

PRODUCT INFORMATION PACKET

Model No: TCA0151AP211GAA009

Catalog No: R436

15.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 3600 RPM, 575 V, 160M Frame, TEFC
Cast Iron IE3 Efficiency Motors





Nameplate Specifications

Output HP	20 Hp	Output KW	15.0 kW
Frequency	60 Hz	Voltage	575 V
Current	18.3 A	Speed	3540 rpm
Service Factor	1.15	Phase	3
Efficiency	91 %	Power Factor	91
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	G
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
UL	Recognized	CSA	N
CE	Y	IP Code	55

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	.73 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	24.49 in
Frame Length	10.00 in	Shaft Diameter	1.654 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3

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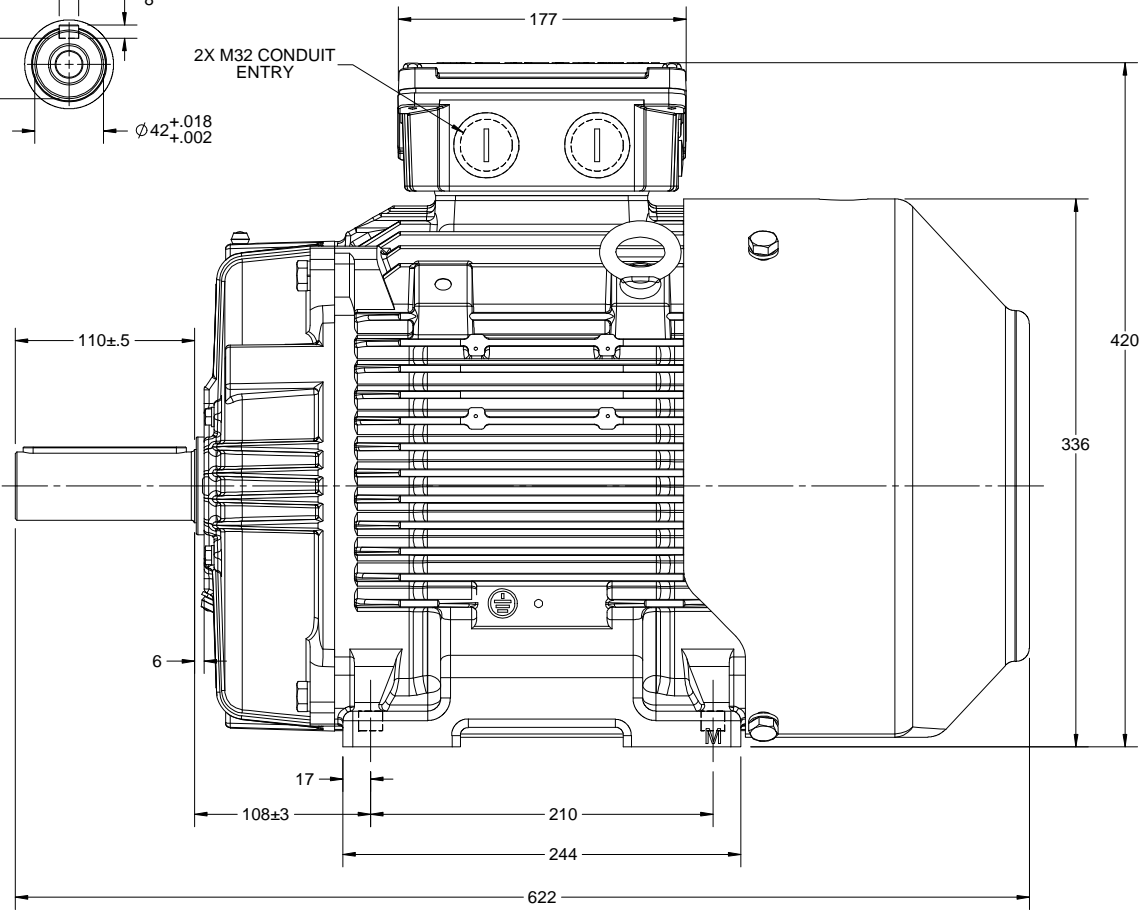
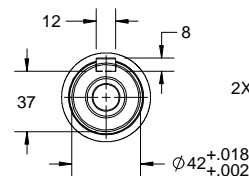
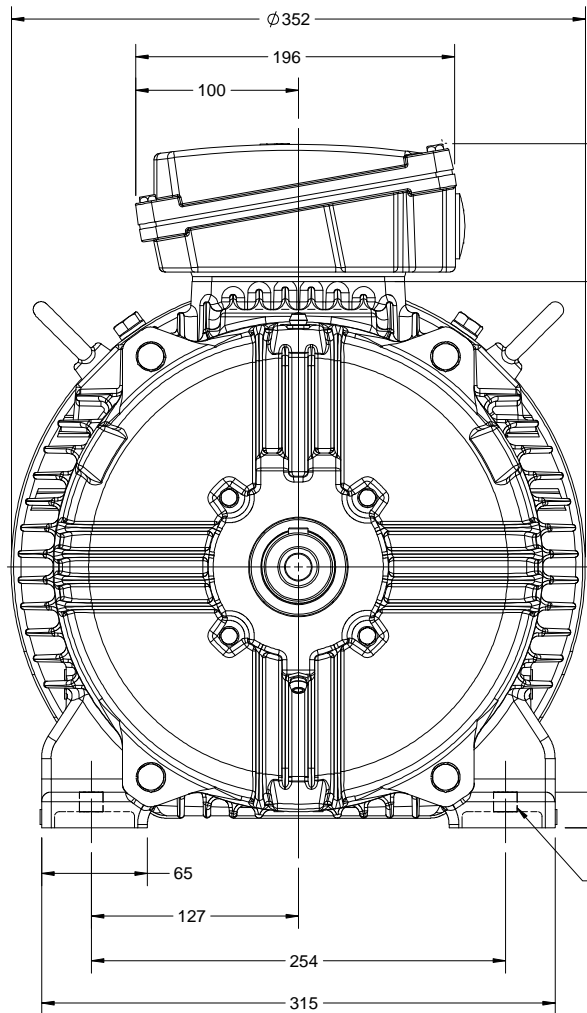
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DRAWING REVISION A	REVISION BY LK	DATE 05/12/2018
ECO ECO-0157830	APPROVED BY JAY	DATE 05/12/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY LK	marathon Motors
DATE 05/12/2018	
APPROVED BY JAY	DESCRIPTION OUTLINE IEC-160M-B3-MTG MOTOR TYPE : TEFC-CAST IRON
DATE 05/12/2018	MATERIAL PROCESS/FINISH
REFERENCE	SIZE B
THIRD ANGLE PROJECTION	DRAWING NUMBER SS208563
	SHEET 1 OF 1

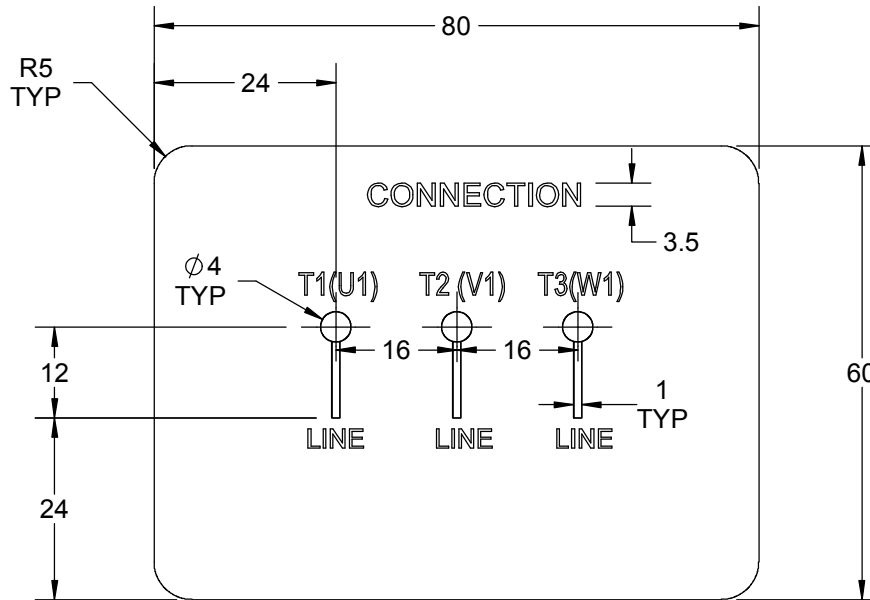
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GENERAL TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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-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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			THIRD ANGLE PROJECTION		SIZE A

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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:		CUSTOMER P.O. #:	
ORDER #:		REFERENCE MODEL #:	TCA0151AP21TGA009
CONN. DIAGRAM:	8442000677	CAT #:	R436
OUTLINE:	SS208563	CUSTOMER PART #:	
WINDING:	IE3L1602202	MOUNTING:	F3
SPEED:			

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN	
20	14.9	3600	3540	160M	TEFC	TCA 160MC02	G	N	
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	575	18.3	LINE OR INVERTER	CONT	F	1.15	40	3300
F.L. EFF		91.0	3/4 LD EFF	91.0	1/2 LD EFF	91.3	GTD EFF	ELECT. TYPE	
F.L. PF		91.0	3/4 LD PF	88.0	1/2 LD PF	82.0	89.7	SQ CAGE INV RATED	
F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (°C)	
29.7	LB-FT	114	47.2	LB-FT	159%	76.7	LB-FT	258%	80
@ 3 FT. DBA		POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	START/HOUR	MOTOR WGT		
75	84	84	1.59	1.59	7	2	146	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 ODE BALL 6309	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 ODE
0.709	0.288	1.573	1.507	64.971	0.090	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
		NONE PPR

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

UL: V - LIME-INS CONST UL REC



Data Sheet

TCA0151AP211GA009

Date: 5/29/2019

Customer: _____
Attention: _____

Submitted

Submitted by: Fareeda Dudekula

Data @ 575 V

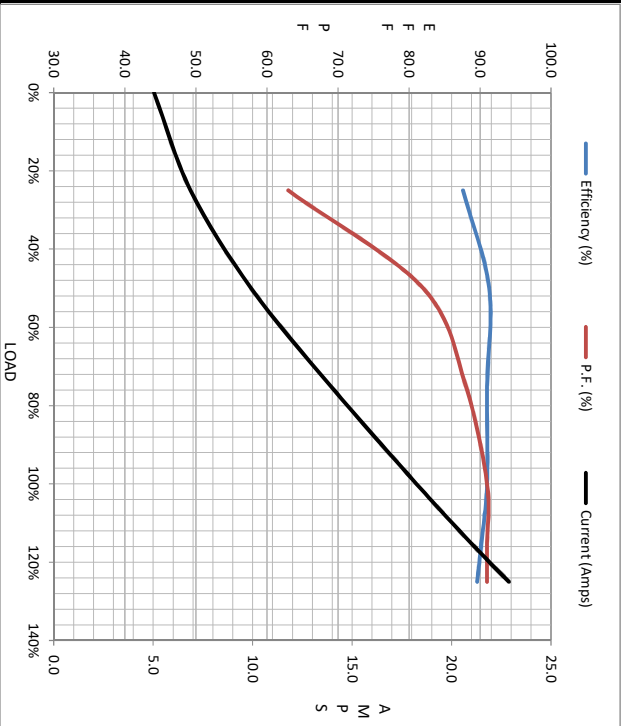
Load	Motor Load Data							
	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	5.0	6.9	9.9	13.9	18.2	21.0	22.9	114
Torque (ft-lb)	0.00	7.3	14.7	22.1	29.7	34.2	37.3	47.2
RPM	3600	3586	3572	3558	3540	3532	3524	0
Efficiency (%)		87.6	91.3	91.0	91.0	90.2	89.6	
P.F. (%)	9.0	63.0	82.0	88.0	91.0	91.0	91.0	63.4

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	3250	3540	3600
Current (Amps)	11.4	109	68.8	18.2	5.0
Torque (ft-lb)	47.2	44.9	76.7	29.7	0.00

IEC

Information Block				
HP	20.0			
Sync. RPM	3600			
Frame	180			
Enclosure	TEFC			
Construction	TCA 160MC02			
Voltage	575 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 wk ²	1.59 Lb-Ft ²			
Ref Wdg	IE3L1602202 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 2:1-VARIABLE 10:1			
Outline Dwg	SS2008563			
Conn. Diag	8442000677			
Additional Specifications:				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.7090	0.2880	1.5730	1.5070	64.9710



Speed - Torque Curve

