

PRODUCT INFORMATION PACKET

marathon[®]
Motors

Model No: SCA5P52A3121GAAD01

Catalog No: SCA5P52A3121GAAD01

5.5kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B3, 50Hz, 87.7%, 132S Frame, TEFC
Cast Iron IE2 Efficiency Motors



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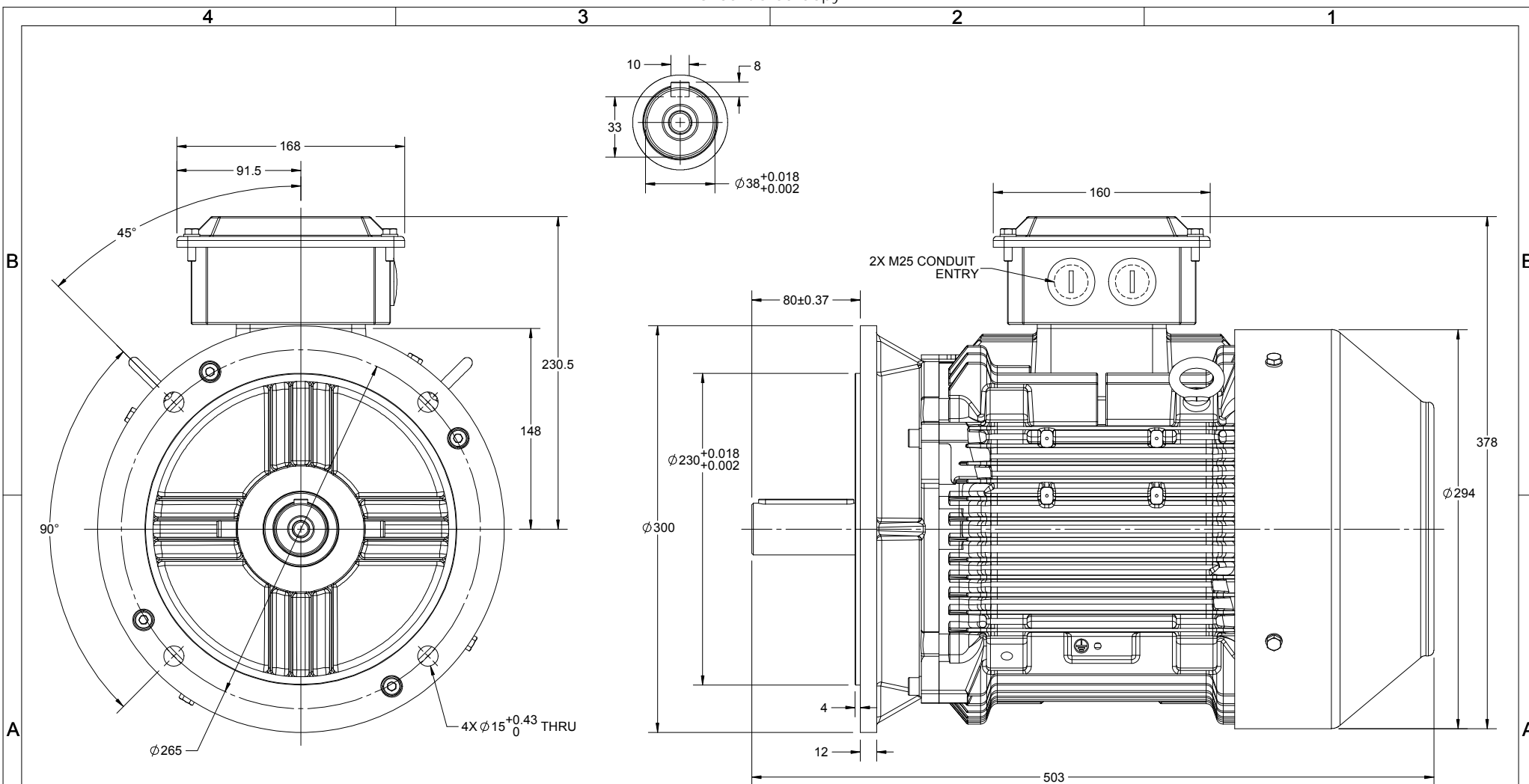
Nameplate Specifications

Output HP	7.50 Hp	Output KW	5.5 kW
Frequency	50 Hz	Voltage	415 V
Current	10.6 A	Speed	1456 rpm
Service Factor	1	Phase	3
Efficiency	87.7 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6308
Opp Drive End Bearing Size	6208	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B5	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	0213201092	Connection Drawing	8442000085

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DRAWING REVISION B	REVISION BY LK	DATE 30/05/2019	X	DRAWN BY PRIYA	marathon Motors
ECO ECO-0167983	APPROVED BY SR	DATE 30/05/2019		DATE 02/04/2018	
ECO DESCRIPTION MODEL UPDATED AS PER NEW 3D STRUCTURE <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. (OWNER) AND CONTAINS OWNERS PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				APPROVED BY JAY	
				DATE 02/04/2018	DESCRIPTION 132M FR.- B5 MTG. MOTOR TYPE SCA
				REFERENCE	MATERIAL
				THIRD ANGLE PROJECTION	PROCESS/FINISH
				SIZE B	DRAWING NUMBER 0213201092
					SHEET 1 OF 1



Model No. SCA5P52A3121GAAD01

U (V)	Δ / Y Conn	f (Hz)	P		I (A)	n (RPM)	T (Nm)	IE Class	% EFF at __ load				PF at __ load			I _w /I _N (pu)	T _k /T _N (pu)	T _k /T _N (pu)
			[kW]	[hp]					S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	5.5	7.5	10.6	1456	36.84	IE2	-	87.7	87.7	87.5	0.83	0.76	0.62	7.6	3.3	3.5

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132S	Motor weight - approx.	83 kg
Duty	S1	Gross weight - approx.	86 kg
Voltage variation *	± 10%	Motor inertia	0.0228 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)	67 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)	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	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_w/I_N - Locked Rotor Current / Rated Current

T_k/T_N - Breakdown Torque / Rated Torque

T_k/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	-	-	-





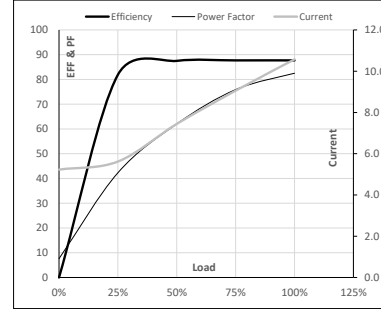
Model No. SCA5P52A3121GAAD01

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	5.5	7.5	10.6	1456	3.76	36.84	IE2	50	S1	1000	0.0228	83

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	5.2	5.6	7.4	9.1	10.6	
Torque	Nm	0.0	9.0	18.1	27.3	36.8	
Speed	r/min	1500	1489	1479	1468	1456	
Efficiency	%	0.0	81.9	87.5	87.7	87.7	
Power Factor	%	7.6	42.3	62.1	75.9	82.5	

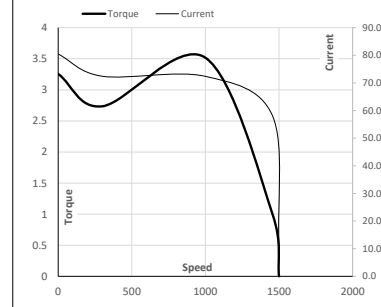
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	997	1456	1500
Current	A	80.5	72.4	58.1	10.6	5.2
Torque	pu	3.3	2.7	3.5	1	0

Starting Characteristics Chart



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

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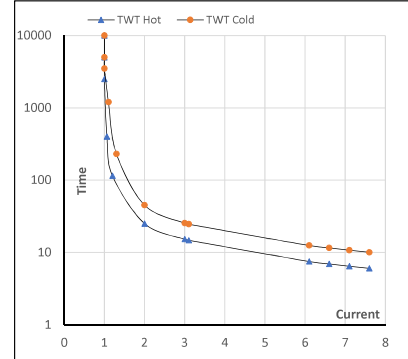
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P (kW)	P (hp)	I (A)	n (rpm)	T (kgm)	T (Nm)	IE Class	Amb (°C)	Duty	Elevation (m)	Inertia (kg·m ²)	Weight (kg)
TEFC	415	Δ	50	5.5	7.5	10.6	1456	3.76	36.84	IE2	50	S1	1000	0.0228	83

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	25	15	11	10	8	6	
TWT Cold	s 10000	45	25	20	17	15	10	
Current	pu	1	2	3	4	5	5.5	7.6

Thermal Characteristics Chart



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

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