

PRODUCT INFORMATION PACKET

Model No: TCA0042AE231GAA009

Catalog No: R825

TerraMAX® 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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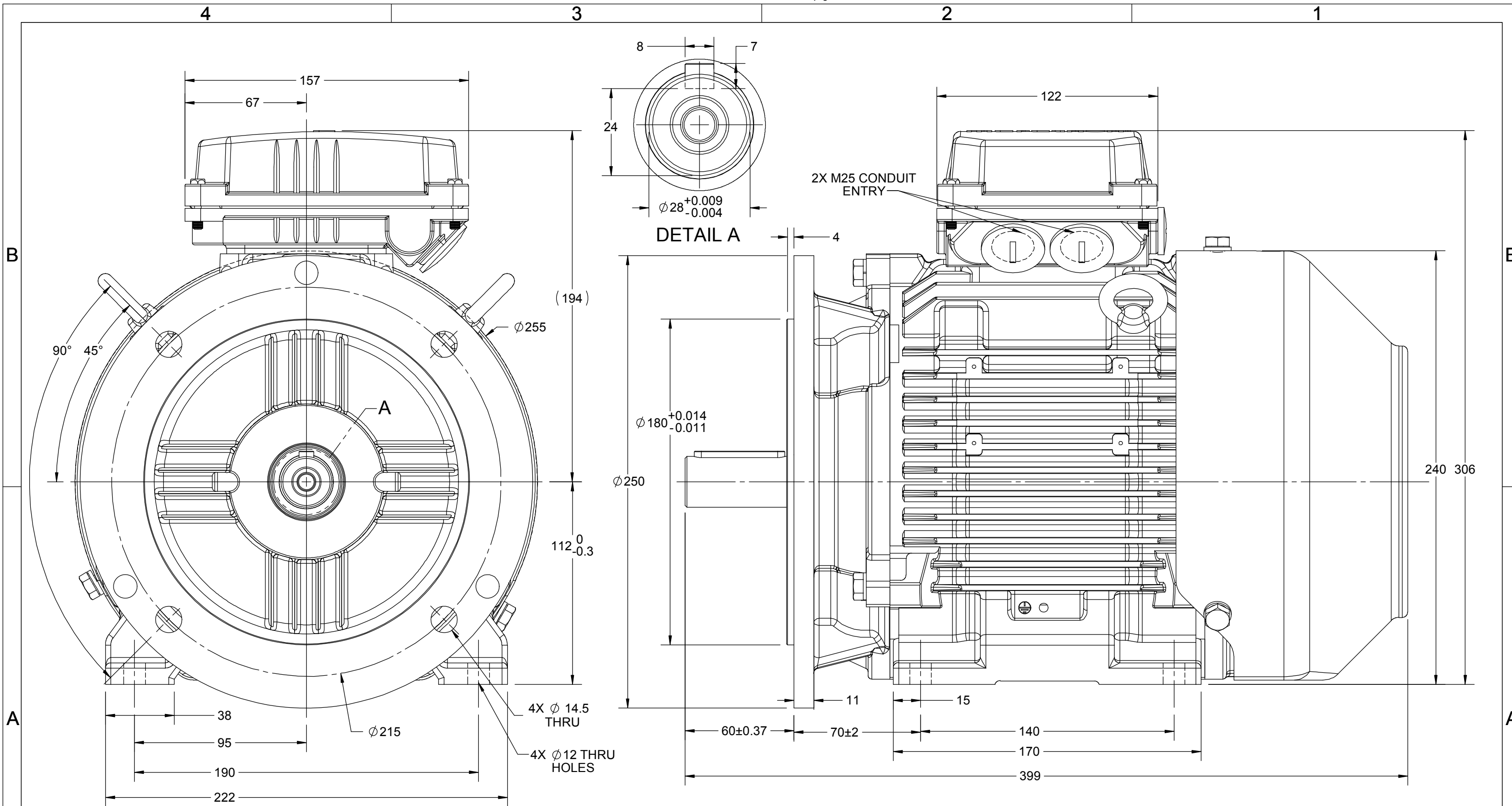
Nameplate Specifications

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	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
Connection Drawing	8442000730	Outline Drawing	SS620873

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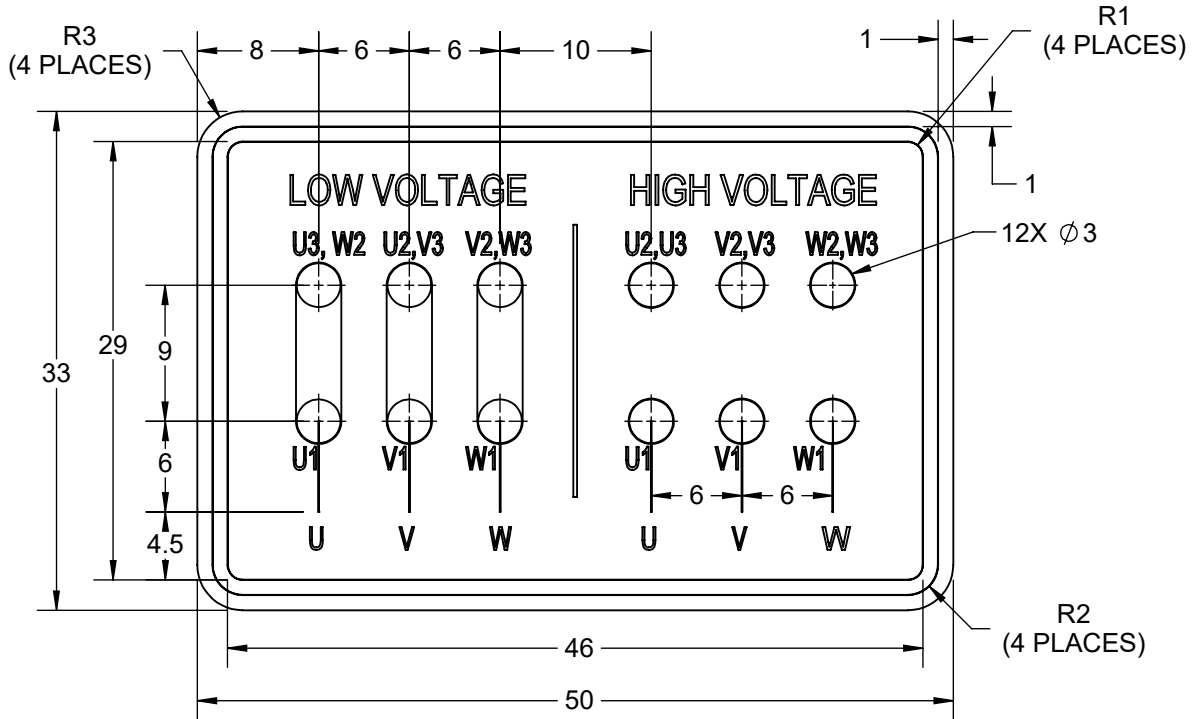
DRAWING REVISION A	REVISION BY MSH	DATE 25/01/2019
ECO ECO-0160263	APPROVED BY JAY	DATE 25/01/2019
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DRAWN BY MSH	marathon™ Motors	
DATE 25/01/2019		
APPROVED BY JAY	DESCRIPTION OUTLINE IEC-112M-B35, MOTOR TYPE: NA-TEFC-CAST IRON	
DATE 25/01/2019	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER SS620873
THIRD ANGLE PROJECTION		SHEET 1 OF 1

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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	Regal Beloit America, Inc.	
	DATE 14/7/2021		
	APPROVED BY JAY	DESCRIPTION CONN DIAGRAM-NAMEPLATE	
	DATE 14/7/2021	9LEADS - DELTA CONNECTION	
	REFERENCE	MATERIAL REFER NOTES	PROCESS/FINISH
THIRD ANGLE PROJECTION	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: SS620873
WINDING: IE3L1124201 NONE 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0042AE231GAA009
CAT #: R825
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
5.5	4.00	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	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE BALL	ODE 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					
	BRAKE: NONE					

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



Data Sheet

Date: 4/9/2020 TCA0042AE231GAA009

Customer: _____

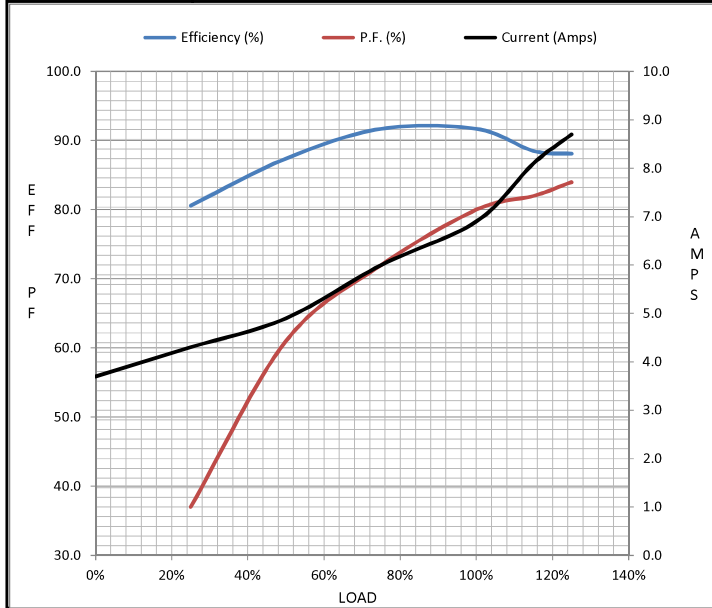
Attention: _____

Submittal

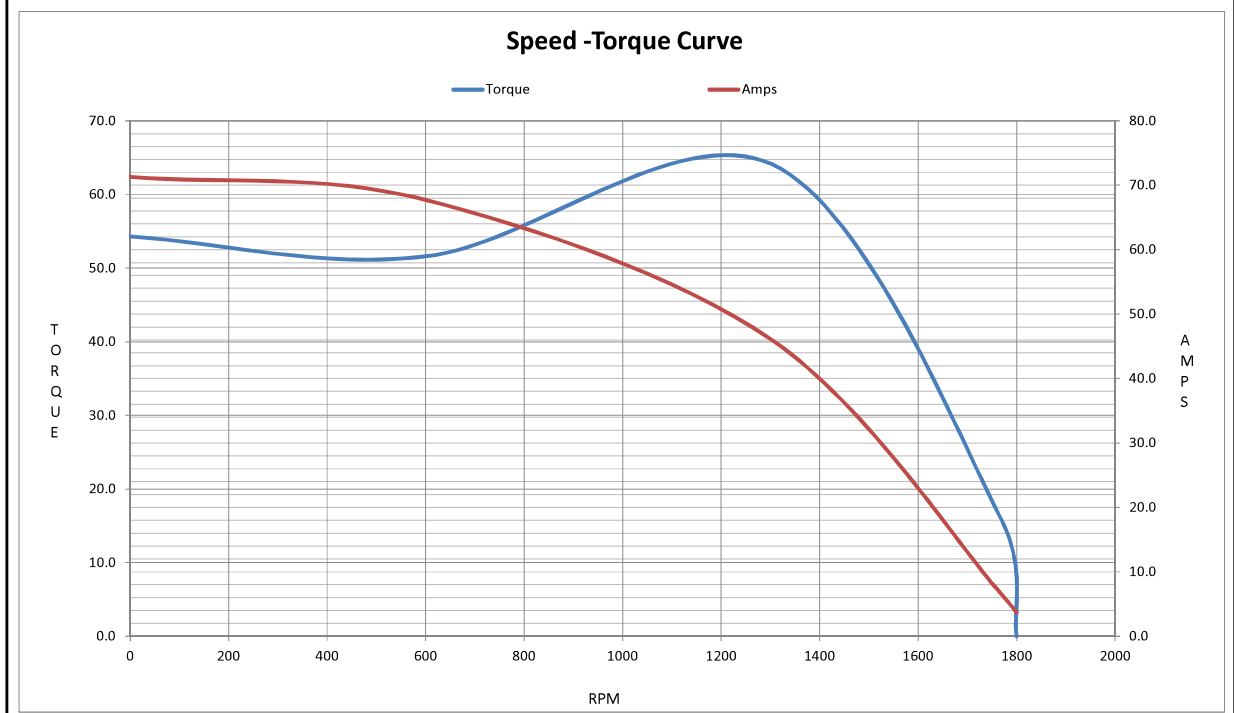
Submitted by: _____ Data @ 460 V

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						Information Block	
	LR	Pull-Up	BD	Rated	Idle		
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	SS620873
						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	
HP	5.5
Sync. RPM	1800
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	SS620873
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	



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 : TCA0042AE231GAA009

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

Catalog No : R825

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