

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0032AE271GAA009

Catalog No: R652

TerraMAX® Cast Iron Motor, 4 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM,
100L Frame, TEFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2023 Regal Rexnord Corporation, All Rights Reserved. MC017097E

RegalRexnord

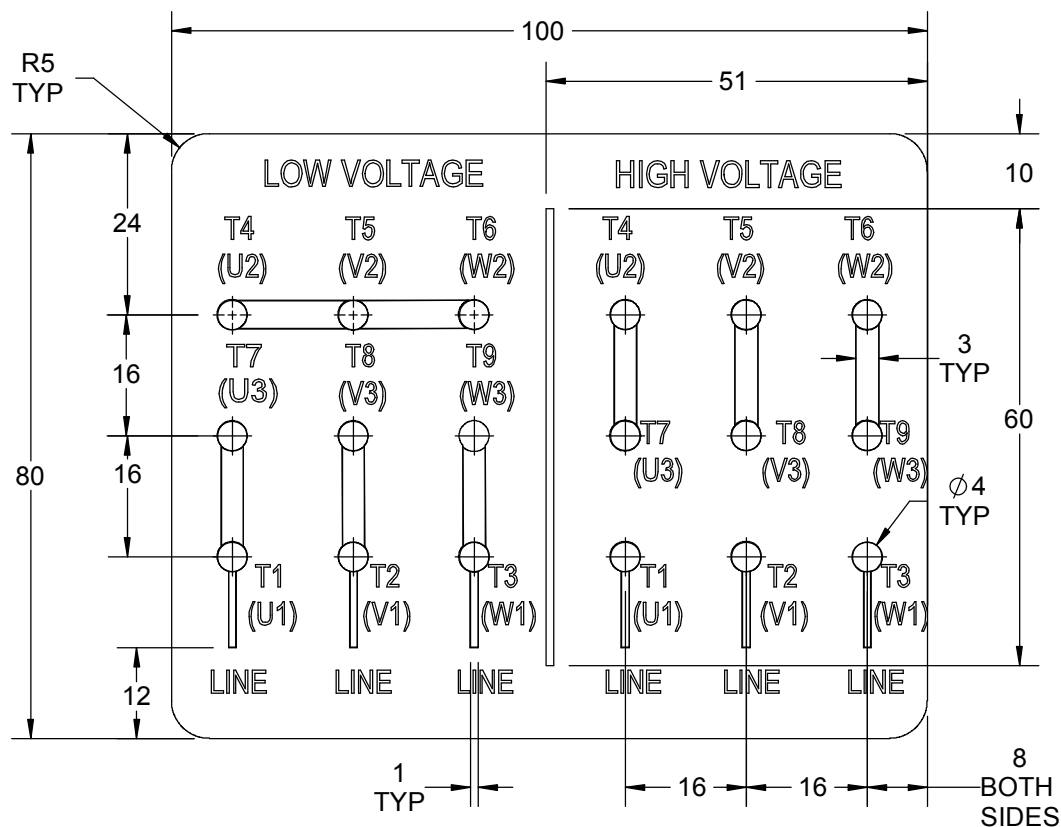
Nameplate Specifications

Phase	3	Output HP	4 & 3 Hp
Output KW	3.0 & 2.2 kW	Voltage	230/460 & 200/400 V
Speed	1765 & 1470 rpm	Service Factor	1.15 & 1.15
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	89.5 & 86.7 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	10.4/5.2 & 9.2/4.6 A	Power Factor	81
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	L
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



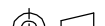
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	3.18 Ohms	Mounting	Round
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	SS620896	Connection Drawing	8442000675





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-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE.
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION B		REVISION BY NIV		DATE 05/03/2019			DRAWN BY NIV		 Regal Beloit America, Inc.						
ECO ECO-0162986		APPROVED BY JAY		DATE 05/03/2019			DATE 29/01/2019								
ECO DESCRIPTION UPDATED DRAWING 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 JAY		DESCRIPTION CONNECTION DIAGRAM 9 LEADS- STAR CONNECTON						
							DATE 29/01/2019								
							REFERENCE		MATERIAL		PROCESS/FINISH				
						THIRD ANGLE PROJECTION				SIZE A		DRAWING NUMBER 8442000675		SHEET 1 OF 1	



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: _____
CONN. DIAGRAM: 8442000675
OUTLINE: SS620896
WINDING: IE3L1004202 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0032AE271GAA009
CAT #: R652
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	60/50	230/460#200/400	10.4/5.2&9.2/4.6	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	48.9		35.4	LB-FT 297%	41.8	LB-FT 351%	80		

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
55 dBA	64 dBA		0.34 LB-FT ²	0.34 LB-FT ²	10 SEC.	2	48	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FT-FLANGE-130	STANDARD	ROUND	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT	MATERIAL	FRAME MATERIAL
DE ODE							
BALL BALL	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)		CAST IRON
6206 6206							

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE	HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE		NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
1.986	1.135	3.191	5.744	108.708	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
		NONE PPR

PREPARED BY: _____ DATE: 11/16/2020	BRAKE: NONE NONE NONE	FT-LB: NA VOLTAGE: NONE	HZ: _____ UL: V - LI,ME-INS,CONST UL REC
--	-----------------------------	----------------------------	---

FORM: 3531 REV_4 2/27/06



Data Sheet

TCA0032AE271GAA009

Date: 5/30/2019

Customer: _____

Attention: _____

Submitted by: Fareeda Dudekula

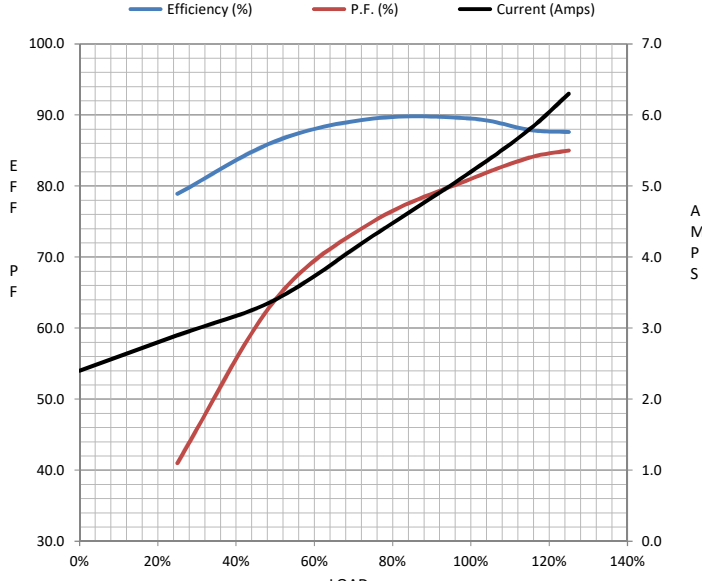
Submittal

Data @ 460 V

Motor Load Data

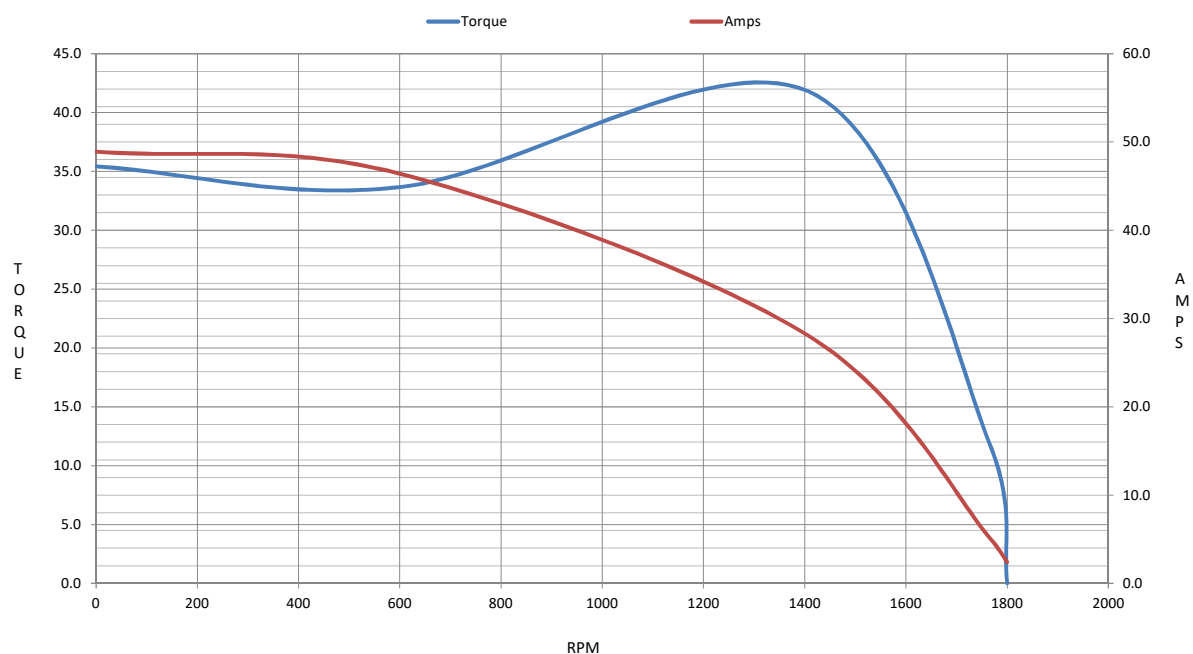
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	2.40	2.90	3.4	4.3	5.2	5.8	6.3	48.9	
Torque (ft-lb)	0.00	2.90	5.9	8.9	11.9	13.8	15.0	35.4	
RPM	1800	1791	1782	1773	1765	1,757	1753	0	
Efficiency (%)		78.9	86.3	89.5	89.5	87.9	87.6		
P.F. (%)	10.0	41.0	64.0	75.0	81.0	84.0	85.0	63.4	

Motor Speed Data

Motor Speed Data																																																																	
	LR	Pull-Up	BD	Rated	Idle																																																												
Speed (RPM)	0	600	1406	1765	1800																																																												
Current (Amps)	48.9	46.4	28.1	5.2	2.40																																																												
Torque (ft-lb)	35.4	33.7	41.8	11.9	0.00																																																												
<div><div>— Efficiency (%)</div><div>— P.F. (%)</div><div>— Current (Amps)</div></div> <table><tr><th colspan="2">Information Block</th></tr><tr><td>HP</td><td>4.0</td></tr><tr><td>Sync. RPM</td><td>1800</td></tr><tr><td>Frame</td><td>100</td></tr><tr><td>Enclosure</td><td>TEFC</td></tr><tr><td>Construction</td><td>TCA 100LB04</td></tr><tr><td>Voltage</td><td>230/460#200/400 V</td></tr><tr><td>Frequency</td><td>60 Hz</td></tr><tr><td>Design</td><td>N</td></tr><tr><td>LR Code letter</td><td>L</td></tr><tr><td>Service Factor</td><td>1.15</td></tr><tr><td>Temp Rise @ FL</td><td>80 °C</td></tr><tr><td>Duty</td><td>CONT</td></tr><tr><td>Ambient</td><td>40 °C</td></tr><tr><td>Elevation</td><td>3,300 feet</td></tr><tr><td>Rotor/Shaft wk²</td><td>0.34 Lb-Ft²</td></tr><tr><td>Ref Wdg</td><td>IE3L1004202 NONE</td></tr><tr><td>Sound Pressure @ 1M</td><td>55 dBA</td></tr><tr><td>VFD Rating</td><td>CONSTANT 2:1/VARIABLE 10:1</td></tr><tr><td>Outline Dwg</td><td>SS620896</td></tr><tr><td>Conn. Diag</td><td>8442000675</td></tr><tr><td colspan="2">Additional Specifications:</td></tr><tr><td colspan="2">0</td></tr><tr><td colspan="2">0</td></tr><tr><td colspan="2">EQUIV CKT (OHMS / PHASE)</td></tr><tr><td>R1</td><td>R2</td><td>X1</td><td>X2</td><td>Xm</td></tr><tr><td>1.9860</td><td>1.1350</td><td>3.1910</td><td>5.7440</td><td>108.7080</td></tr></table>						Information Block		HP	4.0	Sync. RPM	1800	Frame	100	Enclosure	TEFC	Construction	TCA 100LB04	Voltage	230/460#200/400 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	SS620896	Conn. Diag	8442000675	Additional Specifications:		0		0		EQUIV CKT (OHMS / PHASE)		R1	R2	X1	X2	Xm	1.9860	1.1350	3.1910	5.7440	108.7080
						Information Block																																																											
						HP	4.0																																																										
						Sync. RPM	1800																																																										
						Frame	100																																																										
						Enclosure	TEFC																																																										
						Construction	TCA 100LB04																																																										
						Voltage	230/460#200/400 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	SS620896																																																																
Conn. Diag	8442000675																																																																
Additional Specifications:																																																																	
0																																																																	
0																																																																	
EQUIV CKT (OHMS / PHASE)																																																																	
R1	R2	X1	X2	Xm																																																													
1.9860	1.1350	3.1910	5.7440	108.7080																																																													

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 : TCA0032AE271GAA009

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

Catalog No : R652

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