

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA18P1A4181GAA001

Catalog No: SCA18P1A4181GAA001

TerraMAX® Cast Iron Motor, 25 HP, 3 Ph, 50 Hz, 380/660 V, 3000 RPM, 160L Frame, TEFC



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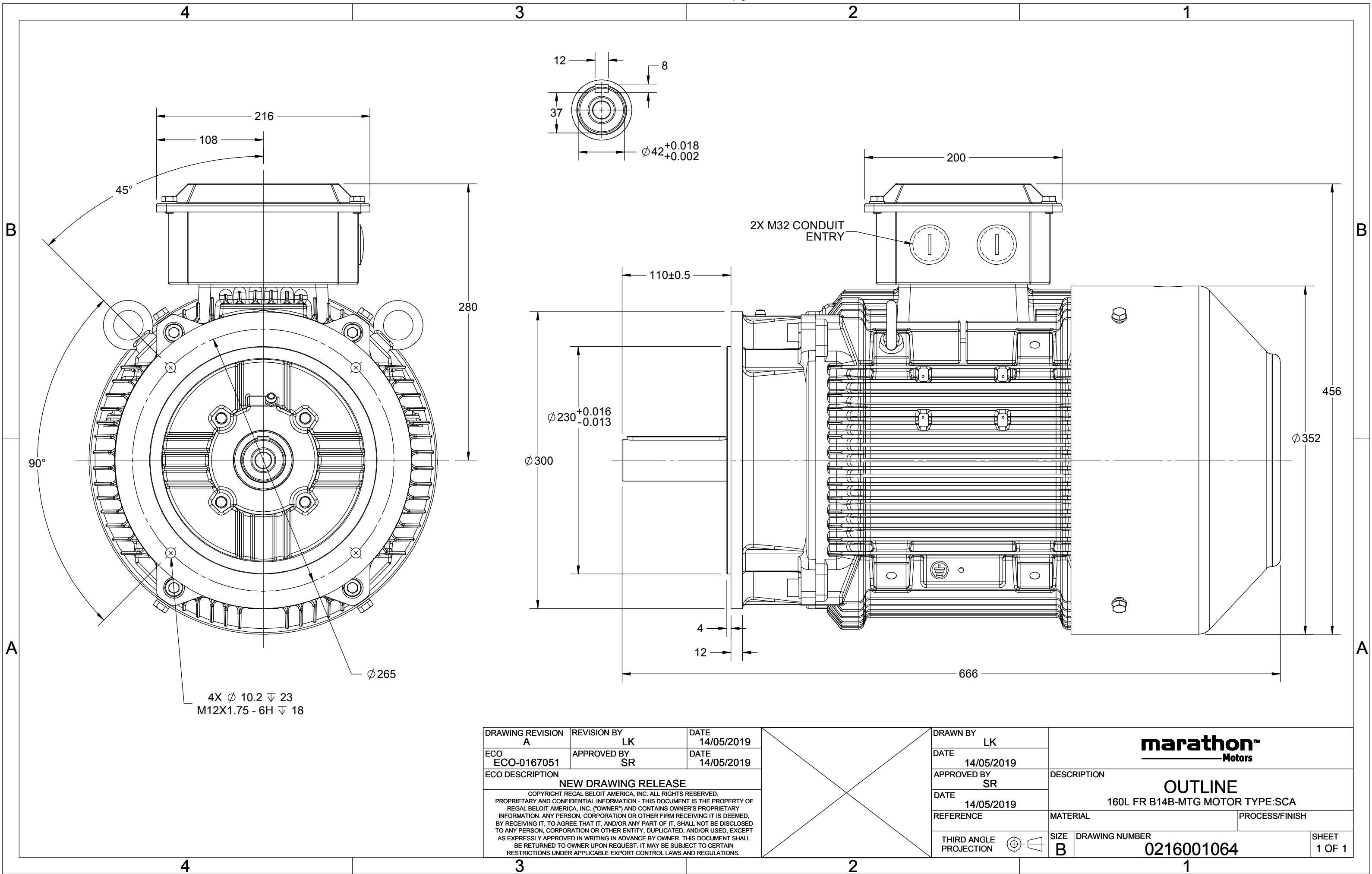
Nameplate Specifications

Output HP	25 Hp	Output KW	18.5 kW
Frequency	50 Hz	Voltage	380/660 V
Current	34.3 A	Speed	2940 rpm
Service Factor	1	Phase	3
Efficiency	90.9 %	Power Factor	0.90
Duty	S1	Insulation Class	F
Frame	160L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
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	2	Rotation	Bi-Directional
Mounting	B14B	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	666 mm	Frame Length	298 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0216001064

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DRAWING REVISION A	REVISION BY LK	DATE 14/05/2019		DRAWN BY LK	<div>marathon™ Motors</div>		
ECO ECO-0167051	APPROVED BY SR	DATE 14/05/2019		DATE 14/05/2019			
ECO DESCRIPTION NEW DRAWING RELEASE				APPROVED BY SR	DESCRIPTION OUTLINE		
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				REFERENCE	MATERIAL	PROCESS/FINISH	
				THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0216001064	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. SCA18P1A4181GAA001

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]
380/660	Δ	50	18.5	25	34.4	2940	60.1	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	7.5	2.9	3.1

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160L	Motor weight - approx.	149 kg
Duty	S1	Gross weight - approx.	169 kg
Voltage variation *	± 10%	Motor inertia	0.0650 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)	74 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [Class B] K	LR withstand time (hot/cold)	6/10 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	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	Available on Request

 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.

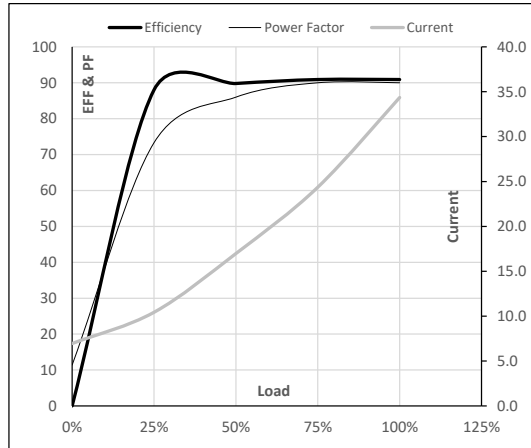
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

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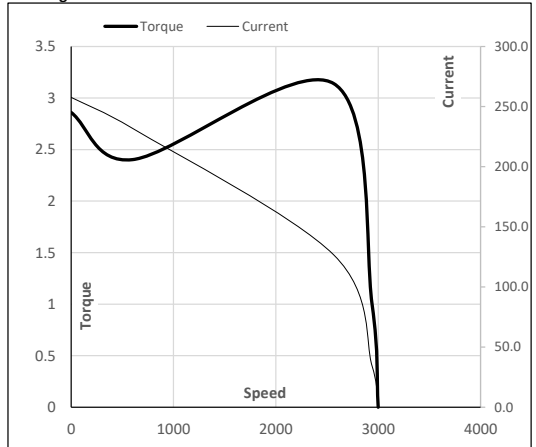
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380/660	Δ	50	18.5	25	34.4	2940	6.13	60.10	IE2	40	S1	1000	0.0650	149

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	7.0	10.4	17.0	24.4	34.4	
Torque	Nm	0.0	14.9	30.0	45.3	60.1	
Speed	r/min	3000	2984	2967	2950	2940	
Efficiency	%	0.0	88.0	89.8	90.9	90.9	
Power Factor	%	11.4	73.3	86.0	90.0	90.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2566	2940	3000
Current	A	257.7	231.9	126.7	34.4	7.0
Torque	pu	2.9	2.4	3.1	1	0

Starting Characteristics Chart

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

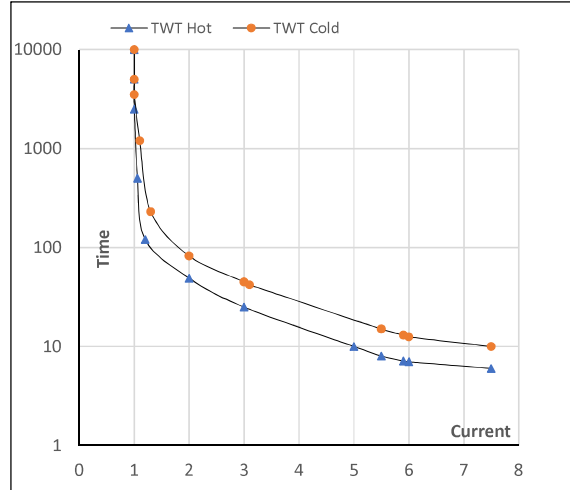
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	380/660	Δ	50	18.5	25	34.4	2940	6.13	60.10	IE2	40	S1	1000	0.0650	149

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s 10000	49	25	15	10	8	6	
TWT Cold	s 10000	82	45	44	42	15	10	
Current	pu	1	2	3	4	5	5.5	7.5

Thermal Characteristics Chart

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

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