

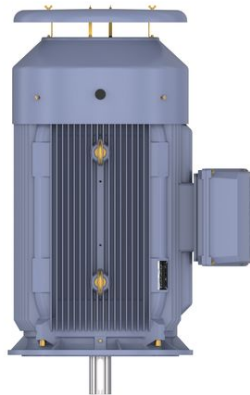
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA3152A3143GAAD01

Catalog No: SCA3152A3143GAAD01

315kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B14A, 50Hz, 95.1%, 355L Frame, TEFC
Cast Iron IE2 Efficiency Motors



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Nameplate Specifications

Output HP	425 Hp	Output KW	315.0 kW
Frequency	50 Hz	Voltage	415 V
Current	517.1 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	95.1 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	355L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6322
Opp Drive End Bearing Size	6322	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	V1	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1680 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	SIDE		
Outline Drawing	0235502466	Connection Drawing	8442000085

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DRAWN BY LK			
DATE 08/02/2019			
APPROVED BY SR		DESCRIPTION OUTLINE 355FR-4-8P-V1 MTG. TCA-RHS TB	
DATE 08/02/2019			
REFERENCE		MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION 	SIZE	DRAWING NUMBER 0235502466	SHEET 1 OF 1

Model No. SCA3152A3143GAAD01

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 _d /T _N [pu]
415	Δ	50	315	425	517.1	1489	2032.3	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.7	1.9	2.4
									-	95.1	95.1	96.1	0.89	0.88	0.83			

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	355L	Motor weight - approx.	1814 kg
Duty	S1	Gross weight - approx.	1859 kg
Voltage variation *	± 10%	Motor inertia	9.2132 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.8 mm/s
Design	N	Noise level (1meter distance from motor)	82 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	6322 C3 / 6322 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 300mm ² /4 x M63 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	Available on Request

I_a/I_N - Locked Rotor Current / Rated CurrentT_d/T_N - Breakdown Torque / Rated TorqueT_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	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-



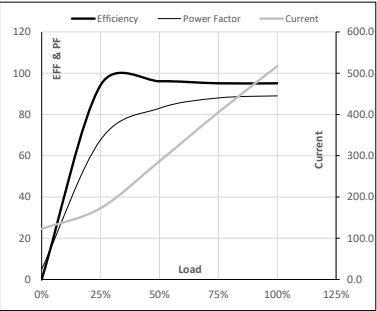
Model No. SCA3152A3143GAAD01

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	315	425	517.1	1489	207.23	2032.25	IE2	50	S1	1000	9.2132	1814

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	122.5	172.9	286.7	405.1	517.1	
Torque	Nm	0.0	505.3	1012.3	1521.2	2032.3	
Speed	r/min	1500	1497	1495	1492	1489	
Efficiency	%	0.0	94.2	96.1	95.1	95.1	
Power Factor	%	4.9	67.7	83.0	88.0	89.0	

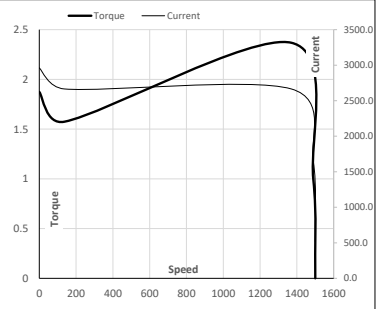
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	136	1370	1489	1500
Current	A	2961.7	2665.5	1652.7	517.1	122.5
Torque	pu	1.9	1.6	2.4	1	0

Starting Characteristics Chart



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

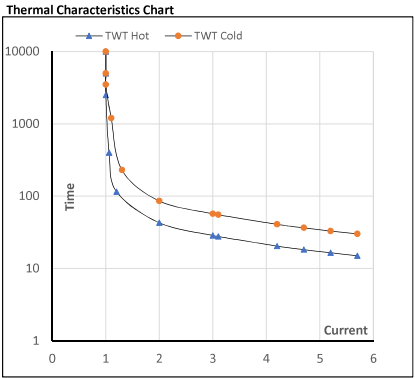
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Motor Speed Torque Data								
Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	43	29	25	17	16	15	
TWT Cold	s 10000	86	57	45	35	31	30	
Current	pu	1	2	3	4	5	5.5	5.7



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

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