

PRODUCT INFORMATION PACKET

Model No: TCA18P1AP211GAA009

Catalog No: R439

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



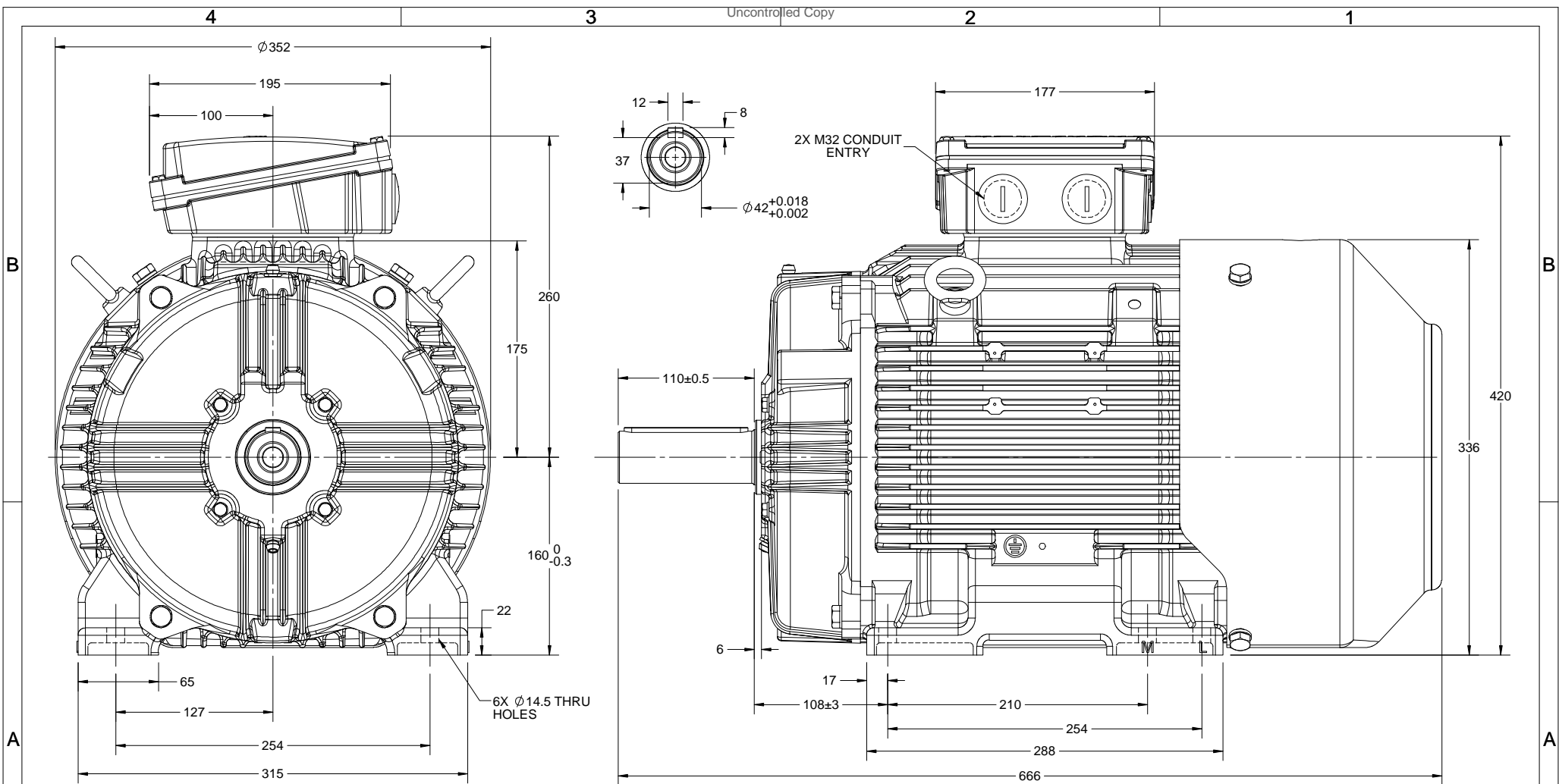
Nameplate Specifications

Output HP	25 Hp	Output KW	18.5 kW
Frequency	60 Hz	Voltage	575 V
Current	22.5 A	Speed	3550 rpm
Service Factor	1.15	Phase	3
Efficiency	91.7 %	Power Factor	90
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	H
Frame	160L	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	.5 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	26.22 in
Frame Length	11.73 in	Shaft Diameter	1.654 in
Shaft Extension	4.33 in	Assembly/Box Mounting	F3

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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
DATE 05/12/2018
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REFERENCE

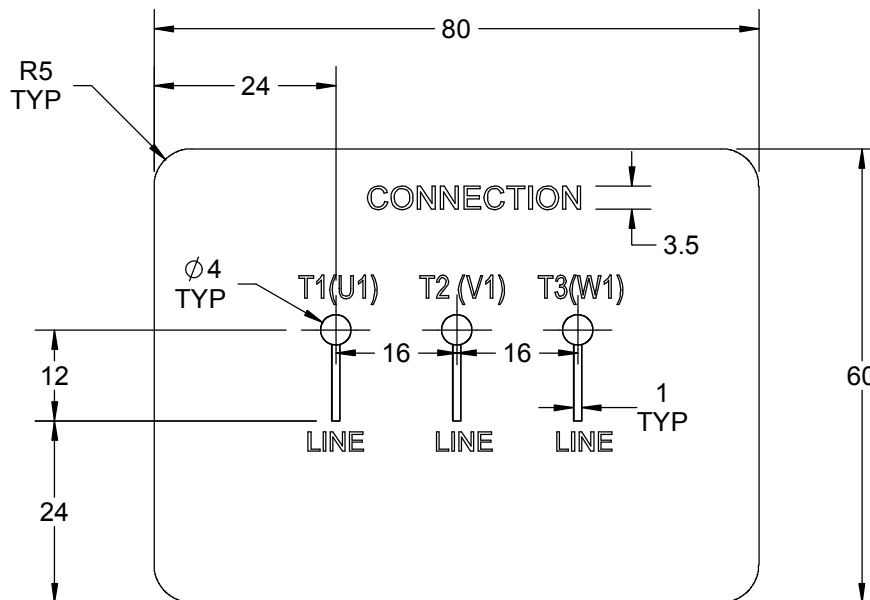
marathon
Motors

DESCRIPTION
OUTLINE
IEC-160L-B3 MTG. MOTOR TYPE : TEFC-CAST IRON

MATERIAL PROCESS/FINISH

THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER SS208564	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	DRAWING NUMBER 8442000685	SHEET 1 OF 1

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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:		CUSTOMER P.O. #:	
ORDER #:	8442000677	REFERENCE MODEL #:	TCA18P1AP211GAA009
CONN. DIAGRAM:	SS208564	CAT #:	R439
OUTLINE:	IE3L1602203	CUSTOMER PART #:	
WINDING:	NONE	MOUNTING:	F3
SPEED:	3		

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN	
25	18.7	3600	3550	160L	TEFC	TCA 160L A02	H	N	
PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60	575	22.5	LINE OR INVERTER	CONT	F	1.15	40	3300
F.L. EFF		91.7	3/4 LD EFF	91.7	1/2 LD EFF	91.8	GTD EFF	ELECT. TYPE	
F.L. PF		90.0	3/4 LD PF	87.0	1/2 LD PF	80.0	90.5	SQ CAGE INV RATED	
F.L. TORQUE		LR AMPS @ 460 V		L.R. TORQUE		B.D. TORQUE		F.L. RISE (°C)	
37.0	LB-FT	174	77.1	LB-FT	208%	114	LB-FT	308%	80
@ 3 FT. DBA		POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	START/SHOUR	MOTOR WGT		
75	84	84	1.90	1.9	7	2	166	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 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
0.496	0.195	0.993	1.099	46.536	0.090	ODE

* N O T E S *	
	INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE
	ENCODER: NONE
	BRAKE: NONE
	FT-LB: NONE NA NONE
	VOLTAGE: NONE NONE
	UL: V - LIME-INS CONST UL REC

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



Data Sheet

?

Date: 5/29/2019

TCA18P14P211GAA009

Customer: _____
Attention: _____

Submittal

Submitted by: Fareeda Dudekula

Data @ 575 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	7.0	9.2	12.8	17.5	22.5	25.8	28.2	174
Torque (ft-lb)	0.00	9.2	18.4	27.6	37.0	42.6	46.4	77.1
RPM	3600	3588	3577	3565	3550	3544	3538	0
Efficiency (%)		87.9	91.8	91.7	91.7	91.4	91.0	91.0
P.F. (%)		58.0	80.0	87.0	90.0	91.0	91.0	63.4

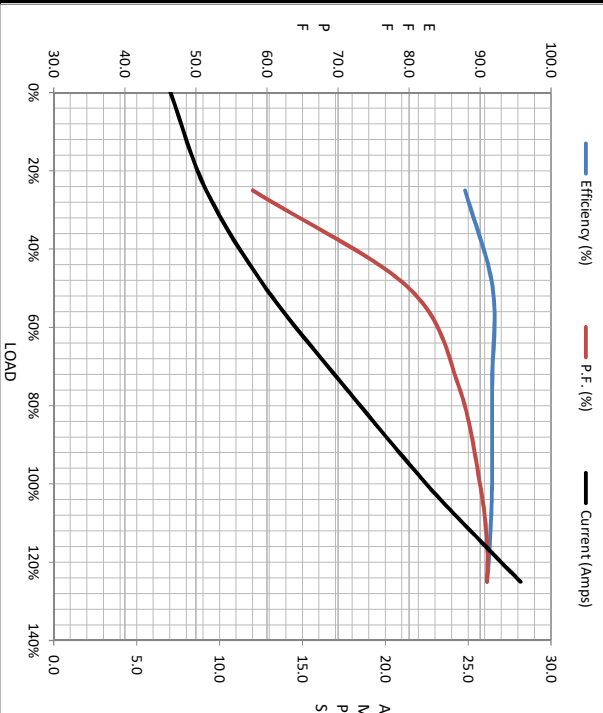
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1200	3243	3550	3600
Current (Amps)	174	165	103	22.5	7.0
Torque (ft-lb)	77.1	73.2	114	37.0	0.00

IEC

Information Block

HP	25.0			
Sync. RPM	3600			
Frame	180			
Enclosure	TEFC			
Construction	TCA 160LA02			
Voltage	575 V			
Frequency	60 Hz			
Design	N			
LR Code letter	H			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk ²	1.90 Lb-Ft ²			
Ref Wdg	IE3L1602203 NONE			
Sound Pressure @ 1M	75 dBA			
VFD Rating	CONSTANT 2:1-VARIABLE 10:1			
Outline Dwg	SS208564			
Conn. Diag	8442000677			
Additional Specifications:				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.4960	0.1950	0.9930	1.0990	46.5360



Speed - Torque Curve

