

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA0302A3121GAAD01

Catalog No: SCA0302A3121GAAD01

TerraMAX® Cast Iron Motor, 40 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 200L Frame, TEFC



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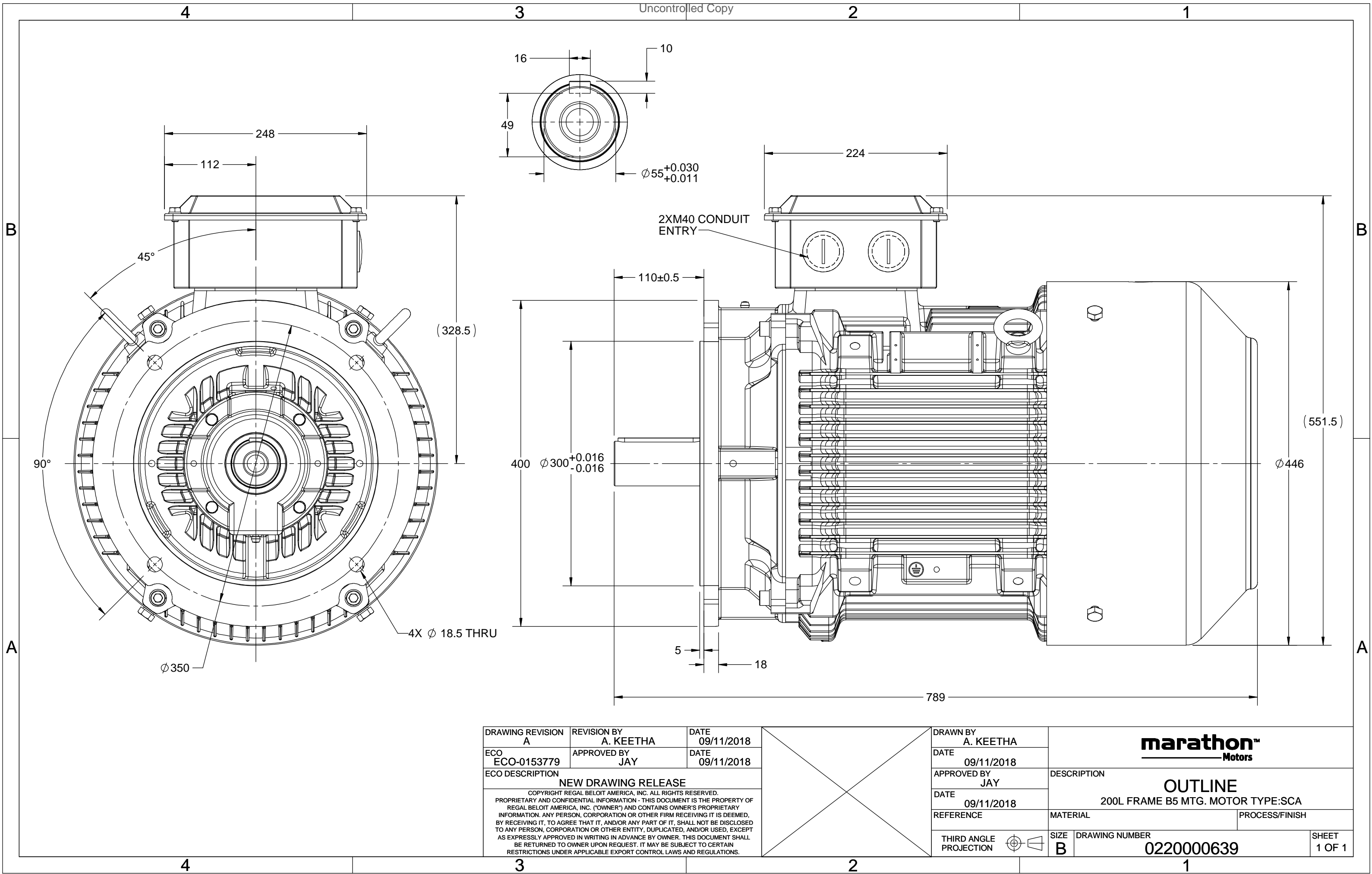
Nameplate Specifications

Output HP	40 Hp	Output KW	30.0 kW
Frequency	50 Hz	Voltage	415 V
Current	53.5 A	Speed	1476 rpm
Service Factor	1	Phase	3
Efficiency	92.3 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	200L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6312	Opp Drive End Bearing Size	6212
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2


Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	789 mm	Frame Length	370 mm
Shaft Diameter	55 mm	Shaft Extension	110 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0220000639

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DRAWING REVISION A	REVISION BY A. KEETHA	DATE 09/11/2018
ECO ECO-0153779	APPROVED BY JAY	DATE 09/11/2018
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DRAWN BY A. KEETHA		<div>marathon™ Motors</div>	
DATE 09/11/2018			
APPROVED BY JAY		DESCRIPTION <div>OUTLINE</div> <div>200L FRAME B5 MTG. MOTOR TYPE:SCA</div>	
DATE 09/11/2018			
REFERENCE		MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION		SIZE B	
		DRAWING NUMBER 0220000639	
		SHEET 1 OF 1	

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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.

8WD.442.2017



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

Model No. SCA0302A3121GAAD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I _A /I _N	T _A /T _N	T _K /T _N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Δ	50	30	40	53.5	1476	193.41	IE2	-	92.3	92.3	92.9	0.85	0.80	0.68	6.6	2.6	3.3

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	301 kg
Duty	S1	Gross weight - approx.	331 kg
Voltage variation *	± 10%	Motor inertia	0.3013 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)	75 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	Accessory - 3	-
DE / NDE bearing	6312 C3 / 6212 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm ² /2 x M40 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

T_K/T_N - Breakdown Torque / Rated Torque

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

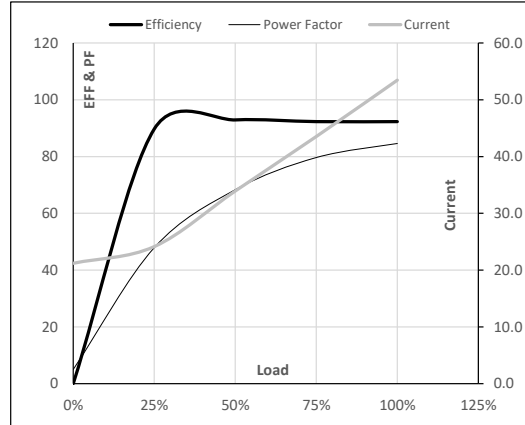
Model No. SCA0302A3121GAAD01

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	30	40.0	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	301.0

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	21.2	24.1	33.9	43.5	53.5	
Torque	Nm	0.0	47.7	95.7	144.1	193.4	
Speed	r/min	1500	1494	1488	1482	1476	
Efficiency	%	0.0	89.7	92.9	92.3	92.3	
Power Factor	%	5.0	47.9	68.3	79.7	84.6	

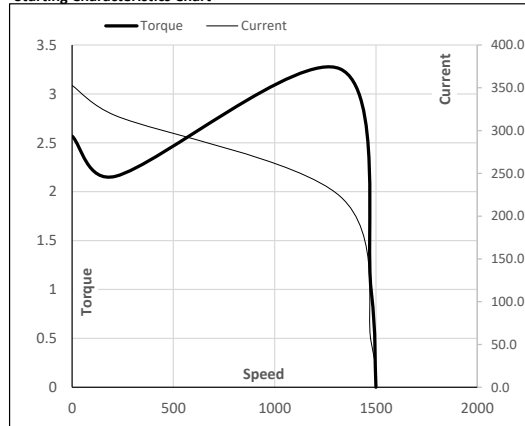
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1323	1476	1500
Current	A	352.8	317.5	223.2	53.5	21.2
Torque	pu	2.6	2.2	3.3	1	0

Starting Characteristics Chart



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

Issued By

Issued Date

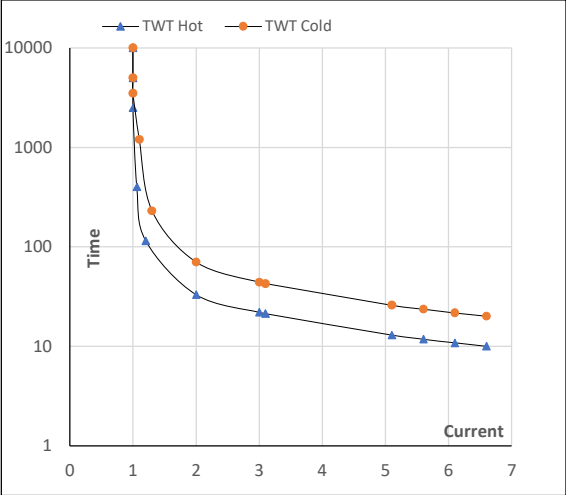
Model No. SCA0302A3121GAAD01

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	30	40	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	301

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	33	22	16	13	12	10	
TWT Cold	s 10000	70	44	35	26	24	20	
Current	pu	1	2	3	4	5	5.5	6.6

Thermal Characteristics Chart



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

Issued By
Issued Date



EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : SCA0302A3121GAAD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : SCA0302A3121GAAD01

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22