

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0042AE221GAA009

Catalog No: R225

Cast Iron Motor, 5.50 & 4 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM, 112M Frame,
TEFC



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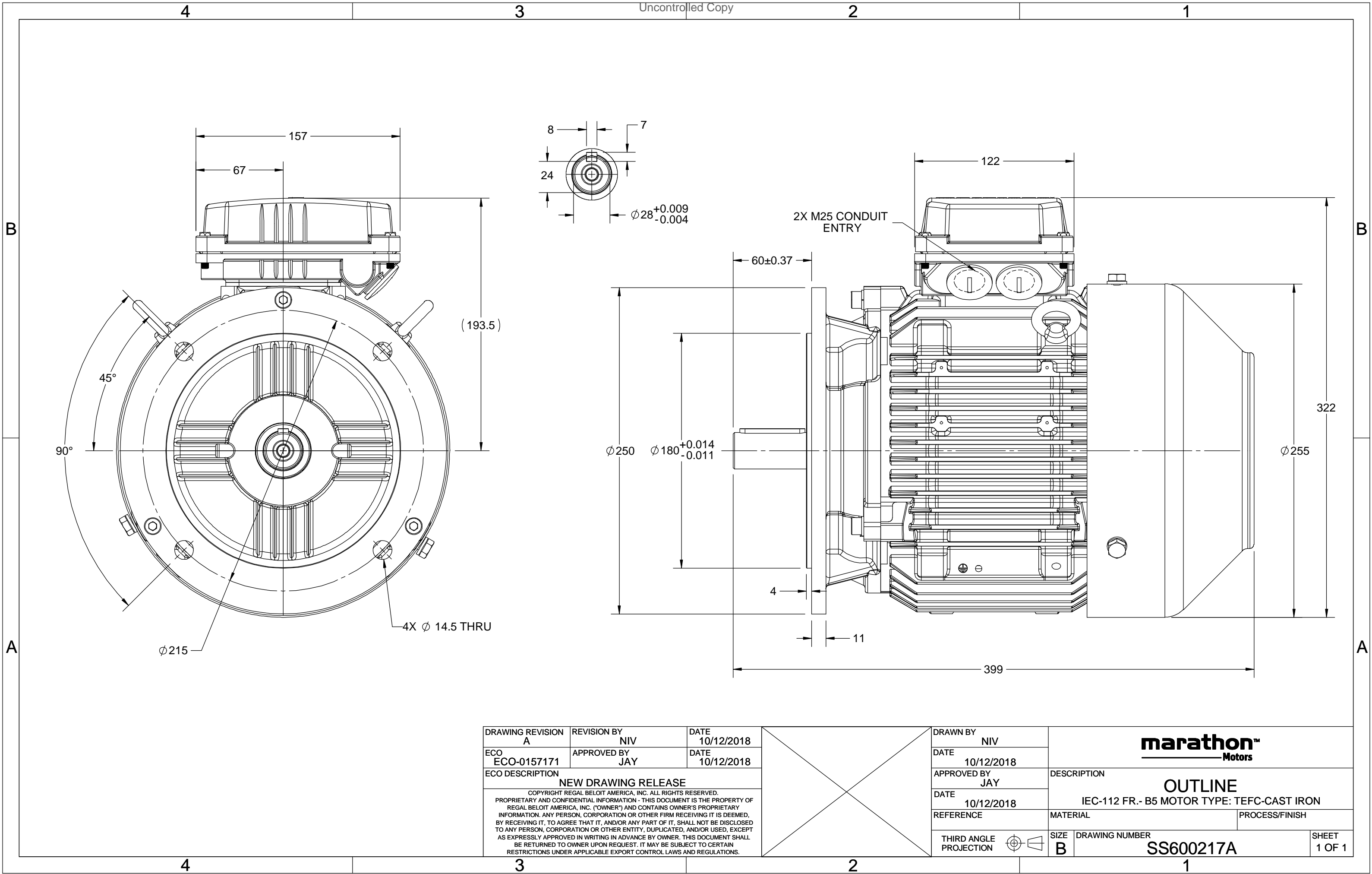
RegalRexnord

Nameplate Specifications

Phase	3	Output HP	5.50 & 4 Hp
Output KW	4.0 & 3.0 kW	Voltage	230/460 & 200/400 V
Speed	1765 & 1470 rpm	Service Factor	1.15 & 1.15
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	91.7 & 87.7 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	13.8/6.9 & 13/6.5 A	Power Factor	80
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	M
Drive End Bearing Size	6306	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	2.33 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	15.71 in
Frame Length	6.85 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	SS600217A	Connection Drawing	8442000730



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DRAWING REVISION

A

REVISION BY

LK

REV DATE/© DATE

14/7/2021

ECO

CR-0003544

APPROVED BY

JAY

DATE

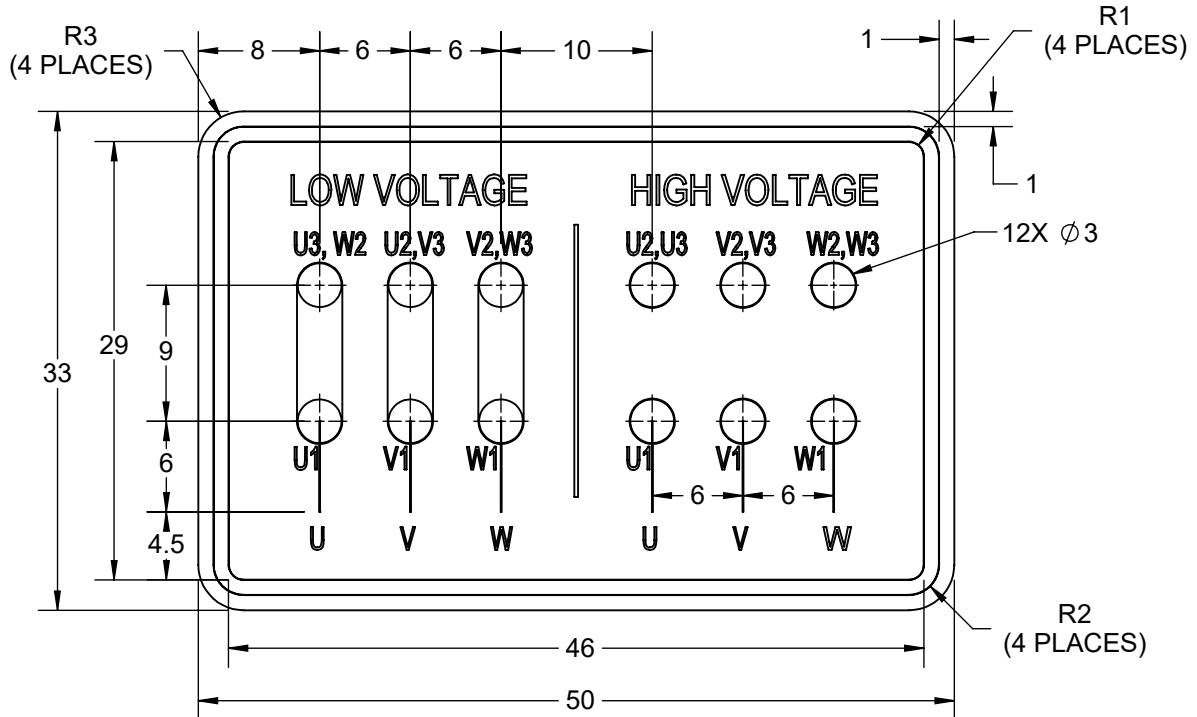
14/7/2021

ECO DESCRIPTION

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 : U1-U3, V1-V3 AND W1-W3 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

PRIMARY DIMENSIONS ARE mm
INCH DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY

LK

DATE

14/7/2021

APPROVED BY

JAY

DATE

14/7/2021

REFERENCE

THIRD ANGLE
PROJECTION



Regal Beloit America, Inc.

DESCRIPTION

CONN DIAGRAM-NAMEPLATE

9LEADS - DELTA CONNECTION

MATERIAL

REFER NOTES

PROCESS/FINISH

SIZE
A

DRAWING NUMBER

8442000730

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: 8442000676
OUTLINE: SS600217A
WINDING: IE3L1124201 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0042AE221GAA009
CAT #: R225
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
5.5	4.1	1800	1765	112M	TEFC	TCA 112MB04	M	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	13.8/6.9&13/6.5	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.7	3/4 LD EFF	91.7	1/2 LD EFF	87.4	GTD EFF	ELECT. TYPE
F.L. PF	80.0	3/4 LD PF	72.0	1/2 LD PF	61.0	90.5	SQ CAGE INV RATED

F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (° C)		
16.4	LB-FT	71.3		54.3	LB-FT 331%	64.1	LB-FT 391%	80		

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
62 dBA	71 dBA		0.46 LB-FT ²	0.46 LB-FT ²	7 SEC.	2	59	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	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
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
1.444	0.825	2.733	3.249	72.098	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

TCA0042AE221GAA009

Date: 5/30/2019

Customer: _____

Attention: _____

Submitted by: Fareeda Dudekula

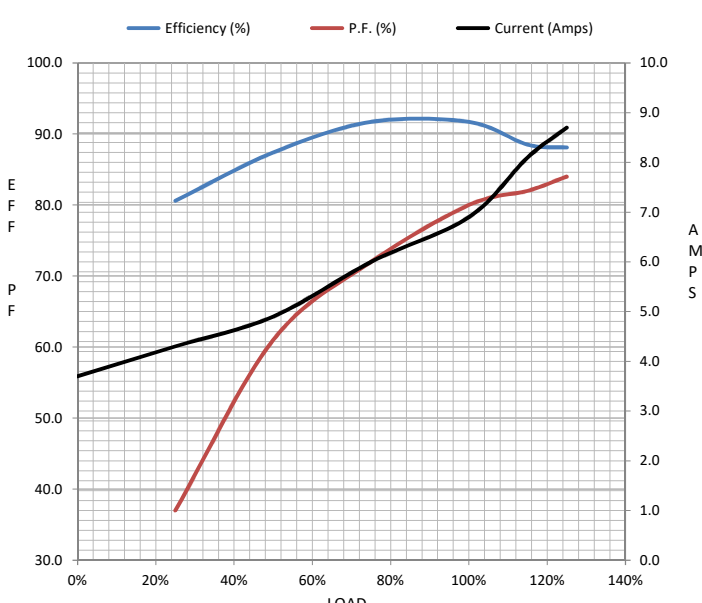
Submittal

Data @ 460 V

Motor Load Data

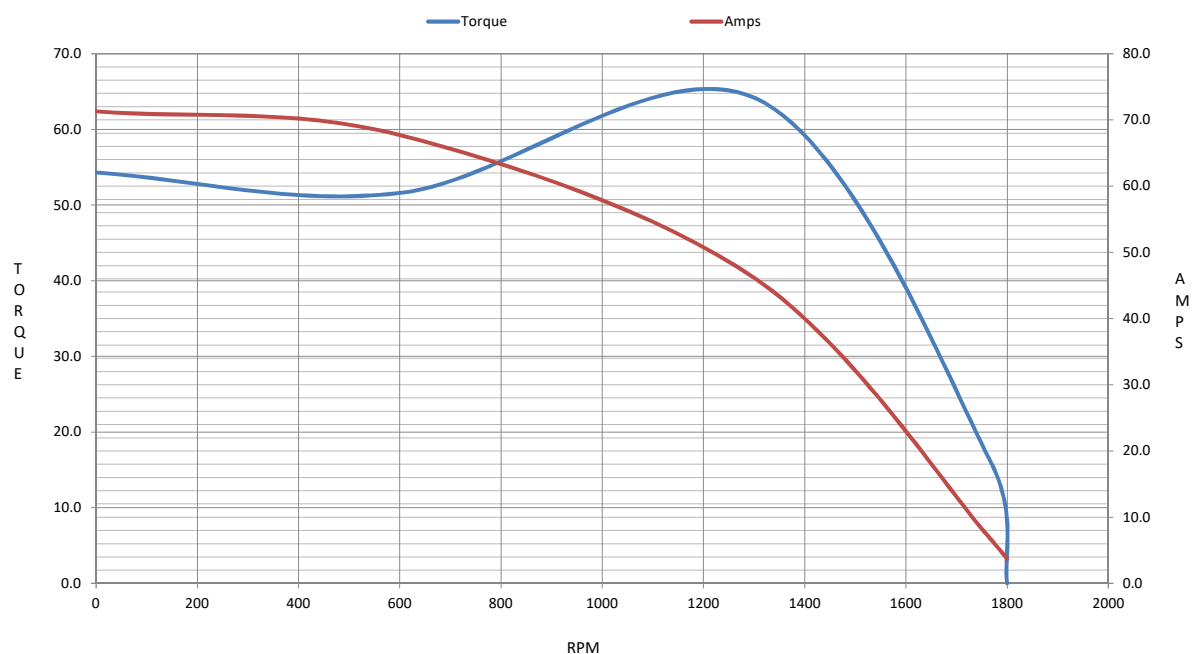
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	3.7	4.3	4.9	6.0	6.9	8.1	8.7	71.3	
Torque (ft-lb)	0.00	4.0	8.1	12.2	16.4	18.9	20.6	54.3	
RPM	1800	1791	1782	1773	1765	1,757	1753	0	
Efficiency (%)		80.6	87.4	91.7	91.7	88.5	88.1		
P.F. (%)	8.0	37.0	61.0	72.0	80.0	82.0	84.0	63.4	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle	Information Block	
Speed (RPM)	0	600	1303	1765	1800	HP	5.5
Current (Amps)	71.3	67.7	46.0	6.9	3.7	Sync. RPM	1800
Torque (ft-lb)	54.3	51.6	64.1	16.4	0.00	Frame	112
						Enclosure	TEFC
						Construction	TCA 112MB04
						Voltage	230/460#200/400 V
						Frequency	60 Hz
						Design	N
						LR Code letter	M
						Service Factor	1.15
						Temp Rise @ FL	80 °C
						Duty	CONT
						Ambient	40 °C
						Elevation	3,300 feet
						Rotor/Shaft wk²	0.46 Lb-Ft²
						Ref Wdg	IE3L1124201 NONE
						Sound Pressure @ 1M	62 dBA
						VFD Rating	CONSTANT 2:1/VARIABLE 10:1
						Outline Dwg	SS600217A
						Conn. Diag	8442000676
						Additional Specifications:	
						0	
						0	
						EQUIV CKT (OHMS / PHASE)	
						R1	R2
						X1	X2
						Xm	
						1.4440	0.8250
						2.7330	3.2490
						72.0980	

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 : TCA0042AE221GAA009

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

Catalog No : R225

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