

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA2P22AE211GAA009

Catalog No: R322B

2.2 kW 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	3 Hp	Output KW	2.2 kW
Frequency	60 Hz	Voltage	230/460 V
Current	7.8/3.9 A	Speed	1770 rpm
Service Factor	1.15	Phase	3
Efficiency	89.5 %	Power Factor	80
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	M
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	3.79 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	15.67 in
Frame Length	7.87 in	Shaft Diameter	1.102 in
Shaft Extension	2.36 in	Assembly/Box Mounting	F3

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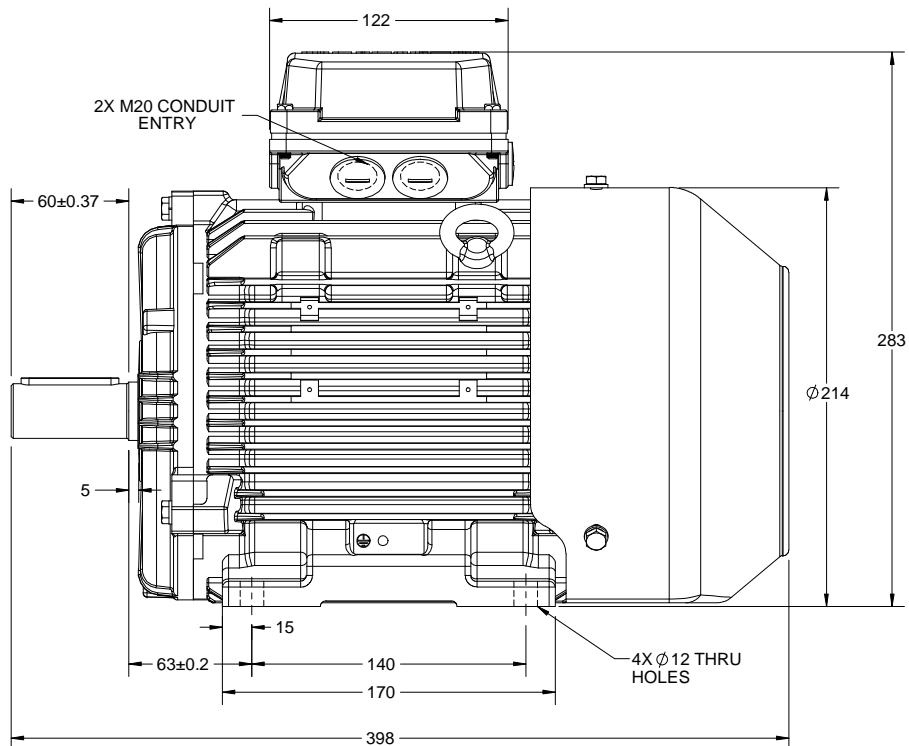
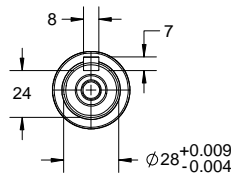
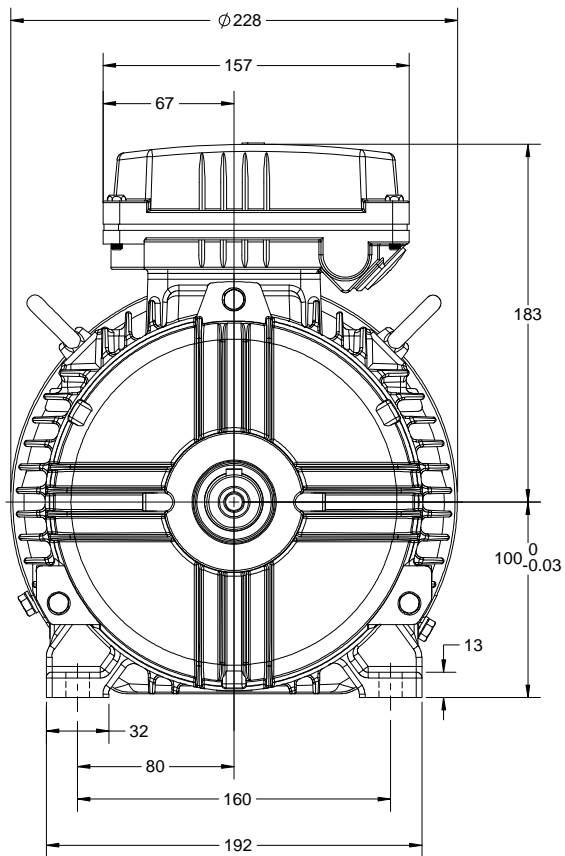
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DRAWING REVISION A	REVISION BY NIV	DATE 03/12/2018
ECO ECO-0157171	APPROVED BY JAY	DATE 03/12/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY NIV	marathon Motors
DATE 03/12/2018	
APPROVED BY JAY	DESCRIPTION OUTLINE IEC-100 FR- B3 MOTOR TYPE: TEFC-CAST IRON
DATE 03/12/2018	MATERIAL
REFERENCE	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B
	DRAWING NUMBER SS600216
	SHEET 1 OF 1

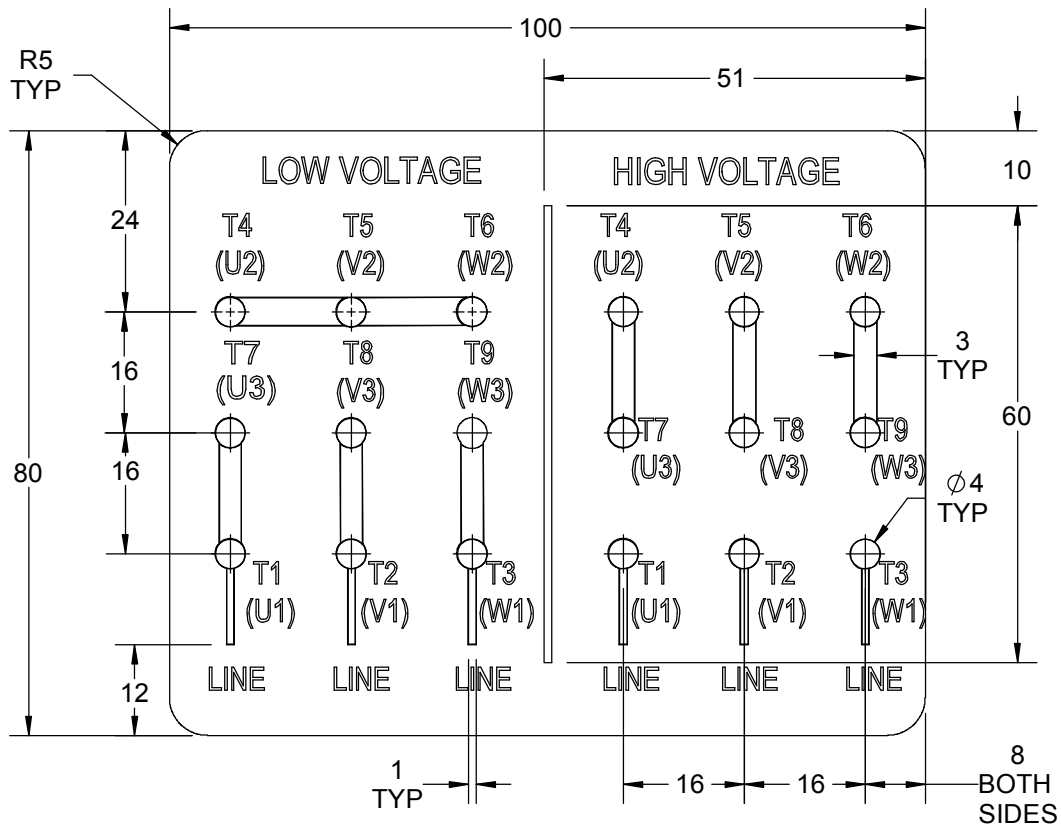
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GENERAL TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

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				APPROVED BY JAY	DESCRIPTION CONNECTION DIAGRAM 9 LEADS- STAR CONNECTOR
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			THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER 8442000675

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

DATA VOLTS: 480

CERTIFICATION DATA SHEET

CUSTOMER:		CUSTOMER P.O. #:	
ORDER #:	8442000675	REFERENCE MODEL #:	TCA2P22AE211GAA009
CONN. DIAGRAM:	SS600216	CAT #:	R322B
OUTLINE:	IE3L1004201	CUSTOMER PART #:	
WINDING:	NONE	MOUNTING:	F3
SPEED:	1		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN			
3	2.2	1800	1770	100L	TEFC	TCA 100LA04	M	N			
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.		
3	60/50	230/460#200/400	7.8/3.9&7/3.5	LINE OR INVERTER	CONT	F	1.15	40	3300		
	F.L. EFF		3/4 LD EFF				GTD EFF		ELECT. TYPE		
	89.5		89.5				85.3		SO CAGE INV RATED		
	F.L. PF		3/4 LD PF				87.9				
	80.0		73.0								
	F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (°C)		
	8.9		39.0		26.8		33.7		80		
	@ 3 FT. DBA		POWER		ROTOR WK²		MAX. LOAD WK²		SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
	55		64		0.34		0.34		10	2	80
					LB-FT²		LB-FT²		SEC.		LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE - RAL 5014
BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL		
DE BALL 6206	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON		

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
2.364	1.418	3.782	7.469	133.03	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
	BRAKE: NONE
	NONE
	FT-LB: NA
	NONE
	VOLTAGE: NONE
	NONE
	UL: V - LI-ME-INS CONST UL REC
	NONE
	PPH

PREPARED BY: Fareeda Dudekula
DATE: 5/28/2019

FORM: 3531 REV. 4 2/27/06

Data Sheet

Date: 5/29/2019

TCAP22AE21GA009

Customer: _____
Attention: _____

Submittal

Submitted by: Fareeda Dudekula

Data @ 460 V

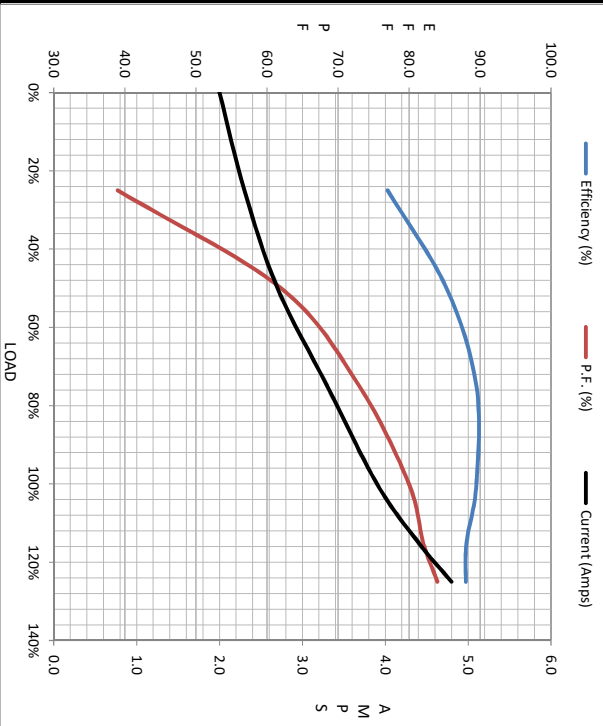
Load	Motor Load Data							LR
	0%	25%	50%	75%	100%	115%	125%	
Current (Amps)	2.00	2.30	2.70	3.3	3.9	4.4	4.8	39.0
Torque (ft-lb)	0.00	2.20	4.4	6.6	8.9	10.3	11.2	26.8
RPM	1800	1792	1784	1776	1770	1762	1759	0
Efficiency (%)		77.0	85.3	89.5	89.5	88.1	88.0	
P.F. (%)	10.0	39.0	62.0	73.0	80.0	82.0	84.0	63.4

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1468	1770	1800
Current (Amps)	39.0	37.1	21.2	3.9	2.00
Torque (ft-lb)	26.8	25.5	33.7	8.9	0.00

Information Block

HP	3.0			
Syn. RPM	1800			
Frame	100			
Enclosure	TEFC			
Construction	TCA 100LA04			
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 wk ²	0.34 Lb-Ft ²			
Ref Wdg	IE3L1004201 NONE			
Sound Pressure @ 1M	55 dBA			
VFD Rating	CONSTANT 2:1-VARIABLE 10:1			
Outline Dwg	SS600216			
Conn. Diag	8442000675			
Additional Specifications:				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
2.3640	1.4180	3.7820	7.4690	139.0300



Speed - Torque Curve

