

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0041AE231GAA009

Catalog No: R824

5.50 Hp, General Purpose Low Voltage IEC Motor, 3 phase, 3600 RPM, 230/460 V, 112M Frame, TEFC
Cast Iron IE3 Efficiency Motors



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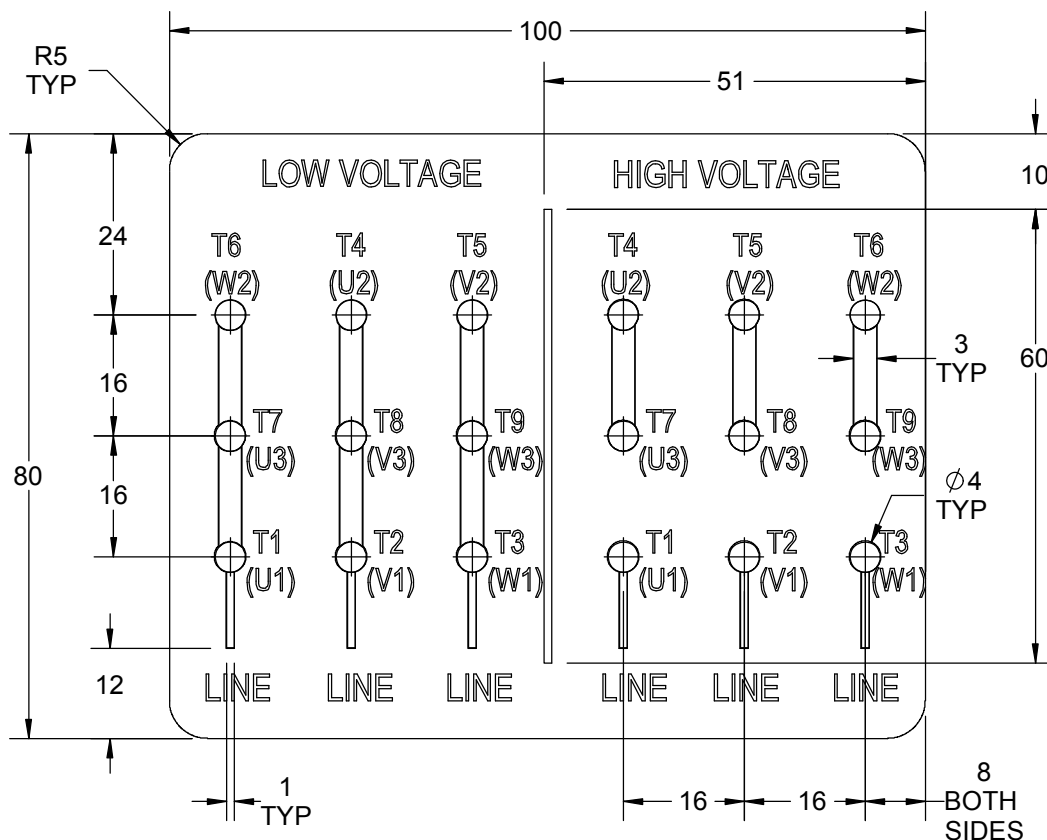
Nameplate Specifications

Output HP	5.50 Hp	Output KW	4.0 kW
Frequency	60 Hz	Voltage	230/460 V
Current	12.4/6.2 A	Speed	3520 rpm
Service Factor	1.15	Phase	3
Efficiency	89.5 %	Power Factor	91
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	J
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55

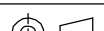
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	3.17 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		
Connection Drawing	8442000676	Outline Drawing	SS620873

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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 C		REVISION BY NIV		DATE 31/01/2019			DRAWN BY NIV		 Regal Beloit America, Inc.						
ECO ECO-0162986		APPROVED BY JAY		DATE 31/01/2019			DATE 29/01/2019								
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							DATE 29/01/2019								
													REFERENCE		MATERIAL
						THIRD ANGLE PROJECTION				SIZE A		DRAWING NUMBER 8442000676		SHEET 1 OF 1	



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER: _____ CUSTOMER P.O. #: _____
ORDER #: _____ REFERENCE MODEL #: TCA0041AE231GAA009
CONN. DIAGRAM: 8442000676 CAT #: R824
OUTLINE: SS620873 CUSTOMER PART #: _____
WINDING: IE3L1122201 NONE 1 MOUNTING: F3
SPEED: _____

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
5.5	4.1	3600	3520	112M	TEFC	TCA 112M02	J	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#200/400	12.4/6.2&11.2/5.6	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	89.5	3/4 LD EFF	89.5	1/2 LD EFF	89.2	GTD EFF	ELECT. TYPE
F.L. PF	91.0	3/4 LD PF	87.0	1/2 LD PF	80.0	87.9	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
8.2 LB-FT	55.1	17.8 LB-FT 217%	27.9 LB-FT 340%	80

@ 3 FT.	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
68 dBA	77 dBA	0.28 LB-FT²	0.28 LB-FT²	7 SEC.	2	55 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-215	STANDARD	B35	HORIZONTAL	NO	NONE	NO	NONE	BLUE - RAL 5014

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
6306 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
1.908	0.928	3.094	1.599	126.712	0.060	ODE

* N O T E *			INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE
			ENCODER: NONE
			NONE
			NONE PPR

PREPARED BY: _____	BRAKE: NONE
DATE: 4/8/2020	NONE
	FT-LB: NA
	VOLTAGE: NONE HZ:
FORM: 3531 REV. 4 2/27/06	UL: V - LI,ME-INS.CONST UL REC



Date: 4/8/2020

Customer:

Attention:

Submitted by:

Data Sheet

TCA0041AE231GAA009

Submittal

Data @ 460 V

Motor Load Data								
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	2.10	2.60	3.6	4.9	6.2	7.2	7.9	55.1
Torque (ft-lb)	0.00	2.00	4.0	6.1	8.2	9.5	10.3	17.8
RPM	3600	3581	3562	3543	3520	3508	3499	0
Efficiency (%)		84.1	89.2	89.5	89.5	88.7	88.1	
P.F. (%)	11.0	58.0	80.0	87.0	91.0	92.0	93.0	63.4

Motor Speed Data					
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	2902	3520	3600
Current (Amps)	55.1	52.4	33.0	6.2	2.10
Torque (ft-lb)	17.8	16.9	27.9	8.2	0.00

Efficiency (%)

P.F. (%)

Current (Amps)

HP

5.5

Sync. RPM

3600

Frame

112

Enclosure

TEFC

Construction

TCA 112M02

Voltage

230/460#200/400 V

Frequency

60 Hz

Design

N

LR Code letter

J

Service Factor

1.15

Temp Rise @ FL

80 °C

Duty

CONT

Ambient

40 °C

Elevation

3,300 feet

Rotor/Shaft wk²

0.28 Lb-Ft²

Ref Wdg

IE3L1122201 NONE

Sound Pressure @ 1M

50 dBA

VFD Rating

CONSTANT 2:1/VARIABLE 10:1

Outline Dwg

SS620873

Conn. Diag

8442000676

Additional Specifications:

0

0

EQUIV CKT (OHMS / PHASE)

R1

1.9080

R2

0.9280

X1

3.0940

X2

1.5990

Xm

126.7120

Speed -Torque Curve

Torque

Amps

