

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0032AE231GAA009

Catalog No: R852

4 Hp, General Purpose Low Voltage IEC Motor, 3 phase, 1800 RPM, 230/460 V, 100L Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

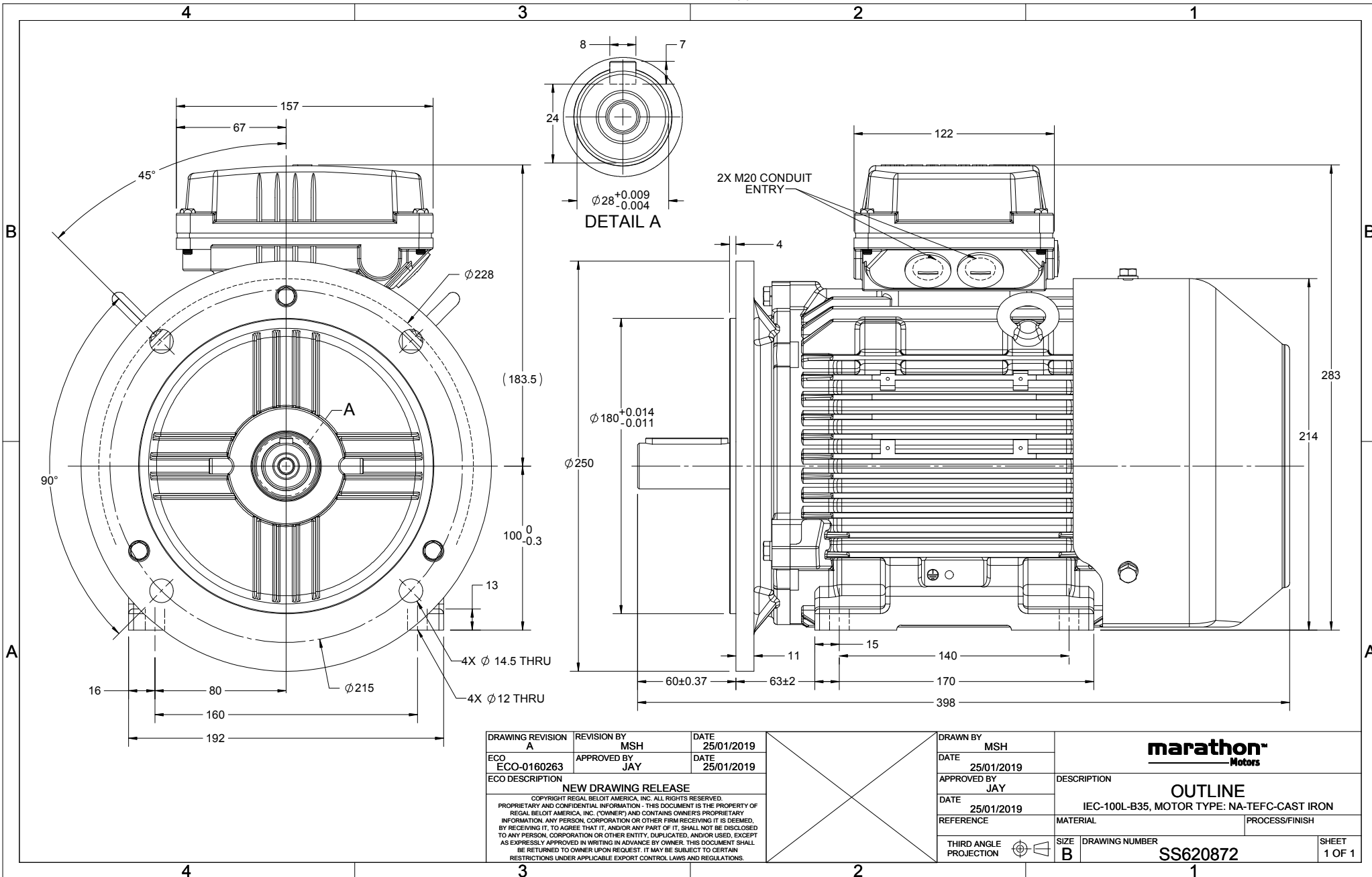
Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	60 Hz	Voltage	230/460 V
Current	10.4/5.2 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	Ambient Temperature	40 °C
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55

Technical Specifications

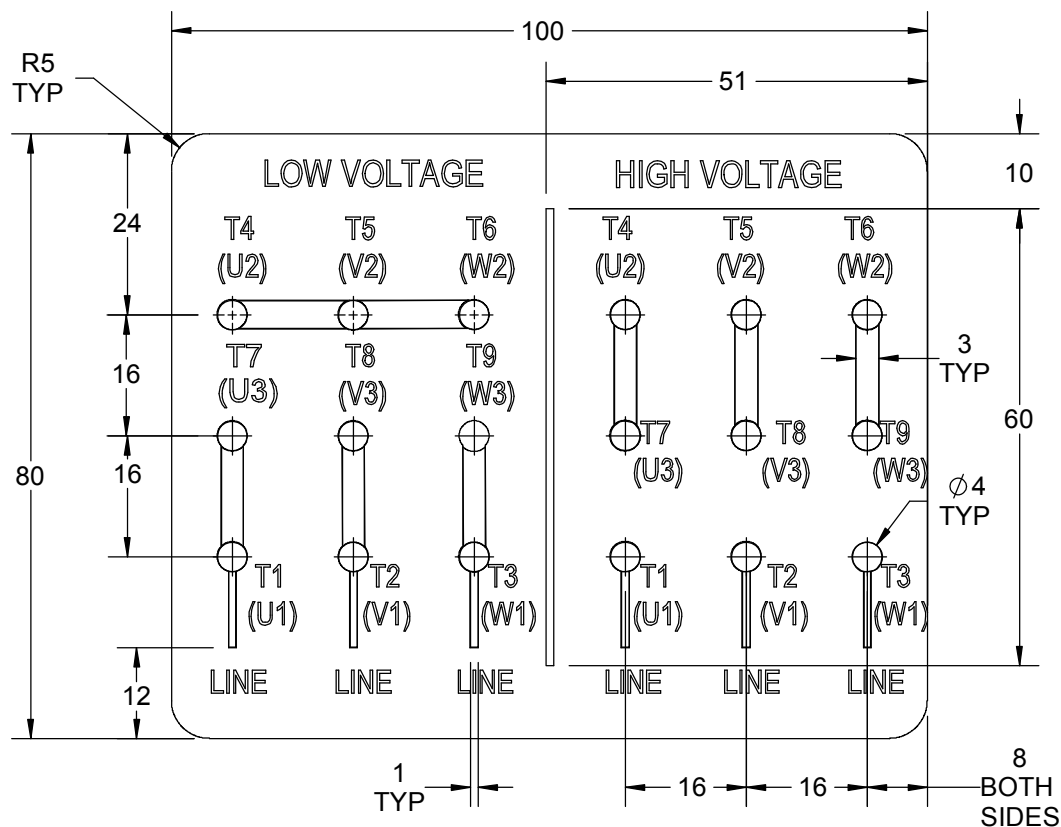
Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	3.18 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	28.000 in
Assembly/Box Mounting	F3		
Connection Drawing	8442000675	Outline Drawing	SS620872

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DRAWING REVISION A	REVISION BY MSH	DATE 25/01/2019
ECO ECO-0160263	APPROVED BY JAY	DATE 25/01/2019
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY MSH	marathon[™] Motors	
DATE 25/01/2019		
APPROVED BY JAY	OUTLINE	
DATE 25/01/2019		
REFERENCE	IEC-100L-B35, MOTOR TYPE: NA-TEFC-CAST IRON	
THIRD ANGLE PROJECTION	MATERIAL	PROCESS/FINISH
	SIZE B	DRAWING NUMBER SS620872
		SHEET 1 OF 1



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
						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: _____ CUSTOMER P.O. #: _____
ORDER #: _____ REFERENCE MODEL #: TCA0032AE231GAA009
CONN. DIAGRAM: 8442000675 CAT #: R852
OUTLINE: SS620872 CUSTOMER PART #: _____
WINDING: IE3L1004202 NONE 1 MOUNTING: F3
SPEED: _____

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	ELEV.
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

@ 3 FT.	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
55 dBA	64 dBA	0.34 LB-FT²	0.34 LB-FT²	10 SEC.	2	49 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	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
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	0.060	ODE

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

ENCODER: NONE		
NONE		NONE PPR
NONE		

BRAKE: NONE		
NONE		NONE
FT-LB:	NA	
VOLTAGE:	NONE	HZ:

PREPARED BY: _____
DATE: 4/8/2020

FORM: 3531 REV. 4 2/27/06

UL: V - LI-ME-INS.CONST UL REC



Date: 4/8/2020

Customer:

Attention:

Submitted by:

TCA0032AE231GAA009

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

	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

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	SS620872			
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

Efficiency (%)

P.F. (%)

Current (Amps)

Speed -Torque Curve

