

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA2P24A3131GAAD01

Catalog No: SCA2P24A3131GAAD01

TerraMAX® Cast Iron Motor, 3 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 132S Frame, TEFC



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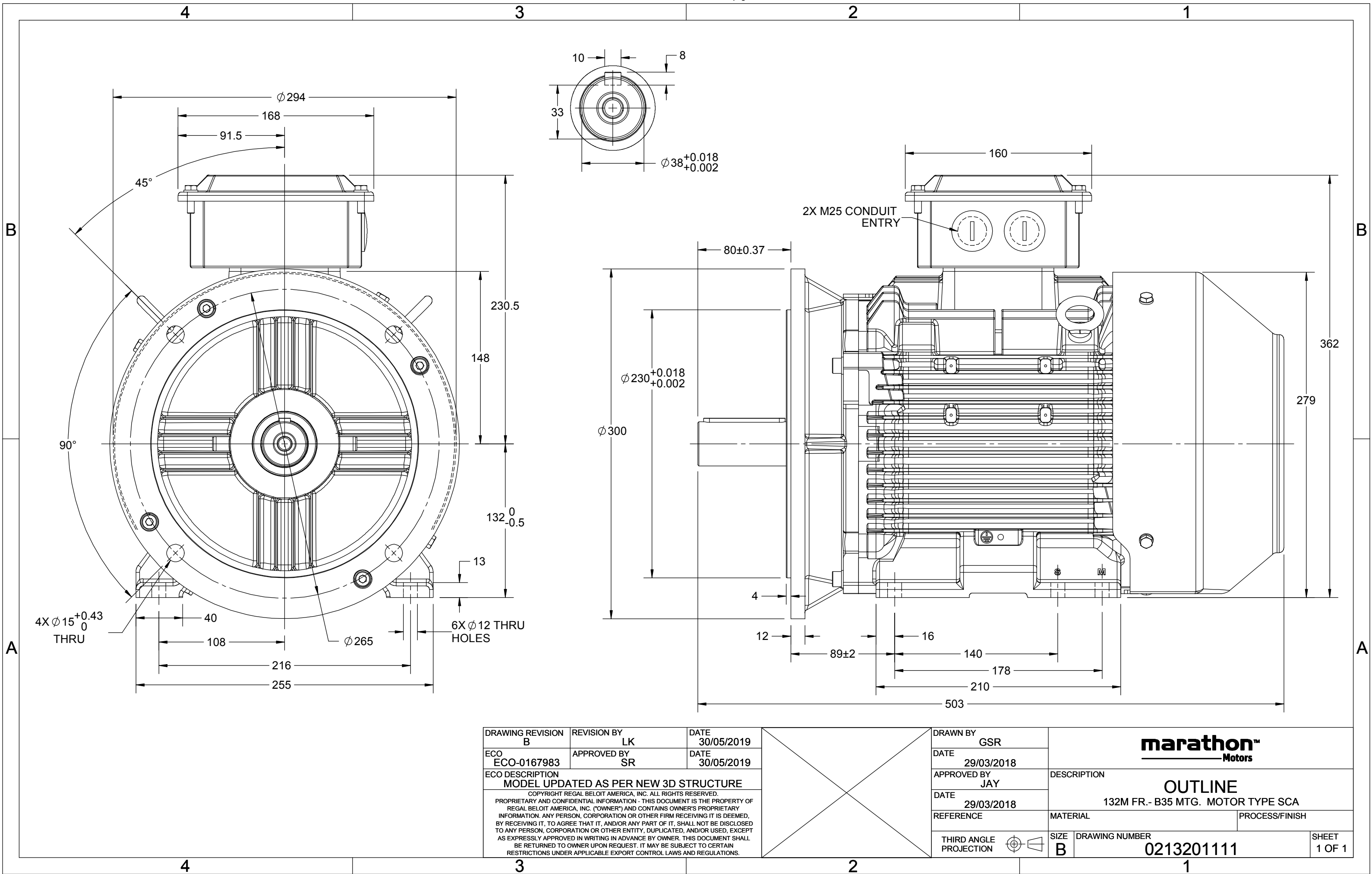
Nameplate Specifications

Output HP	3 Hp	Output KW	2.2 kW
Frequency	50 Hz	Voltage	415 V
Current	5.6 A	Speed	707 rpm
Service Factor	1	Phase	3
Efficiency	77.6 %	Power Factor	0.7052
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
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	8	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	503 mm	Frame Length	240 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0213201111	Connection Drawing	8442000085

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DRAWING REVISION B	REVISION BY LK	DATE 30/05/2019
ECO ECO-0167983	APPROVED BY SR	DATE 30/05/2019
ECO DESCRIPTION MODEL UPDATED AS PER NEW 3D STRUCTURE		
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DRAWN BY GSR	marathon™ Motors		
DATE 29/03/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE 132M FR.- B35 MTG. MOTOR TYPE SCA		
DATE 29/03/2018			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0213201111	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.		
	DESCRIPTION CONN DIAGRAM-NAMEPLATE		
	MATERIAL		PROCESS/FINISH
DATE 16/12/2016	THIRD ANGLE PROJECTION 		SHEET 1 OF 1
APPROVED BY SBD	SIZE A		DRAWING NUMBER 8442000085
DATE 16/12/2016			
REFERENCE			

Model No. SCA2P24A3131GAAD01

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 _K /T _N [pu]
415	Y	50	2.2	3.0	5.6	707	30.28	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	3.9	1.8	2.1

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132S	Motor weight - approx.	81 kg
Duty	S1	Gross weight - approx.	84 kg
Voltage variation *	± 10%	Motor inertia	0.0640 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level (1meter distance from motor)	58 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	6308-2Z / 6208-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm ² /2 x M25 x 1.5
Type of grease	NA	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.

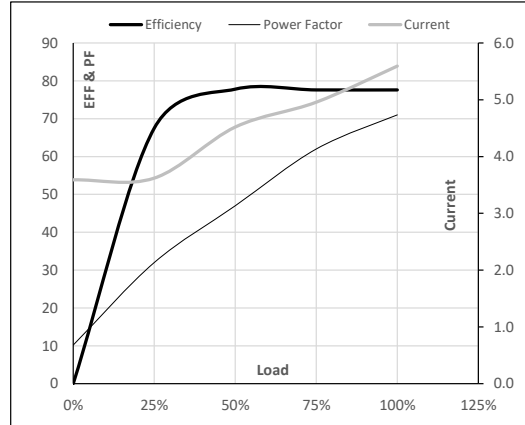
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

Model No. SCA2P24A3131GAAD01

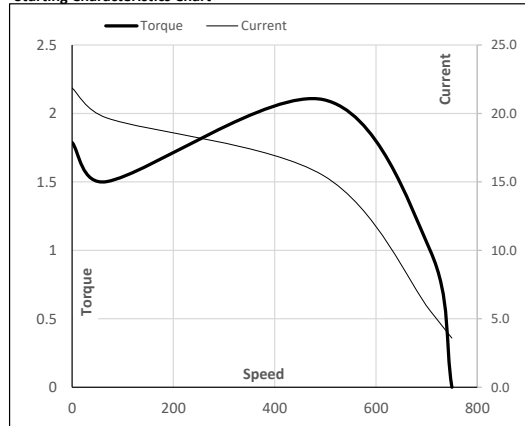
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Y	50	2.2	3.0	5.6	707	3.09	30.28	IE2	50	S1	1000	0.0640	81.5

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.6	3.6	4.5	5.0	5.6	
Torque	Nm	0.0	7.2	14.7	22.3	30.3	
Speed	r/min	750	740	731	720	707	
Efficiency	%	0.0	67.5	77.8	77.6	77.6	
Power Factor	%	10.2	32.0	47.0	62.0	71.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	68	496	707	750
Current	A	21.9	19.7	15.5	5.6	3.6
Torque	pu	1.8	1.5	2.1	1	0

Starting Characteristics Chart

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

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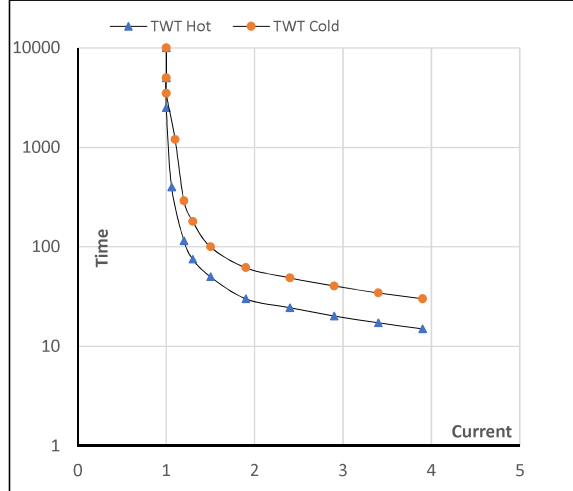
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Y	50	2.2	3.0	5.6	707	3.09	30.28	IE2	50	S1	1000	0.0640	81

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	50	32	24	19	16	15	
TWT Cold	s 10000	100	60	48	39	32	30	
Current	pu	1	1.5	2	2.5	3	3.5	3.9

Thermal Characteristics Chart

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

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