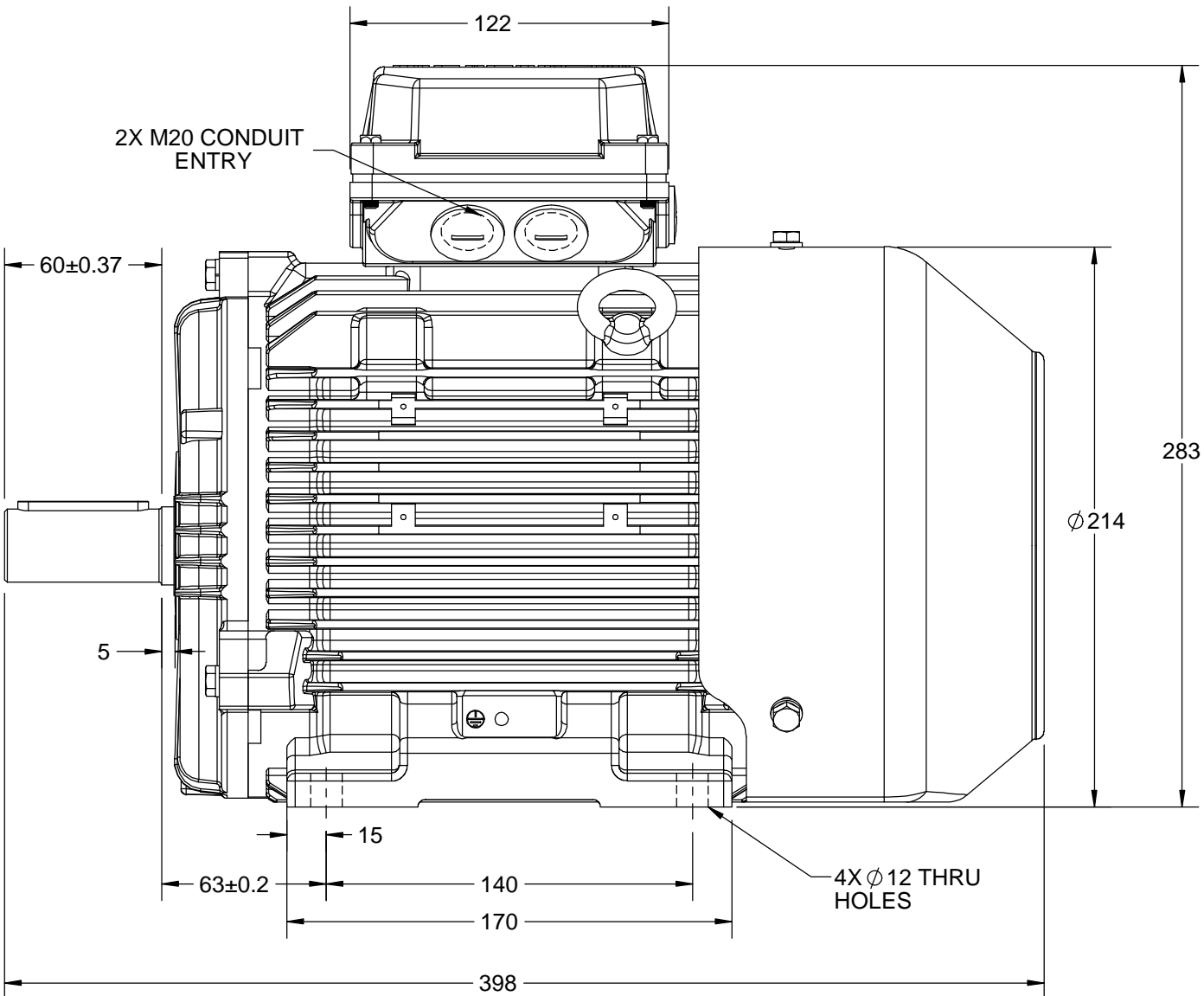
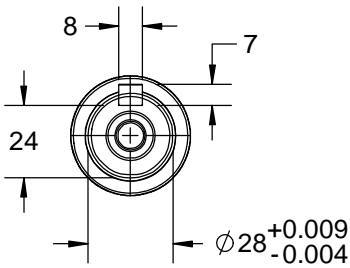
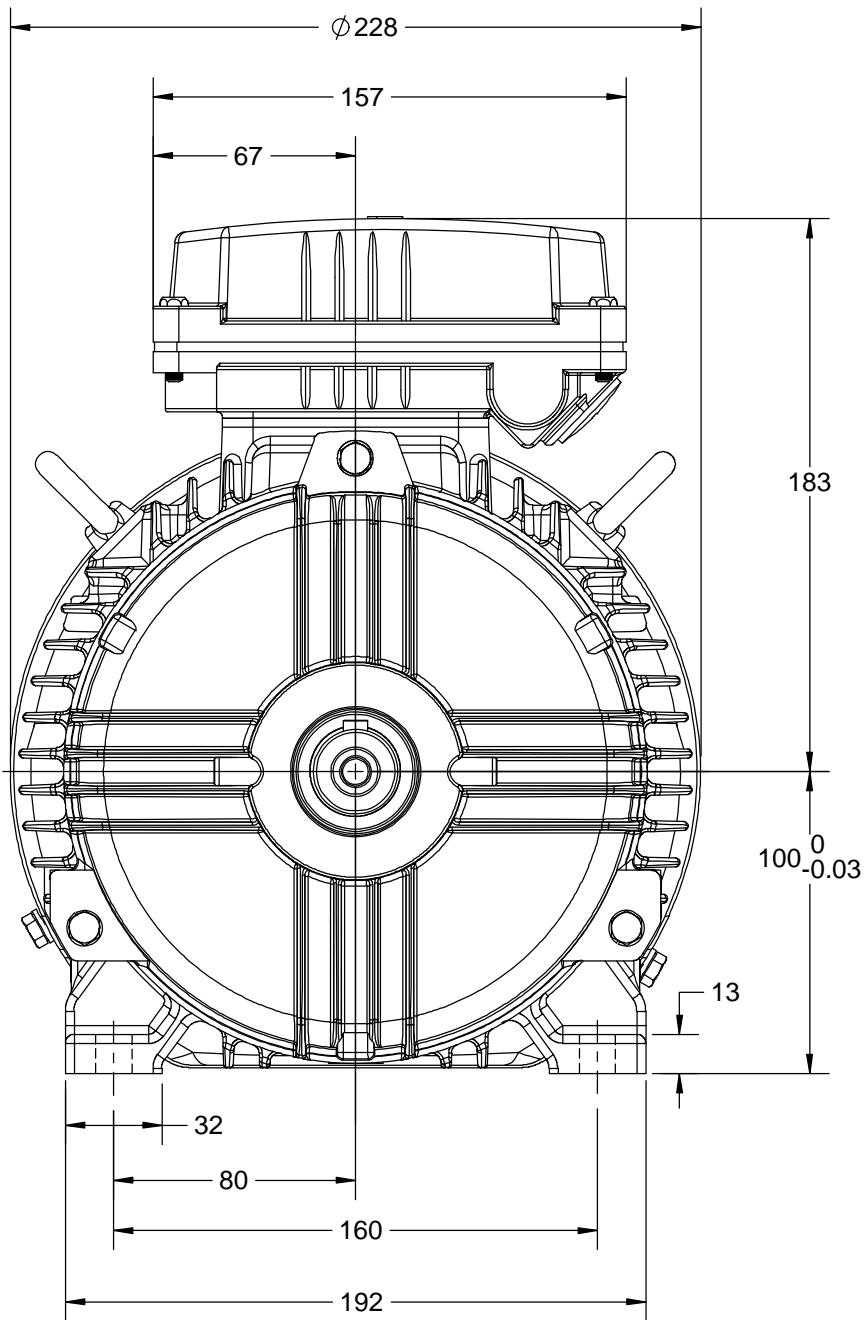


B

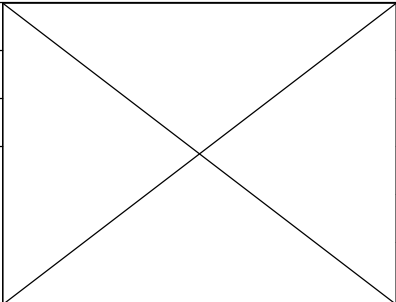
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A

A

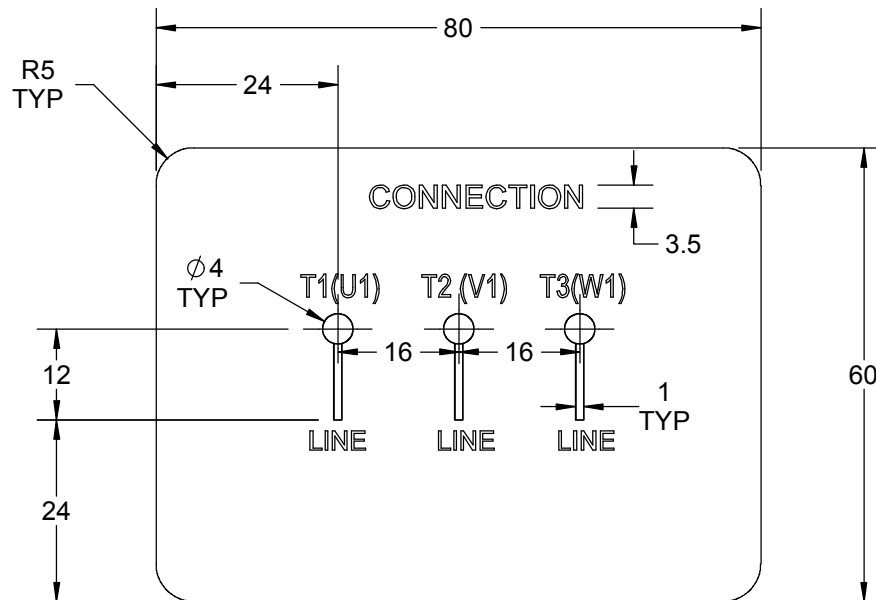


DRAWING REVISION A	REVISION BY NIV	DATE 03/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 03/12/2018
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DRAWN BY NIV	<b>marathon™</b> Motors		
DATE 03/12/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 03/12/2018	IEC-100 FR- B3 MOTOR TYPE: TEFC-CAST IRON		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER SS600216	SHEET 1 OF 1

GENERAL TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



## NOTES:

1. PRESSURE-SENSITIVE ADHESIVE TAPE COATED WITH ANTI-ADHESIVE.
2. YELLOW COLOR BACK GROUND LETTERS WILL BE BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : T1-T2 - T3 & U1-V1-W1 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION A	REVISION BY A. KEETHA	DATE 25/07/2019	<div></div>	DRAWN BY A. KEETHA	<div><div>REGAL™</div><div>Regal Beloit America, Inc.</div></div>		
ECO ECO-0171114	APPROVED BY SN	DATE 25/07/2019		DATE 24/07/2019	<div>DESCRIPTION</div> <div>CONNECTION DIAGRAM</div> <div>3 LEAD CONNECTION</div>		
<div>ECO DESCRIPTION</div> <div>NEW DRAWING RELEASE</div> <div><div>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.</div><div>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.</div></div>				APPROVED BY SN			
				DATE 24/07/2019			
				REFERENCE	MATERIAL	PROCESS/FINISH	
				THIRD ANGLE PROJECTION	<div><div></div><div></div></div>	SIZE A	DRAWING NUMBER 8442000685



P.O. BOX 8003  
WAUSAU, WI 54401-8003  
PH. 715-675-3311

DATA VOLTS: 575

### CERTIFICATION DATA SHEET

CUSTOMER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: 8442000685  
OUTLINE: SS600216  
WINDING: IE3L1004202 NONE 3  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA0032AP211GAA009  
CAT #: R452B  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

### TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN	
4	3.0	1800	1765	100L	TEFC	TCA 100LB04	L	N	
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft.)
3	60	575	4.2	LINE OR INVERTER	CONT	F	1.15	40	3300
F.L. EFF		89.5	3/4 LD EFF	89.5	1/2 LD EFF	86.3	GTD EFF	ELECT. TYPE	
F.L. PF		81.0	3/4 LD PF	75.0	1/2 LD PF	64.0	87.9	SQ CAGE INV RATED	
F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)	
11.9	LB-FT	39.1		35.4	LB-FT	297%	41.8	LB-FT	351%
SOUND PRESSURE @ 3 FT.		SOUND	POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
55	dBA	64	dBA	0.34	LB-FT <sup>2</sup>	0.34	10	SEC.	2
*** SUPPLEMENTAL INFORMATION ***									
DE BRACKET TYPE		ODE BRACKET TYPE		MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS
STANDARD		STANDARD		B3	HORIZONTAL	NO	NONE	NO	NONE
BEARINGS		GREASE		SHAFT TYPE		SPECIAL DE		SPECIAL ODE	
DE	ODE	POLYREX EM		STANDARD IEC		NONE		NONE	
BALL	BALL							1045 HOT ROLLED (C-204)	
6206	6206							CAST IRON	
THERMOSTATS		PROTECTORS		WDG RTD's		BRG RTD's		THERMISTORS	
NONE		NOT		NONE		NONE		NONE	
R1 (ohms/ph)		R2 (ohms/ph)		X1 (ohms/ph)		X2 (ohms/ph)		Xm (ohms/ph)	
4.847		2.770		7.791		14.023		265.400	
VIBRATION (in/sec)		FLOAT							
0.150		ODE							
* N O T E S *						INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE			
						ENCODER: NONE NONE NONE			
						BRAKE: NONE NONE NONE			
						FT-LB: NA VOLTAGE: NONE			
						UL: V - LI,ME-INS,CONST UL REC			
PREPARED BY: _____ DATE: 11/12/2020									
FORM: 3531 REV_4 2/27/06									

REGAL

## Data Sheet

TCA0032AP211GAA009

Date: 5/29/2019

Customer: \_\_\_\_\_

Attention: \_\_\_\_\_

Submitted by: Fareeda Dudekula

Submittal

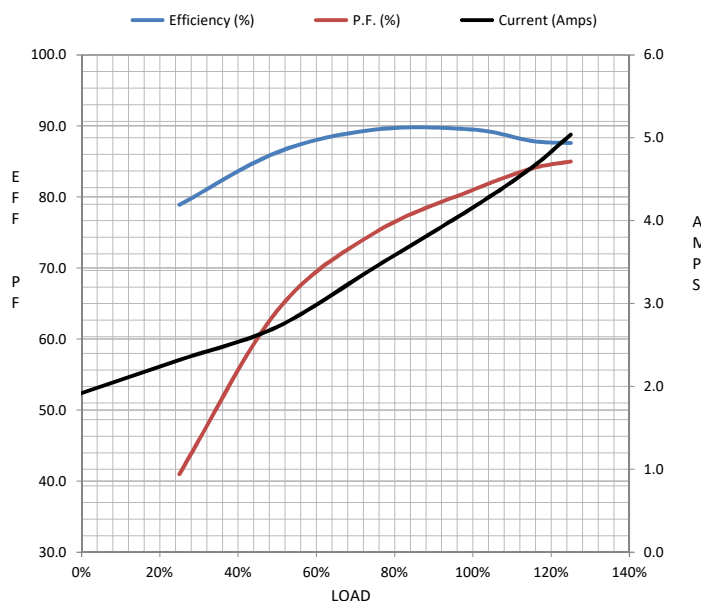
Data @ 575 V

## Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.92	2.32	2.72	3.4	4.2	4.6	5.0	39.1	
Torque (ft-lb)	0.00	2.90	5.9	8.9	11.9	13.8	15.0	35.4	
RPM	1800	1791	1782	1773	1765	1,757	1753	0	
Efficiency (%)		78.9	86.3	89.5	89.5	87.9	87.6		
P.F. (%)	10.0	41.0	64.0	75.0	81.0	84.0	85.0	63.4	

## Motor Speed Data

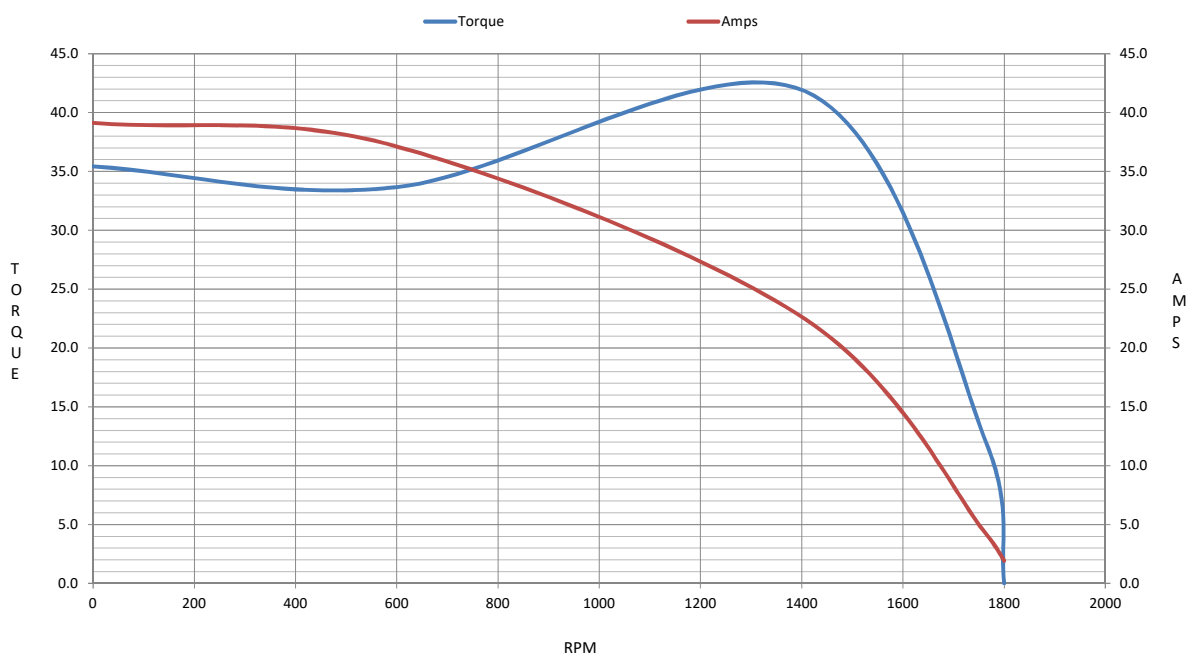
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1406	1765	1800
Current (Amps)	39.1	37.1	22.5	4.2	1.92
Torque (ft-lb)	35.4	33.7	41.8	11.9	0.00



Information Block				
HP	4.0			
Sync. RPM	1800			
Frame	100			
Enclosure	TEFC			
Construction	TCA 100LB04			
Voltage	575	V		
Frequency	60	Hz		
Design	N			
LR Code letter	L			
Service Factor	1.15			
Temp Rise @ FL	80	° C		
Duty	CONT			
Ambient	40	° C		
Elevation	3,300	feet		
Rotor/Shaft wk²	0.34	Lb-Ft²		
Ref Wdg	IE3L1004202 NONE			
Sound Pressure @ 1M	55	dBA		
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS600216			
Conn. Diag	8442000675			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
3.1020	1.7730	4.9860	8.9750	169.8560

IEC

## Speed -Torque Curve



## 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 : TCA0032AP211GAA009

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

Catalog No : R452B

Rework No : N/A

Directives :

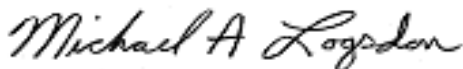
Low Voltage Directive 2014/35/EU

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**