

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA2P23AG181GAA001

Catalog No: SCA2P23AG181GAA001

TerraMAX® Cast Iron Motor, 3 HP, 3 Ph, 50 Hz, 220/380 V, 1000 RPM, 112M Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	3 Hp	Output KW	2.2 kW
Frequency	50 Hz	Voltage	220/380 V
Current	5.2 A	Speed	962 rpm
Service Factor	1	Phase	3
Efficiency	81.8 %	Power Factor	0.78
Duty	S1	Insulation Class	F
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
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	6	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	399 mm	Frame Length	174 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0211200573

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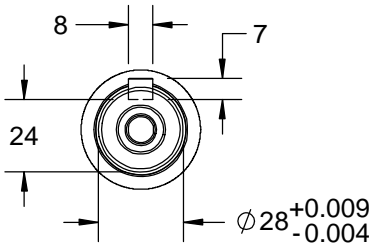
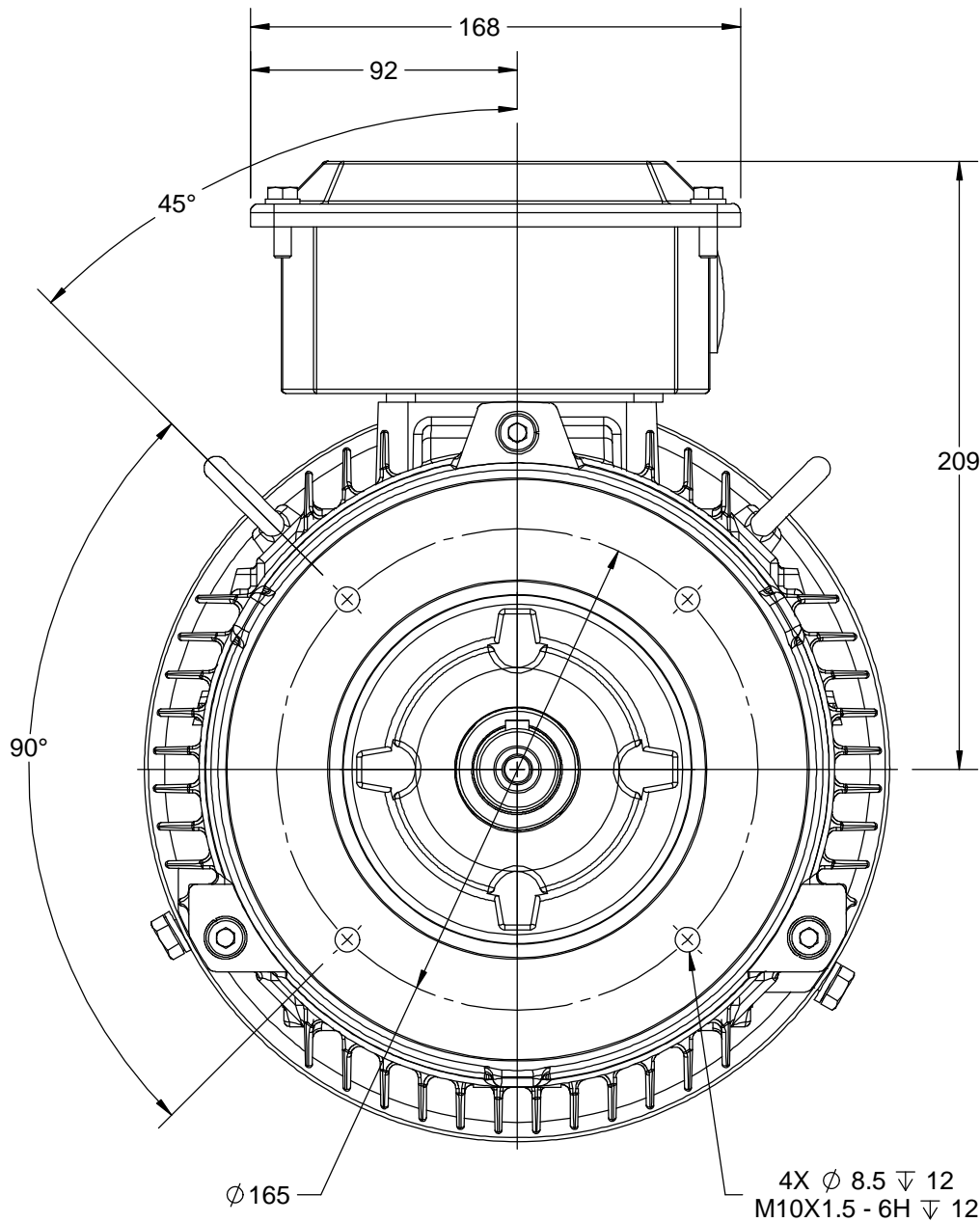
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B

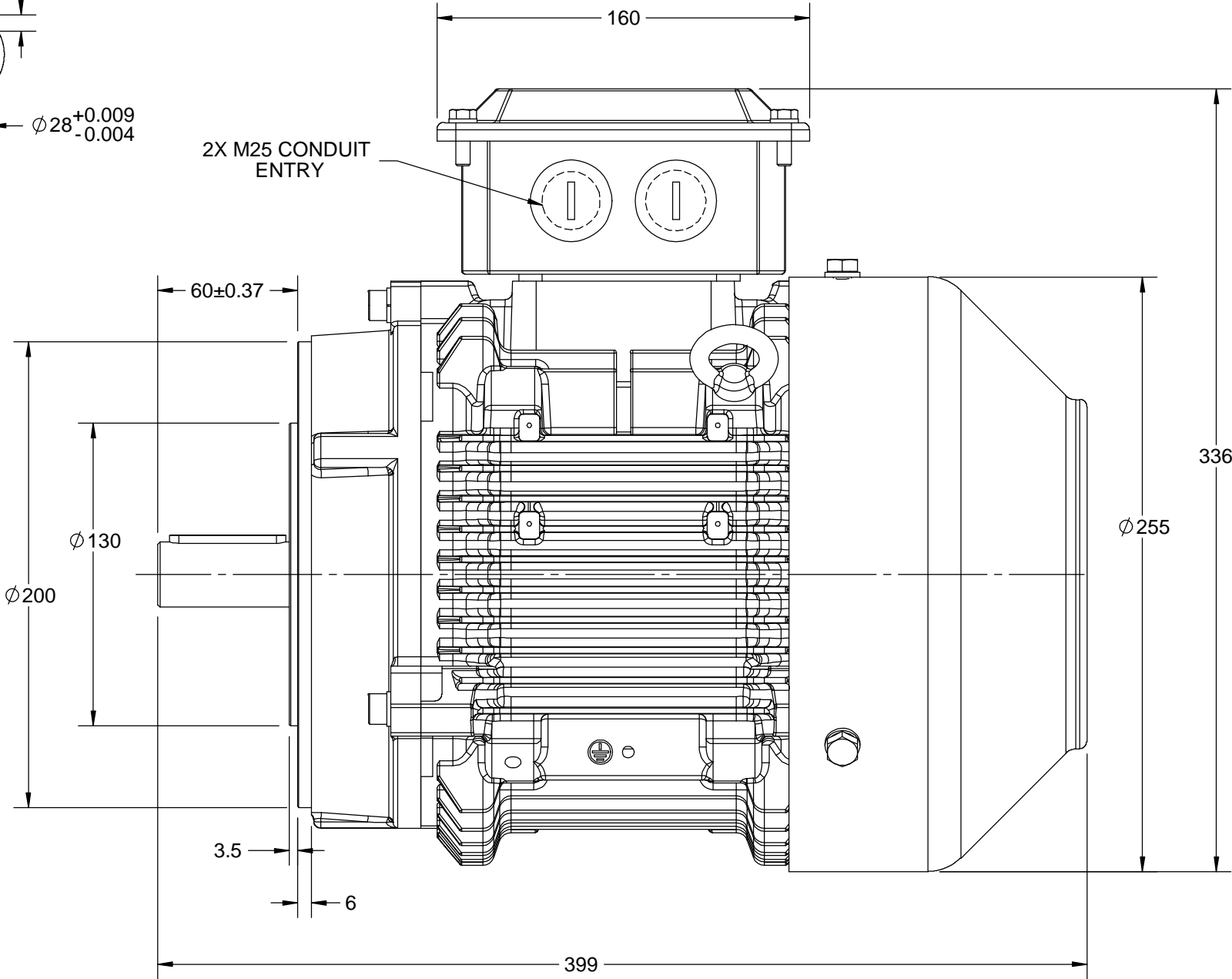
B

A

A



2X M25 CONDUIT
ENTRY



DRAWING REVISION A	REVISION BY LK	DATE 26/06/2018
ECO ECO-0147803	APPROVED BY JAY	DATE 26/06/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY LK	marathon™ Motors		
DATE 26/06/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 26/06/2018	112 FR.- B14B MTG. MOTOR TYPE: SCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0211200573	SHEET 1 OF 1

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ECO DESCRIPTION

GEOMETRIC TOLERANCE

LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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. SCA2P23AG181GAA001

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]
220/380	Y	50	2.2	3.0	5.2	962	22.21	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6	2.3	2.6

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	112M	Motor weight - approx.	45 kg
Duty	S1	Gross weight - approx.	48 kg
Voltage variation *	± 10%	Motor inertia	0.0180 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)	59 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)	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	6306-2Z / 6206-2Z	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	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.

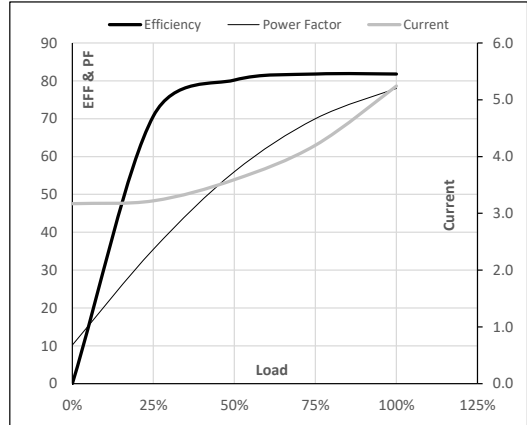
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

Model No. SCA2P23AG181GAA001

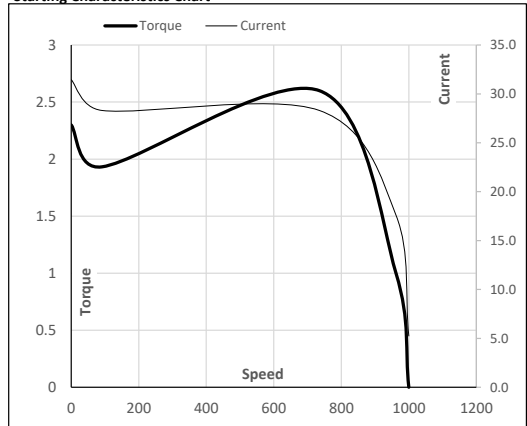
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	220/380	Y	50	2.2	3.0	5.2	962	2.26	22.21	IE2	40	S1	1000	0.0180	45

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.2	3.2	3.6	4.2	5.2	
Torque	Nm	0.0	5.4	10.9	16.5	22.2	
Speed	r/min	1000	991	982	973	962	
Efficiency	%	0.0	70.7	80.2	81.8	81.8	
Power Factor	%	10.2	35.5	56.0	70.0	78.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	735	962	1000
Current	A	31.5	28.3	17.6	5.2	3.2
Torque	pu	2.3	1.9	2.6	1	0

Starting Characteristics Chart

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

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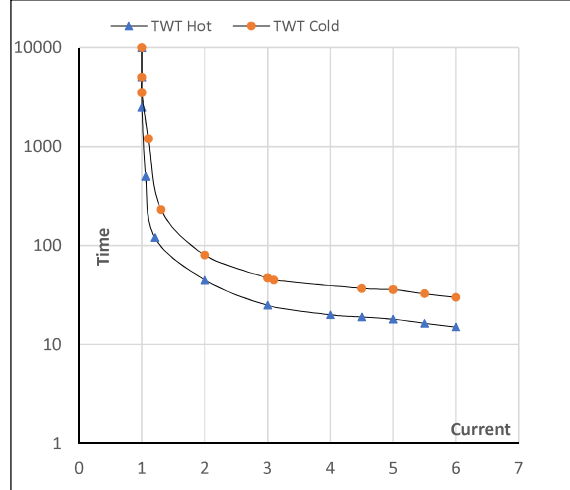
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Model No. SCA2P23AG181GAA001

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	220/380	Y	50	2.2	3.0	5.2	962	2.26	22.21	IE2	40	S1	1000	0.0180	45

Motor Speed Torque Data

Load		FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s	10000	45	25	20	18	16	15
TWT Cold	s	10000	80	47	45	36	33	30
Current	pu	1	2	3	4	5	5.5	6

Thermal Characteristics Chart

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

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