

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0111AE221GAA009

Catalog No: R233

Cast Iron Motor, 15 & 10 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 3600 & 3000 RPM, 160M Frame,
TEFC



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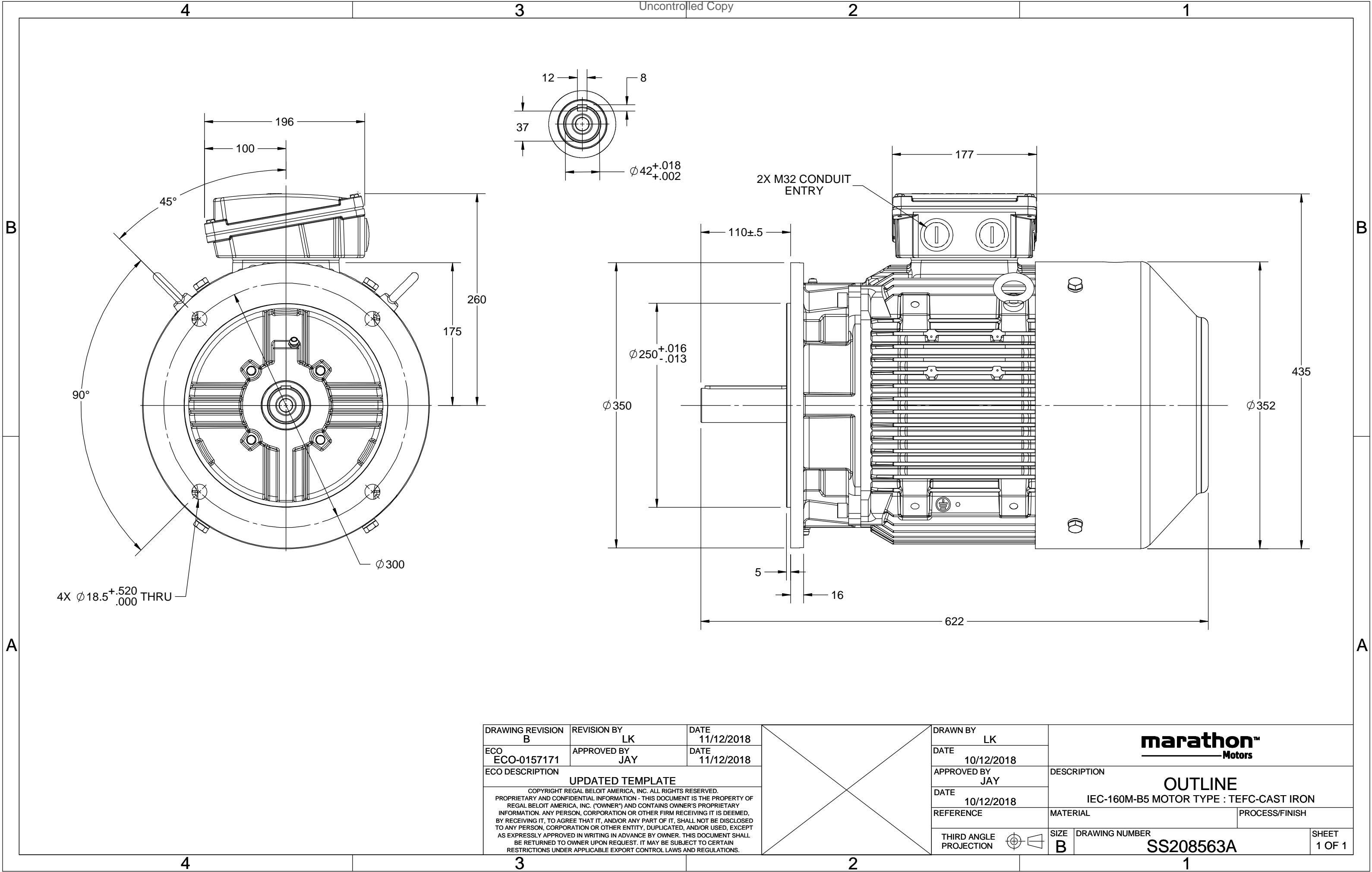
RegalRexnord

Nameplate Specifications

Phase	3	Output HP	15 & 10 Hp
Output KW	11.0 & 7.5 kW	Voltage	230/460 & 200/400 V
Speed	3550 & 2965 rpm	Service Factor	1.15 & 1.15
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	91 & 90.1 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	34/16.9 & 27.8/13.9 A	Power Factor	90
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	G
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
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	2	Rotation	Reversible
Resistance Main	.93 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	20.55 in
Frame Length	10.00 in	Shaft Diameter	1.654 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3
Inverter Load	CONSTANT 2:1/VARIABLE 10:1		
Connection Drawing	8442000715	Outline Drawing	SS208563A



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DRAWING REVISION
A
 ECO
 ECO-0194685
 ECO DESCRIPTION

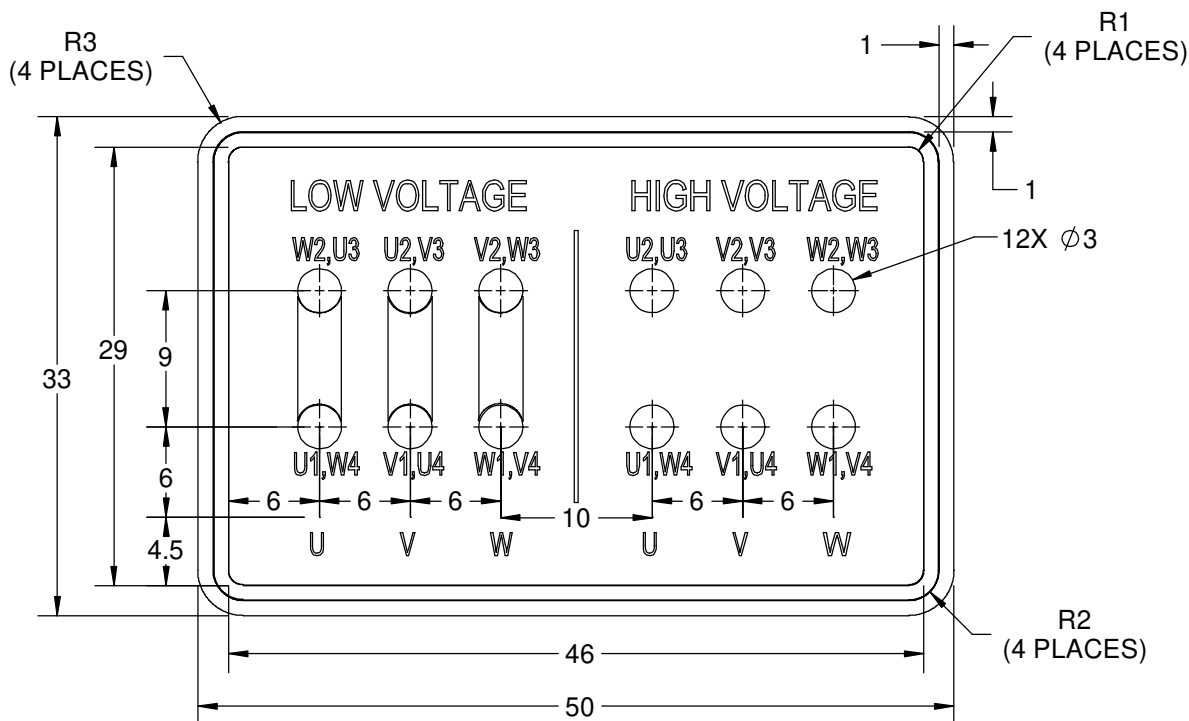
REVISION BY
S.MUDDA
 APPROVED BY
SUMANTA

DATE
16/11/2020
 DATE
16/11/2020

NEW DRAWING

GEOMETRIC TOLERANCE

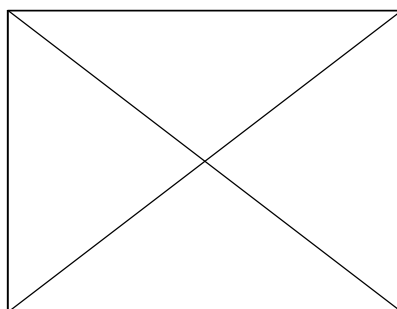
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS 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.

8WD.442.2017



DRAWN BY
S.MUDDA
 DATE
16/11/2020
 APPROVED BY
SUMANTA
 DATE
16/11/2020
 REFERENCE

THIRD ANGLE
 PROJECTION



Regal Beloit America, Inc.

DESCRIPTION

CONN DIAGRAM-NAMEPLATE

MATERIAL

PROCESS/FINISH

SIZE
A

DRAWING NUMBER

8442000715

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: 8442000677
OUTLINE: SS208563A
WINDING: IE3L1602201 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0111AE221GAA009
CAT #: R233
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
15	11.2	3600	3550	160M	TEFC	TCA 160MB02	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	34/16.9&27.8/13.9	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	90.3	GTD EFF	ELECT. TYPE
F.L. PF	90.0	3/4 LD PF	86.0	1/2 LD PF	79.0	89.7	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
22.2 LB-FT	118	37.6 LB-FT 169%	64.0 LB-FT 288%	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
75 dBA	84 dBA	1.49 LB-FT ²	1.49 LB-FT ²	10 SEC.	2	147	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-300	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
6309 6209						

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
0.567	0.227	1.229	1.097	47.994	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: 11/16/2020	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

TCA0111AE221GAA009

Date: 5/30/2019

Customer: _____

Attention: _____

Submitted by: Fareeda Dudekula

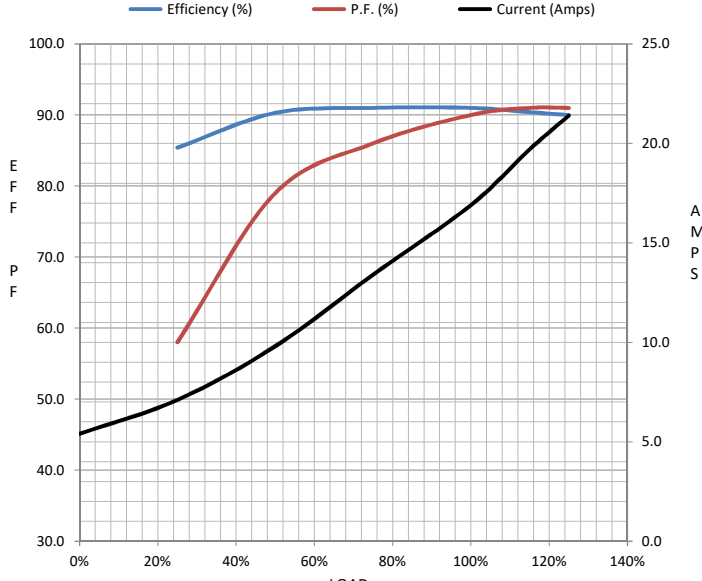
Submittal

Data @ 460 V

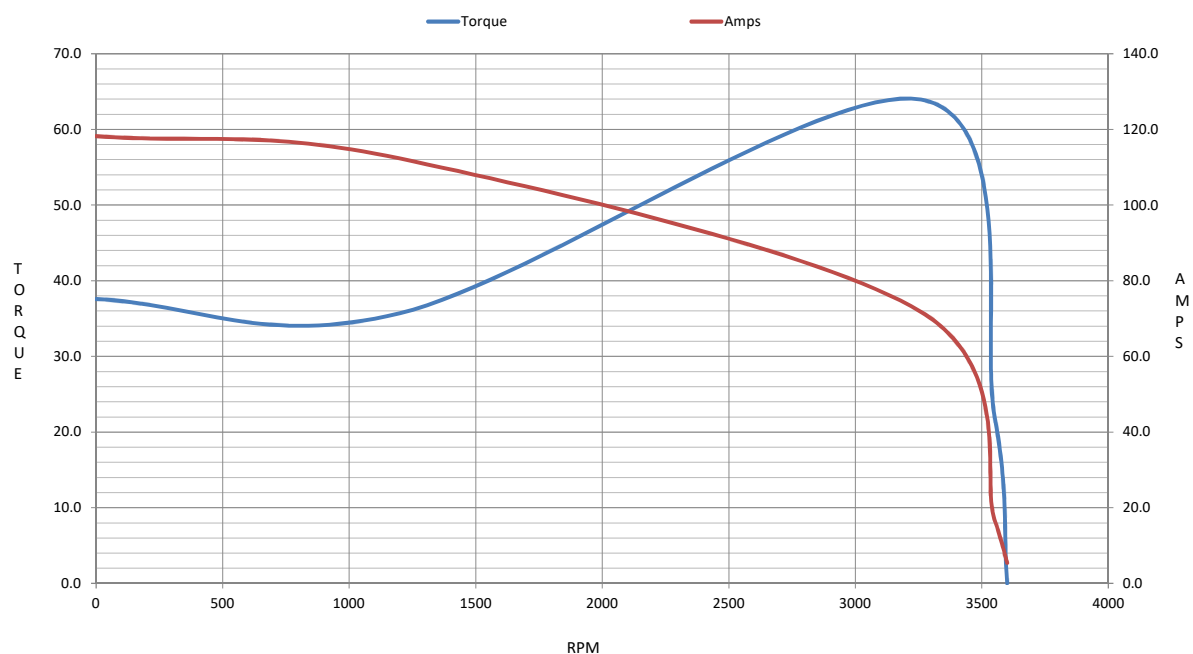
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	5.4	7.1	9.8	13.4	16.9	19.7	21.4	118	
Torque (ft-lb)	0.00	5.5	11.0	16.6	22.2	25.6	27.9	37.6	
RPM	3600	3588	3576	3563	3550	3,541	3535	0	
Efficiency (%)		85.4	90.3	91.0	91.0	90.4	90.0		
P.F. (%)	10.0	58.0	79.0	86.0	90.0	91.0	91.0	63.4	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle																																																												
Speed (RPM)	0	1200	3259	3550	3600																																																												
Current (Amps)	118	112	71.8	16.9	5.4																																																												
Torque (ft-lb)	37.6	35.7	64.0	22.2	0.00																																																												
<div><div>— Efficiency (%)</div><div>— P.F. (%)</div><div>— Current (Amps)</div></div> <table><tr><td colspan="2">Information Block</td></tr><tr><td>HP</td><td>15.0</td></tr><tr><td>Sync. RPM</td><td>3600</td></tr><tr><td>Frame</td><td>160</td></tr><tr><td>Enclosure</td><td>TEFC</td></tr><tr><td>Construction</td><td>TCA 160MB02</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>G</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>1.49 Lb-Ft²</td></tr><tr><td>Ref Wdg</td><td>IE3L1602201 NONE</td></tr><tr><td>Sound Pressure @ 1M</td><td>75 dBA</td></tr><tr><td>VFD Rating</td><td>CONSTANT 2:1/VARIABLE 10:1</td></tr><tr><td>Outline Dwg</td><td>SS208563A</td></tr><tr><td>Conn. Diag</td><td>8442000677</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>0.5670</td><td>0.2270</td><td>1.2290</td><td>1.0970</td><td>47.9940</td></tr></table>						Information Block		HP	15.0	Sync. RPM	3600	Frame	160	Enclosure	TEFC	Construction	TCA 160MB02	Voltage	230/460#200/400 V	Frequency	60 Hz	Design	N	LR Code letter	G	Service Factor	1.15	Temp Rise @ FL	80 °C	Duty	CONT	Ambient	40 °C	Elevation	3,300 feet	Rotor/Shaft wk²	1.49 Lb-Ft²	Ref Wdg	IE3L1602201 NONE	Sound Pressure @ 1M	75 dBA	VFD Rating	CONSTANT 2:1/VARIABLE 10:1	Outline Dwg	SS208563A	Conn. Diag	8442000677	Additional Specifications:		0		0		EQUIV CKT (OHMS / PHASE)		R1	R2	X1	X2	Xm	0.5670	0.2270	1.2290	1.0970	47.9940
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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 : TCA0111AE221GAA009

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

Catalog No : R233

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