

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA1P53AE231GAA009

Catalog No: R820

TerraMAX® Cast Iron Motor, 2 & 1.50 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1200 & 1000 RPM,
100L Frame, TEFC



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RegalRexnord

Nameplate Specifications

Phase	3	Output HP	2 & 1.50 Hp
Output KW	1.5 & 1.1 kW	Voltage	230/460 & 200/400 V
Speed	1175 & 980 rpm	Service Factor	1.15 & 1.15
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	88.5 & 81 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	6/3 & 5.4/2.7 A	Power Factor	72
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	K
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

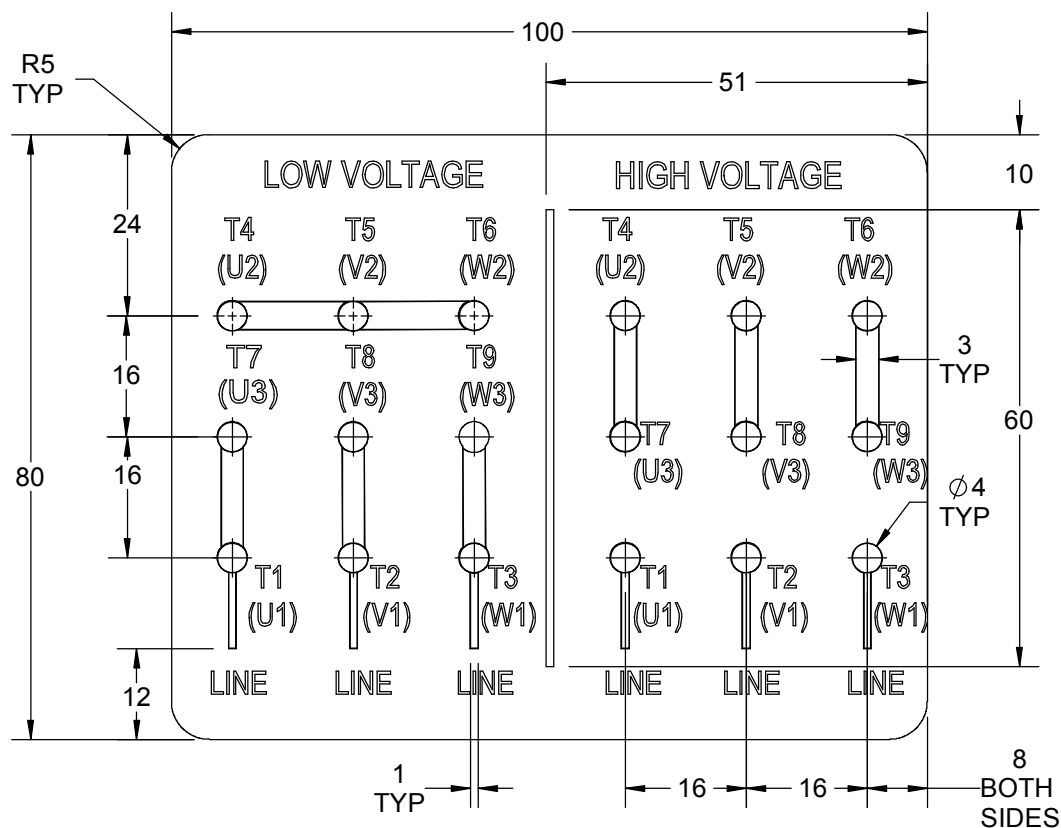
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	6.5 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	28.000 in
Assembly/Box Mounting	F3	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Outline Drawing	SS620872	Connection Drawing	8442000675

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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-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							APPROVED BY JAY		DESCRIPTION CONNECTION DIAGRAM 9 LEADS- STAR CONNECTON					
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							REFERENCE						MATERIAL	
							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: SS620872
WINDING: IE3L1006202 NONE 2
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA1P53AE231GAA009
CAT #: R820
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
2	1.5	1200	1175	100L	TEFC	TCA 100LA06	K	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	6/3&5.4/2.7	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	88.5	3/4 LD EFF	88.5	1/2 LD EFF	84.9	GTD EFF	ELECT. TYPE
F.L. PF	72.0	3/4 LD PF	63.0	1/2 LD PF	50.0	86.8	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
9.0 LB-FT	22.3	21.6 LB-FT	30.8 LB-FT	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		0.45 LB-FT ²	0.45 LB-FT ²	15 SEC.	2	45	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-215	STANDARD	B3	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
3.829	2.411	7.091	9.218	144.801	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 PPR

PREPARED BY: _____ DATE: 11/27/2020	BRAKE: NONE NONE NONE FT-LB: NA VOLTAGE: NONE UL: V - LI,ME-INS,CONST UL REC	HZ: _____
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FORM: 3531 REV_4 2/27/06



Data Sheet																			
Date: 4/8/2020		TCA1P53AE231GAA009																	
Customer: _____		Submittal																	
Attention: _____		Data @ 460 V																	
Submitted by: _____																			
Motor Load Data																			
Load	0%	25%	50%	75%	100%	115%	125%	LR											
Current (Amps)	1.80	2.10	2.20	2.60	3.0	3.3	3.5	22.3											
Torque (ft-lb)	0.00	2.20	4.4	6.7	9.0	10.3	11.3	21.6											
RPM	1200	1193	1187	1181	1175	1,169	1166	0											
Efficiency (%)		76.4	84.9	88.5	88.5	87.4	87.1												
P.F. (%)	8.0	30.0	50.0	63.0	72.0	75.0	77.0	63.4											
Motor Speed Data																			
	LR	Pull-Up	BD	Rated	Idle	Information Block													
Speed (RPM)	0	400	977	1175	1200	<div style="display: flex; justify-content: space-between;"> <div> <p>HP 2.0</p> <p>Sync. RPM 1200</p> <p>Frame 100</p> <p>Enclosure TEFC</p> <p>Construction TCA 100L06</p> <p>Voltage 230/460#200/400 V</p> <p>Frequency 60 Hz</p> <p>Design N</p> <p>LR Code letter K</p> <p>Service Factor 1.15</p> <p>Temp Rise @ FL 80 °C</p> <p>Duty CONT</p> <p>Ambient 40 °C</p> <p>Elevation 3,300 feet</p> <p>Rotor/Shaft wk² 0.45 Lb-Ft²</p> <p>Ref Wdg IE3L1006202 NONE</p> <p>Sound Pressure @ 1M 55 dBA</p> <p>VFD Rating CONSTANT 2:1/VARIABLE 10:1</p> <p>Outline Dwg SS620872</p> <p>Conn. Diag 8442000675</p> <p>Additional Specifications:</p> <p>0</p> <p>0</p> <p>EQUIV CKT (OHMS / PHASE)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>R1</th> <th>R2</th> <th>X1</th> <th>X2</th> <th>Xm</th> </tr> </thead> <tbody> <tr> <td>3.8290</td> <td>2.4110</td> <td>7.0910</td> <td>9.2180</td> <td>144.8010</td> </tr> </tbody> </table> </div> <div style="text-align: right;">IEC</div> </div>				R1	R2	X1	X2	Xm	3.8290	2.4110	7.0910	9.2180	144.8010
R1	R2	X1	X2	Xm															
3.8290	2.4110	7.0910	9.2180	144.8010															
Current (Amps)	22.3	21.2	12.5	3.0	1.80														
Torque (ft-lb)	21.6	20.5	30.8	9.0	0.00														

LOAD

Efficiency (%) P.F. (%) Current (Amps)

Speed -Torque Curve

RPM

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 : TCA1P53AE231GAA009

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

Catalog No : R820

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

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