

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA18P1A1181GAA001

Catalog No: SCA18P1A1181GAA001

TerraMAX® Cast Iron Motor, 25 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 160L Frame, TEFC



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**RegalRexnord**

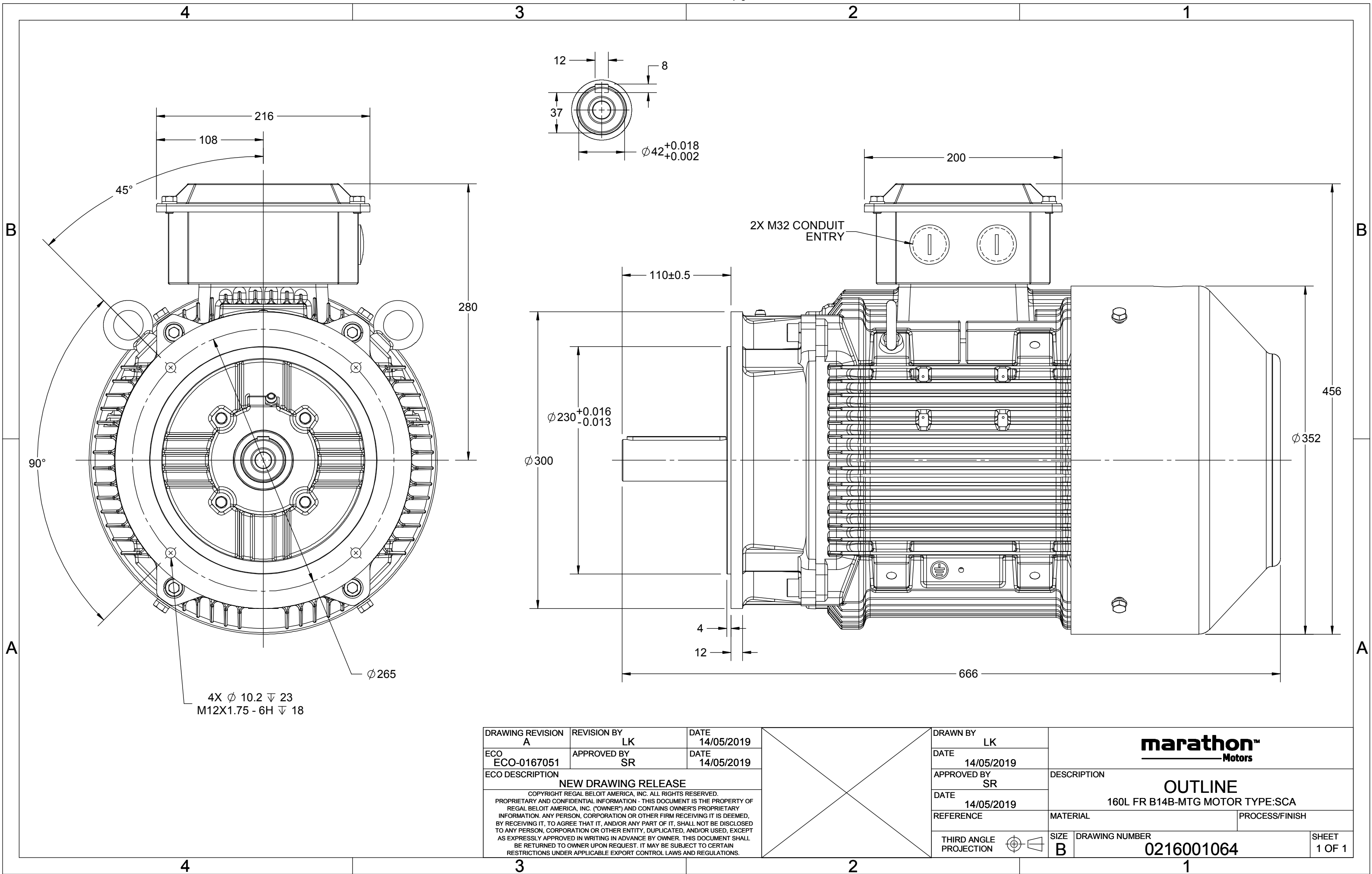
### Nameplate Specifications

Output HP	25 Hp	Output KW	18.5 kW
Frequency	50 Hz	Voltage	400 V
Current	32.6 A	Speed	2940 rpm
Service Factor	1	Phase	3
Efficiency	90.9 %	Power Factor	0.9
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

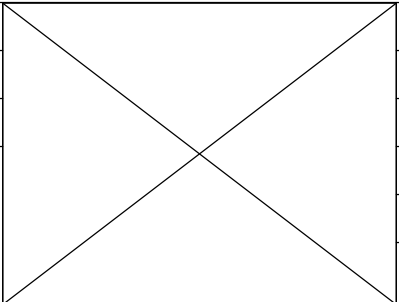
### Technical Specifications

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		
Outline Drawing	0216001064	Connection Drawing	8442000085

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DRAWING REVISION A	REVISION BY LK	DATE 14/05/2019
ECO ECO-0167051	APPROVED BY SR	DATE 14/05/2019
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY LK	<b>marathon™</b> Motors		
DATE 14/05/2019			
APPROVED BY SR	DESCRIPTION OUTLINE		
DATE 14/05/2019	160L FR B14B-MTG MOTOR TYPE:SCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0216001064	SHEET 1 OF 1

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

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

**Model No.** SCA18P1A1181GAA001

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 <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
400	Δ	50	18.5	25	32.6	2940	60.10	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 <sup>2</sup>
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)	10/6 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	PTC 150°C
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 <sup>2</sup> /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	Available on Request

I<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>A</sub>/T<sub>N</sub> - 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.

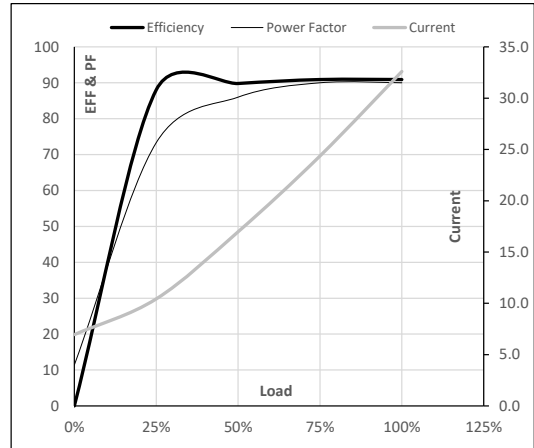
Efficiency Standards	Europe IEC: 60034-30	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC: 60034-30
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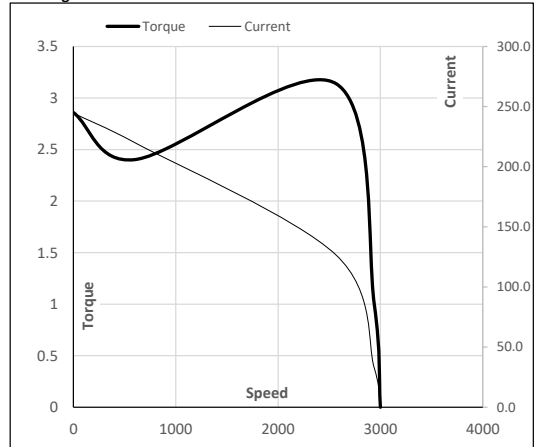
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	18.5	25	32.6	2940	6.13	60.10	IE2	40	S1	1000	0.0650	149

**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	32.6	
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	244.5	220.1	126.7	32.6	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

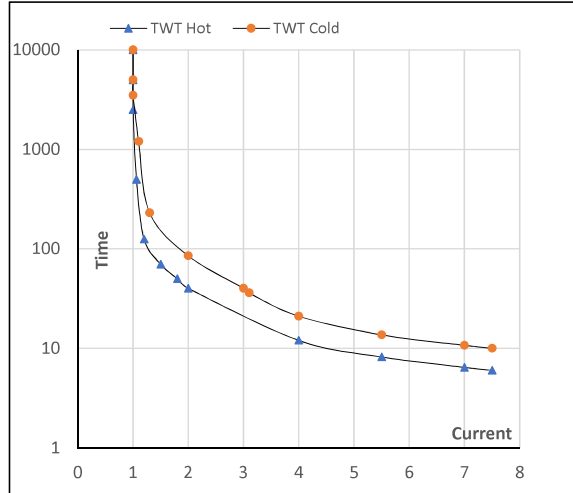
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**Model No.** SCA18P1A1181GAA001

Enclosure	U (V)	$\Delta$ / 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 <sup>2</sup> ]	Weight [kg]
TEFC	400	$\Delta$	50	18.5	25	32.6	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	40	30	12	10	8	6
TWT Cold	s 10000	85	40	21	16	14	10
Current	pu	1	2	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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