

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA0153A3131GAAD01

Catalog No: SCA0153A3131GAAD01

15kW, General Purpose Low Voltage IEC Motor, 3 phase, 6 Pole, 415V, B5, 50Hz, 89.7%, 180L Frame, TEFC
Cast Iron IE2 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	20 Hp	Output KW	15.0 kW
Frequency	50 Hz	Voltage	415 V
Current	30.1 A	Speed	977 rpm
Service Factor	1	Phase	3
Efficiency	89.7 %	Power Factor	0.77
Duty	S1	Insulation Class	F
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6311
Opp Drive End Bearing Size	6211	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	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	750 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0218000850	Connection Drawing	8442000085

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:16/01/2020

4

3

Uncontrolled Copy

2

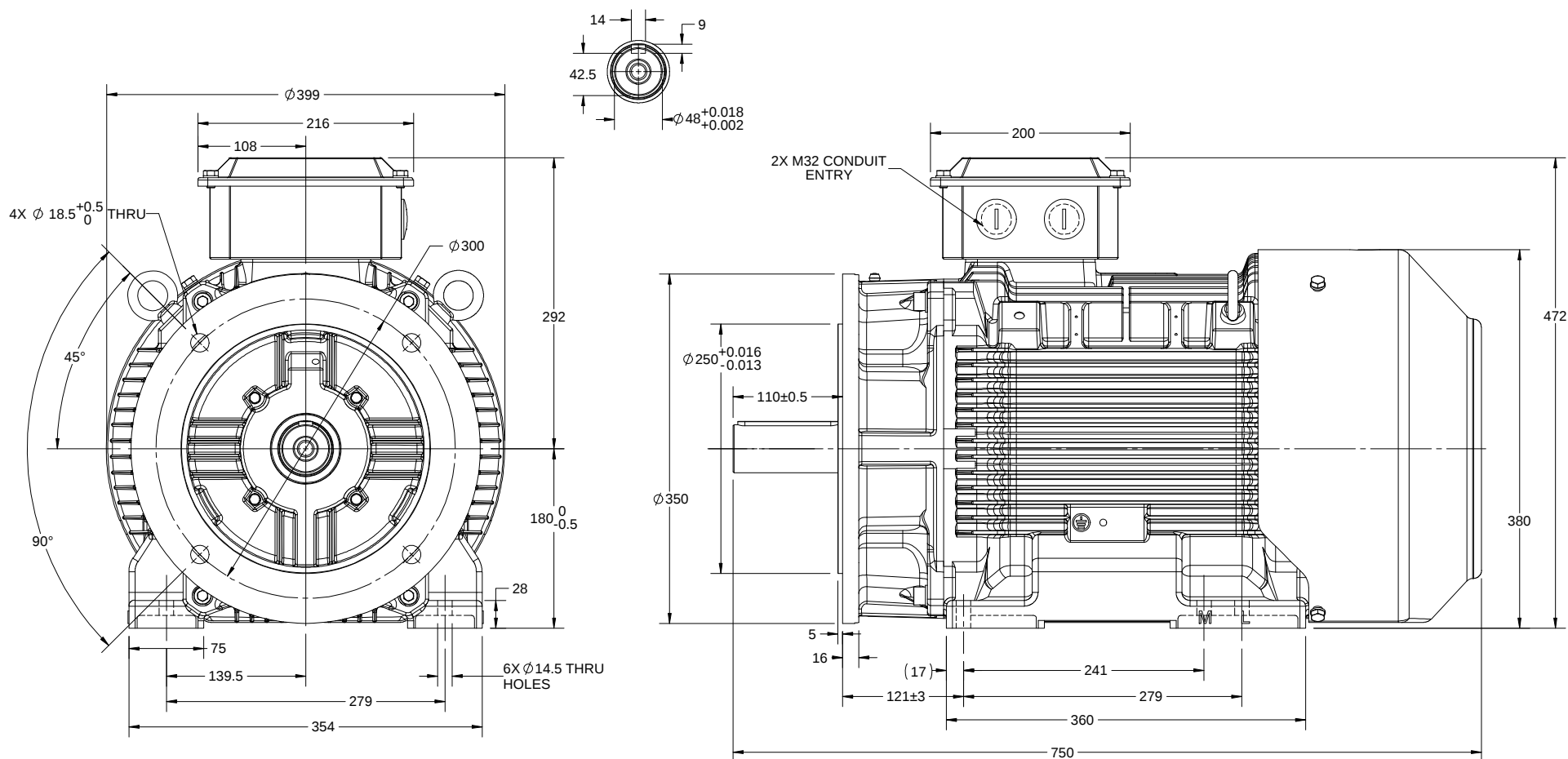
1

B

B

A

A



DRAWING REVISION B	REVISION BY VS	DATE 16/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 16/08/2018
ECO DESCRIPTION MODEL UPDATED		
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 GSR		
DATE 02/04/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE 180L-FR-B35 MTG. MOTOR TYPE: SCA	
DATE 02/04/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000850
		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
		DATE	16/12/2016
		APPROVED BY	SBD
		DATE	16/12/2016
REFERENCE		MATERIAL	
THIRD ANGLE PROJECTION		SIZE	DRAWING NUMBER
A		8442000085	SHEET 1 OF 1

8WD.442.2017

REGAL™ Regal Beloit America, Inc.

DESCRIPTION
CONN DIAGRAM-NAMEPLATE

Model No. SCA0153A3131GAAD01

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 _k /T _N [pu]	T _k /T _N [pu]
415	Δ	50	15	20	30.1	977	145.80	IE2	S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.4	2.3	2.6

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180L	Motor weight - approx.	218 kg
Duty	S1	Gross weight - approx.	238 kg
Voltage variation *	± 10%	Motor inertia	0.2127 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)	69 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)	15/30 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	Accessory - 3	-
DE / NDE bearing	6311-2Z / 6211-2Z	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_k/T_N - Breakdown Torque / Rated TorqueT_k/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.

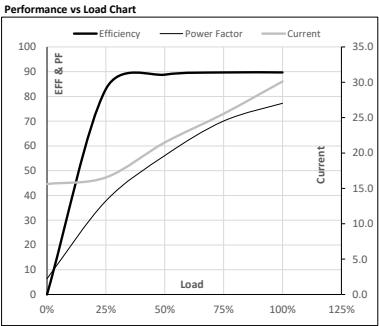
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

Model No. SCA0153A3131GAAD01

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	15	20	30.1	977	14.87	145.80	IE2	50	S1	1000	0.2127	218

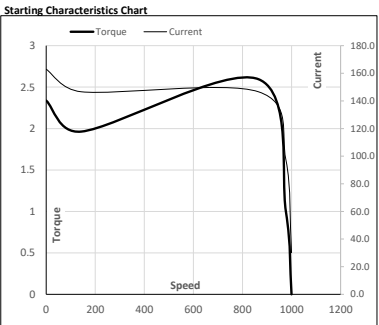
Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	15.6	16.6	21.5	25.6	30.1	
Torque	Nm	0.0	35.8	72.0	108.7	145.8	
Speed	r/min	1000	995	989	984	977	
Efficiency	%	0.0	83.0	88.8	89.7	89.7	
Power Factor	%	6.4	37.8	56.1	70.1	77.2	



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	143	865	977	1000
Current	A	162.9	146.6	97.4	30.1	15.6
Torque	pu	2.3	2.0	2.6	1	0



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

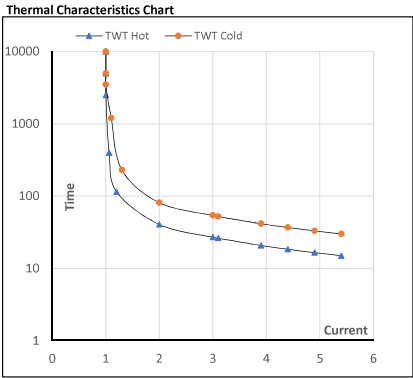
Issued By

Issued Date

Model No. SCA0153A3131GAAD01

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	15	20	30.1	977	14.87	145.80	IE2	50	S1	1000	0.2127	218

Motor Speed Torque Data								
Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	41	27	20	17	16	15	
TWT Cold	s 10000	81	54	50	35	32	30	
Current	pu	1	2	3	4	4.5	5	5.4



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

Issued By
Issued Date

