

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0111A3131GACD01

Catalog No: TCA0111A3131GACD01

11.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 3000 RPM, 415 V, 160M Frame, TEFC
Cast Iron IE3 Efficiency Motors



Regal and Marathon are trademarks of Regal Beloit Corporation or one of its affiliated companies.

©2020 Regal Beloit Corporation, All Rights Reserved. MC017097E

REGAL

Nameplate Specifications

Output HP	15 Hp	Output KW	11.0 kW
Frequency	50 Hz	Voltage	415 V
Current	18.9 A	Speed	2953 rpm
Service Factor	1	Phase	3
Efficiency	91.2 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6309
Opp Drive End Bearing Size	6209	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	622 mm	Frame Length	254 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0216000480	Connection Drawing	8442000085

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:06/01/2020

4

3

Uncontrolled Copy

2

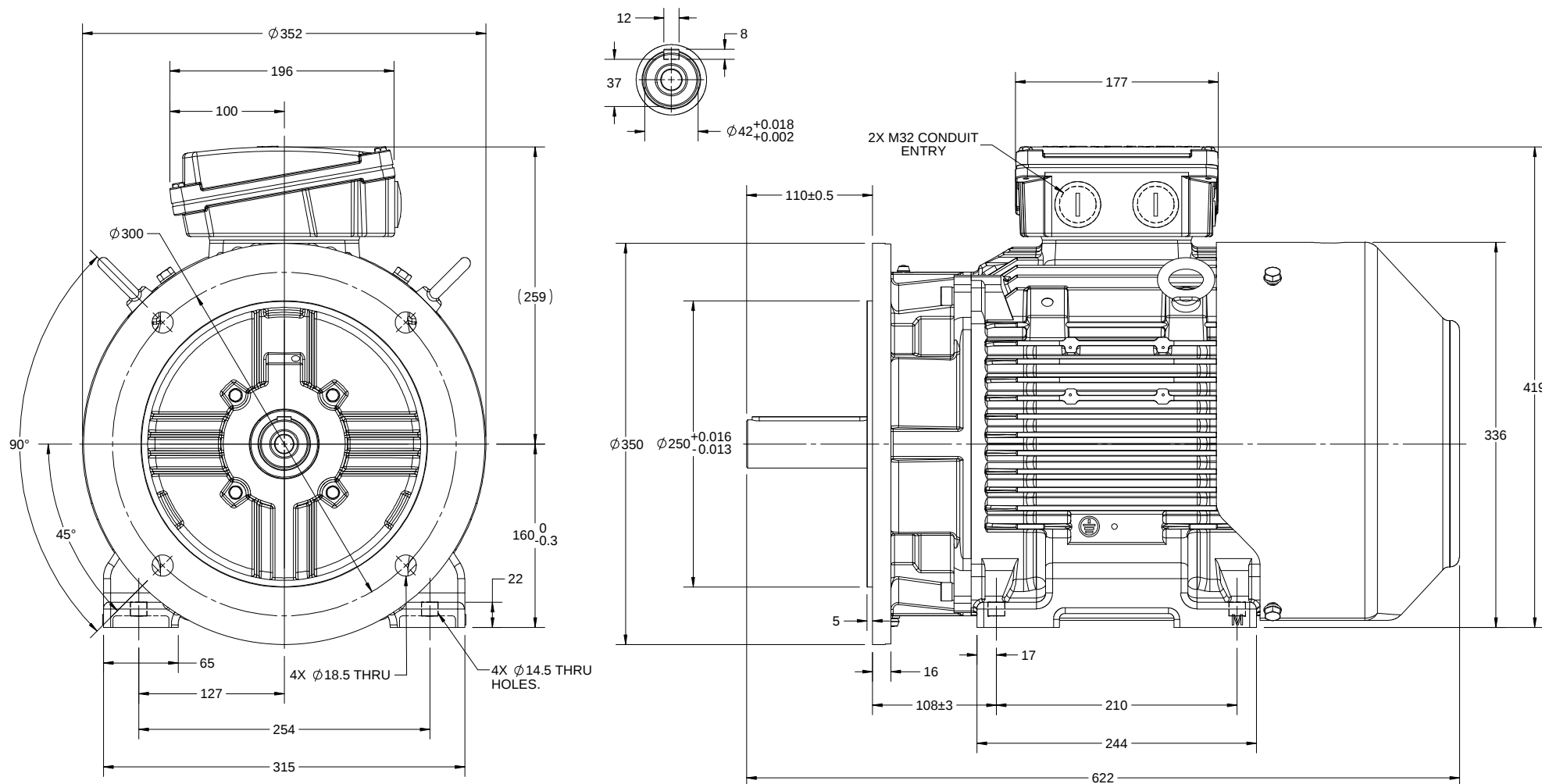
1

B

B

A

A



DRAWING REVISION B	REVISION BY I. RAMDAS	DATE 06/07/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 06/07/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING		
COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.		

DRAWN BY KCS	 Regal Beloit America, Inc.	
DATE 10/11/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 160M FR B35 MTG. MOTOR TYPE TCA	
DATE 10/11/2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0216000480
		SHEET 1 OF 1

4

3

2

1

DRAWING REVISION A	REVISION BY SN	DATE 13/01/2017
ECO ECO-0116390	APPROVED BY SBD	DATE 13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

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.

DRAWN BY		SN	Regal Beloit America, Inc.	
DATE		16/12/2016	DESCRIPTION	
APPROVED BY		SBD	CONN DIAGRAM-NAMEPLATE	
DATE		16/12/2016	MATERIAL	
REFERENCE			PROCESS/FINISH	
THIRD ANGLE PROJECTION		A	SIZE	
			DRAWING NUMBER	
			8442000085	
			SHEET	
			1 OF 1	

Model No. TCA0111A3131GACD01

U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I _a /I _N [pu]	T _a /T _N [pu]	T _b /T _N [pu]
415	Δ	50	11	15	18.9	2953	36.17	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	7.6	2.2	3.5

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160M	Motor weight - approx.	141 kg
Duty	S1	Gross weight - approx.	161 kg
Voltage variation *	± 10%	Motor inertia	0.0626 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level (1meter distance from motor)	71 dB(A)
Service factor	1.0	No. of starts hot/cold/Equally spread	2/3/4
Insulation class	F	Starting method	DOL
Ambient temperature	-20 to +50 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [Class B] K	LR withstand time (hot/cold)	10/20 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	NA	Standard rotation	Clockwise form DE
Zone classification	NA	Paint shade	RAL 5014
Gas group	NA	Accessories	
Temperature class	NA	Accessory - 1	-
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball bearing	Accessory - 3	-
DE / NDE bearing	6309-2Z / 6209-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I_a/I_N - Locked Rotor Current / Rated CurrentT_b/T_N - Breakdown Torque / Rated TorqueT_a/T_N - Locked Rotor Torque / Rated Torque
NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

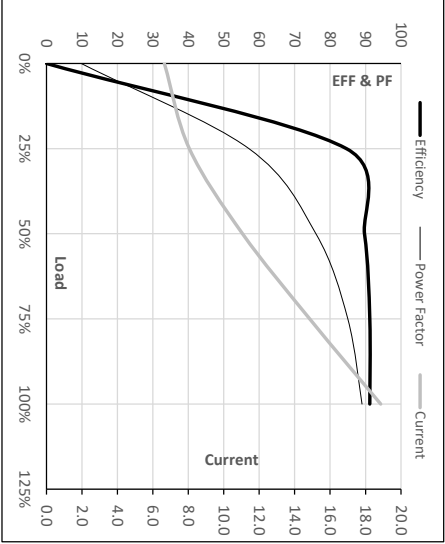
Model No. TCA011JA3131GACD01

Enclosure	U [V]	Δ / Y Com	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	11	15	18.9	2953	3.69	36.17	IE3	50	S1	1000	0.0626	14.1

Motor Speed Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	6.7	8.1	11.1	14.9	18.9	
Torque	Nm	0.0	8.9	17.9	27.0	36.2	
Speed	r/min	3000	2988	2977	2965	2953	
Efficiency	%	0.0	84.6	89.7	91.2	91.2	
Power Factor	%	9.8	57.1	76.0	85.0	89.0	

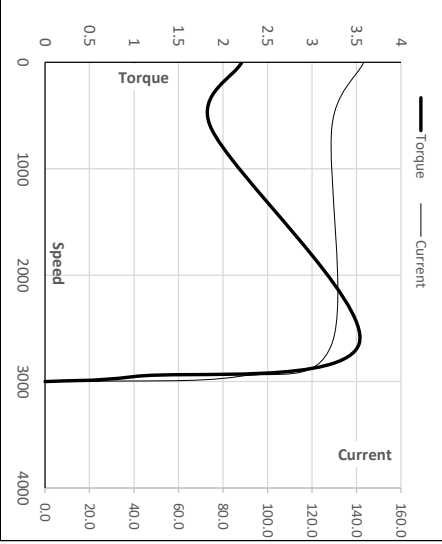
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	600	2643	2953	3000
Current	A	143.3	129.0	86.7	18.9	6.7
Torque	pu	2.2	1.9	3.5	1	0

Starting Characteristics Chart



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

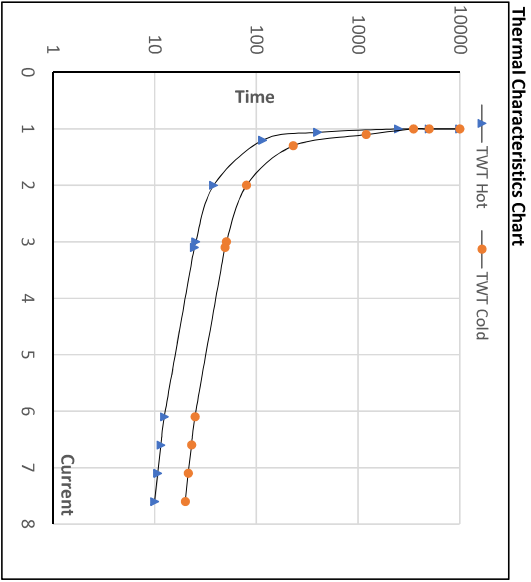
Issued By
Issued Date

Model No. TCA0111A313IGACD01

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	11	15	18.9	2953	3.69	36.17	IE3	50	S1	1000	0.0626	141

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	38	25	20	16	13	10
TWT Cold	s 10000	80	51	44	36	29	20
Current	pu 1	2	3	4	5	5.5	7.6



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

Issued By
Issued Date