

# PRODUCT INFORMATION PACKET

Model No: TCA0372AP211GAA009

Catalog No: R449

37.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1800 RPM, 575 V, 225S Frame, TEFC  
Cast Iron IE3 Efficiency Motors



### Nameplate Specifications

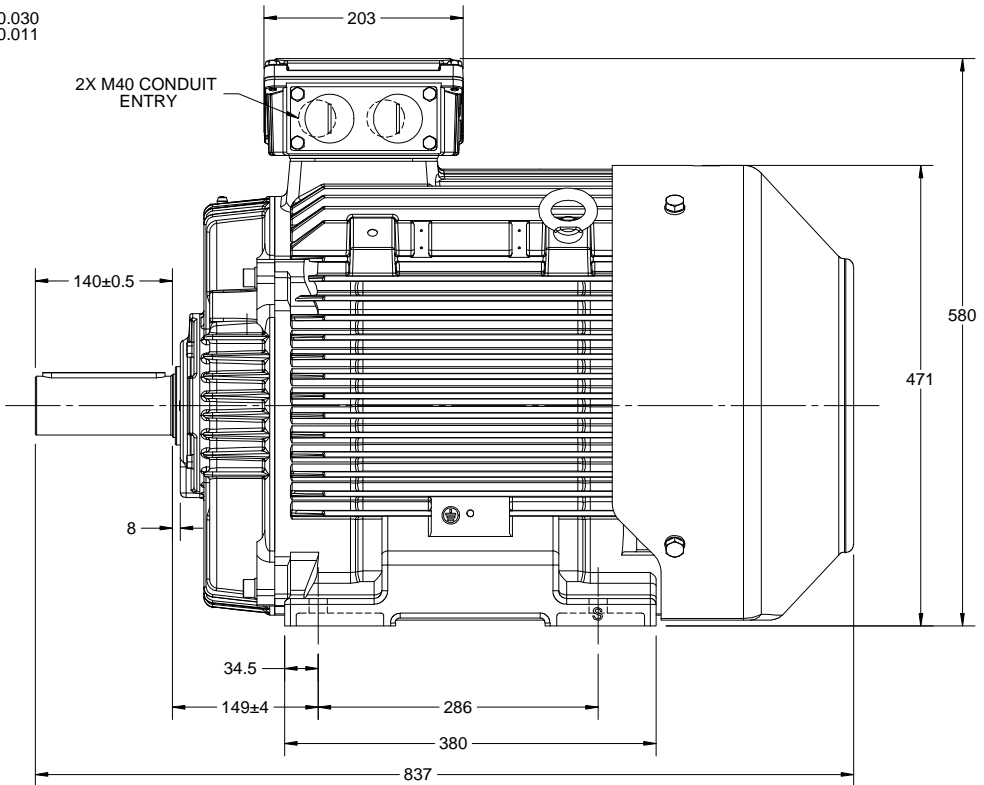
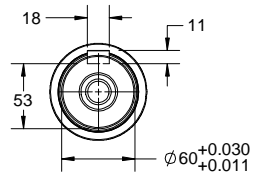
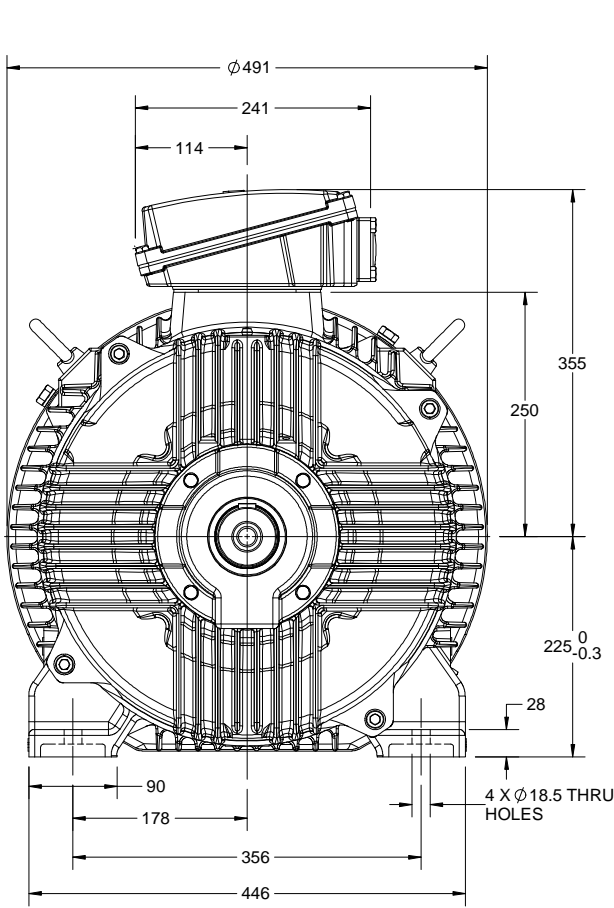
Output HP	<b>50 Hp</b>	Output KW	<b>37.0 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>575 V</b>
Current	<b>47.0 A</b>	Speed	<b>1785 rpm</b>
Service Factor	<b>1.15</b>	Phase	<b>3</b>
Efficiency	<b>94.5 %</b>	Power Factor	<b>84</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>N (IEC)</b>	KVA Code	<b>J</b>
Frame	<b>225S</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6313</b>	Opp Drive End Bearing Size	<b>6213</b>
UL	<b>Recognized</b>	CSA	<b>N</b>
CE	<b>Y</b>	IP Code	<b>55</b>

### Technical Specifications

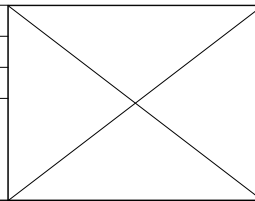
Electrical Type	<b>Squirrel Cage Inverter Rated</b>	Starting Method	<b>Line Or Inverter</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.13 Ohms</b>	Mounting	<b>B3</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>IEC</b>	Overall Length	<b>32.95 in</b>
Frame Length	<b>15.75 in</b>	Shaft Diameter	<b>2.362 in</b>
Shaft Extension	<b>5.51 in</b>	Assembly/Box Mounting	<b>F3</b>

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# OUTLINE



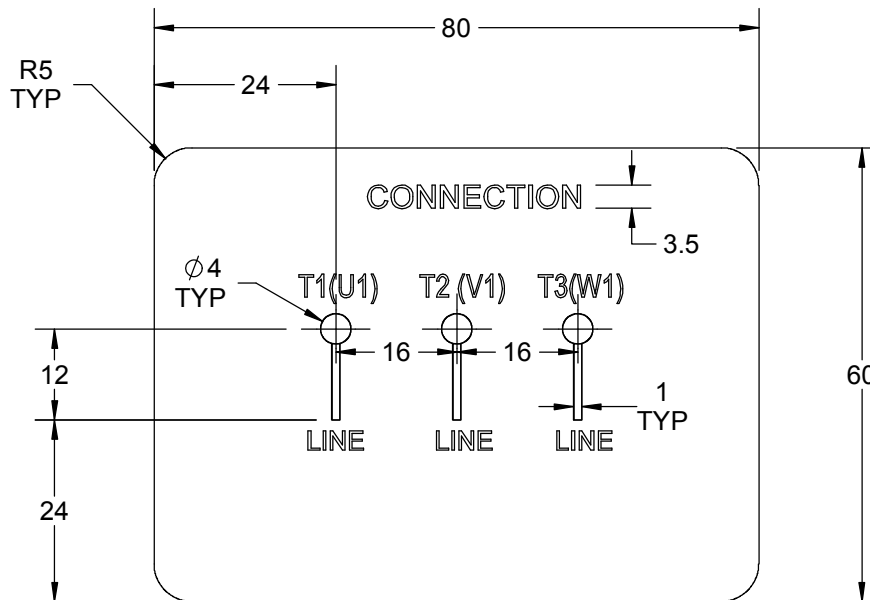
DRAWING REVISION A	REVISION BY LK	DATE 05/12/2018
ECO ECO-0157830	APPROVED BY JAY	DATE 05/12/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY LK
DATE 05/12/2018
APPROVED BY JAY
DATE 05/12/2018
REFERENCE
THIRD ANGLE PROJECTION

<b>marathon</b> Motors	
DESCRIPTION <b>OUTLINE</b> IEC-225S-4P-B3 MOTOR TYPE: TEFC-CAST IRON	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER <b>SS557720</b>
	SHEET 1 OF 1

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-T2 - T3 & U1-V1-W1 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION A	REVISION BY A. KEETHA	DATE 25/07/2019		DRAWN BY A. KEETHA	Regal Beloit America, Inc.	
ECO ECO-0171114	APPROVED BY SN	DATE 25/07/2019		DATE 24/07/2019		
ECO DESCRIPTION NEW DRAWING RELEASE				APPROVED BY SN	DESCRIPTION CONNECTION DIAGRAM 3 LEAD CONNECTION	
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				REFERENCE	SIZE A	DRAWING NUMBER 8442000685
			THIRD ANGLE PROJECTION			

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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

<b>CUSTOMER:</b>		<b>CUSTOMER P.O. #:</b>	
<b>ORDER #:</b>	8442000677	<b>REFERENCE MODEL #:</b>	TCA0372AP21TGA009
<b>CONN. DIAGRAM:</b>	SS57720	<b>CAT #:</b>	R449
<b>OUTLINE:</b>	IE3L2254201	<b>CUSTOMER PART #:</b>	
<b>WINDING:</b>	NONE	<b>MOUNTING:</b>	F3
<b>SPEED:</b>	3		

**TYPICAL MOTOR PERFORMANCE DATA**

<b>HP</b>	<b>KW</b>	<b>SYNC RPM</b>	<b>FL RPM</b>	<b>FRAME</b>	<b>ENCLOSURE</b>	<b>TYPE</b>	<b>KVA CODE</b>	<b>DESIGN</b>	
50	37	1800	1786	226S	TEFC	TCA 226S04	J	N	
<b>PH</b>	<b>HZ</b>	<b>VOLTS</b>	<b>AMPS</b>	<b>START TYPE</b>	<b>DUTY</b>	<b>INSL</b>	<b>S.F.</b>	<b>AMB</b>	<b>ELEV.</b>
3	60	575	47	LINE OR INVERTER	CONT	F	1.15	40	3300
<b>F.L. EFF</b>		94.5	<b>3/4 LD EFF</b>	94.5	<b>1/2 LD EFF</b>	93.9	<b>GTD EFF</b>	<b>ELECT. TYPE</b>	
<b>F.L. PF</b>		84.0	<b>3/4 LD PF</b>	79.0	<b>1/2 LD PF</b>	69.0	93.7	SQ CAGE INV RATED	
<b>F.L. TORQUE</b>		<b>LR AMPS @ 460 V</b>		<b>L.R. TORQUE</b>		<b>B.D. TORQUE</b>		<b>F.L. RISE (°C)</b>	
147	<b>LB-FT</b>	363	346	<b>LB-FT</b>	235%	451	<b>LB-FT</b>	307%	80
<b>@ 3 FT.</b>		<b>POWER</b>	<b>ROTOR WK²</b>	<b>MAX. LOAD WK²</b>	<b>SAFE STALL TIME</b>	<b>START/SHOUR</b>	<b>MOTOR WGT</b>		
69	<b>DBA</b>	78	17.3	17.3	17.3	15	2	296	<b>LB.</b>

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

<b>DE BRACKET TYPE</b>	<b>ODE BRACKET TYPE</b>	<b>MOUNT TYPE</b>	<b>MOTOR ORIENTATION</b>	<b>SEVERE DUTY</b>	<b>HAZARDOUS LOCATION</b>	<b>DRIP COVER</b>	<b>SCREENS</b>	<b>PAINT</b>
STANDARD	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE - RAL 5014
<b>BEARINGS</b>	<b>GREASE</b>	<b>SHAFT TYPE</b>	<b>SPECIAL DE</b>	<b>SPECIAL ODE</b>	<b>SHAFT MATERIAL</b>	<b>FRAME MATERIAL</b>		
DE ODE BALL BALL 6313	SG-SS-V100	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON		

<b>THERMOSTATS</b>	<b>PROTECTORS</b>	<b>WDG RTD's</b>	<b>BRG RTD's</b>	<b>THERMISTORS</b>	<b>CONTROL</b>	<b>SPACE HEATERS</b>
NONE	NOT	NONE	NONE	NONE	FALSE	NA
<b>R1 (ohms/ph)</b>	<b>R2 (ohms/ph)</b>	<b>X1 (ohms/ph)</b>	<b>X2 (ohms/ph)</b>	<b>Xm (ohms/ph)</b>	<b>VIBRATION (in/sec)</b>	<b>FLOAT ODE</b>
0.133	0.053	0.514	0.727	17.276	0.090	ODE

<b>* N O T E S *</b>	<b>INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1</b>	
	<b>INV. HP SPEED RANGE: NONE</b>	
	<b>ENCODER: NONE</b>	
	NONE	
	NONE	
	<b>BRAKE: NONE</b>	
	NONE	
	<b>FT-LB: NA</b>	<b>NONE</b>
	<b>VOLTAGE: NONE</b>	<b>NONE</b>
		<b>NONE PPR</b>

**PREPARED BY:** Fareeda Dudekula  
**DATE:** 5/29/2019

**UL: V - LIME-INS CONST UL REC**



Data Sheet

Date: 5/29/2019

TCA0372AP211GAA009

Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_

**Submittal**

Submitted by: Fareeda Dudekula

Data @ 575 V

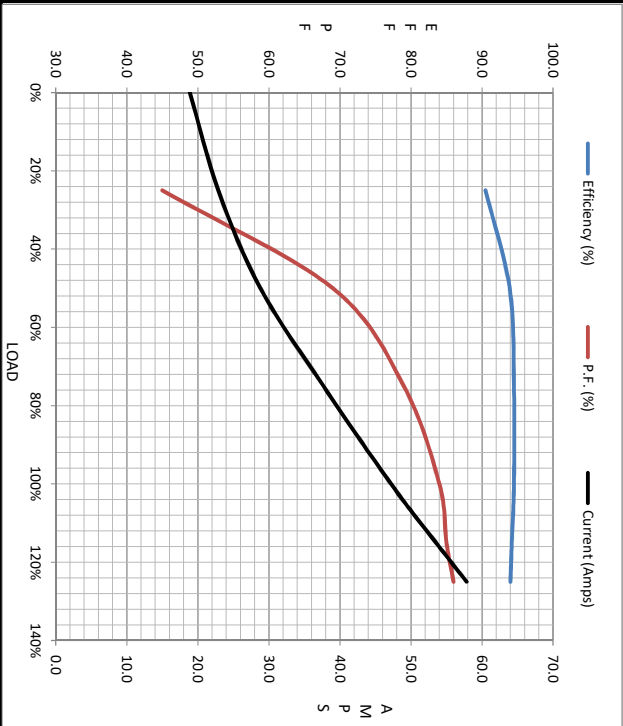
Load	Motor Load Data						LR	
	0%	25%	50%	75%	100%	115%		125%
Current (Amps)	18.9	22.9	28.8	37.7	47.2	53.5	57.8	363
Torque (ft-lb)	0.00	36.6	73.2	110	147	169	184	346
RPM	1800	1797	1793	1790	1785	1,784	1783	0
Efficiency (%)		90.5	93.9	94.5	94.5	94.2	94.0	
P.F. (%)	5.0	45.0	69.0	79.0	84.0	85.0	86.0	63.4

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1699	1785	1800
Current (Amps)	363	345	205	47.2	18.9
Torque (ft-lb)	346	329	451	147	0.00

Information Block

HP	50.0			
Sync. RPM	1800			
Frame	225			
Enclosure	TEFC			
Construction	TCA225S04			
Voltage	575 V			
Frequency	60 Hz			
Design	N			
LR Code letter	J			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk <sup>2</sup>	1.73 Lb-Ft <sup>2</sup>			
Ref Wdg	IE312254201 NONE			
Sound Pressure @ 1M	69 dBA			
VFD Rating	CONSTANT 2:1-VARIABLE 10:1			
Outline Dwg	SS557720			
Conn. Diag	8442000677			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.1330	0.0530	0.5140	0.7270	17.2760



Speed - Torque Curve

