

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA1602A3123GAAD01

Catalog No: SCA1602A3123GAAD01

160kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B5, 50Hz, 94.9%, 315L Frame, TEFC
Cast Iron IE2 Efficiency Motors



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REGAL

Nameplate Specifications

Output HP	215 Hp	Output KW	160.0 kW
Frequency	50 Hz	Voltage	415 V
Current	263.2 A	Speed	1487 rpm
Service Factor	1	Phase	3
Efficiency	94.9 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6319
Opp Drive End Bearing Size	6319	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	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1317 mm	Frame Length	840 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	SIDE		
Connection Drawing	8442000085	Outline Drawing	0231501396

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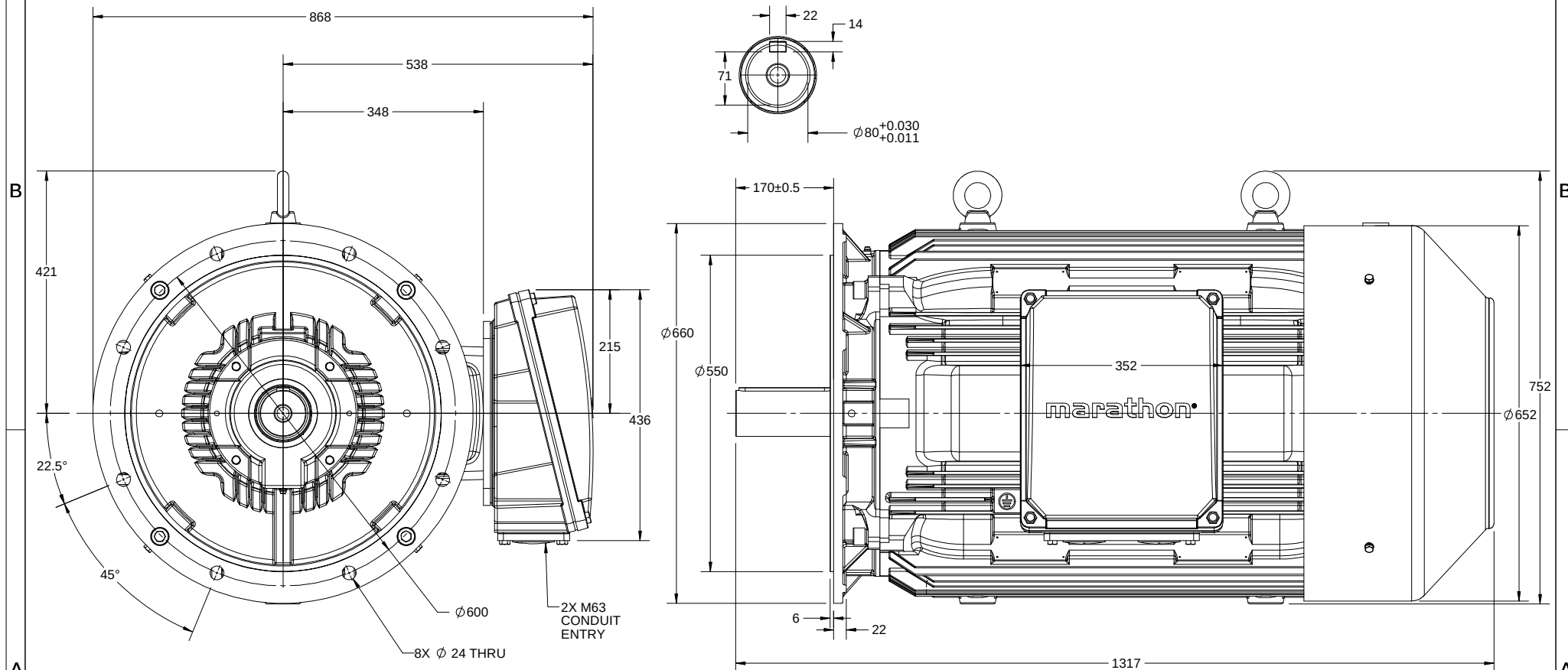
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OUTLINE

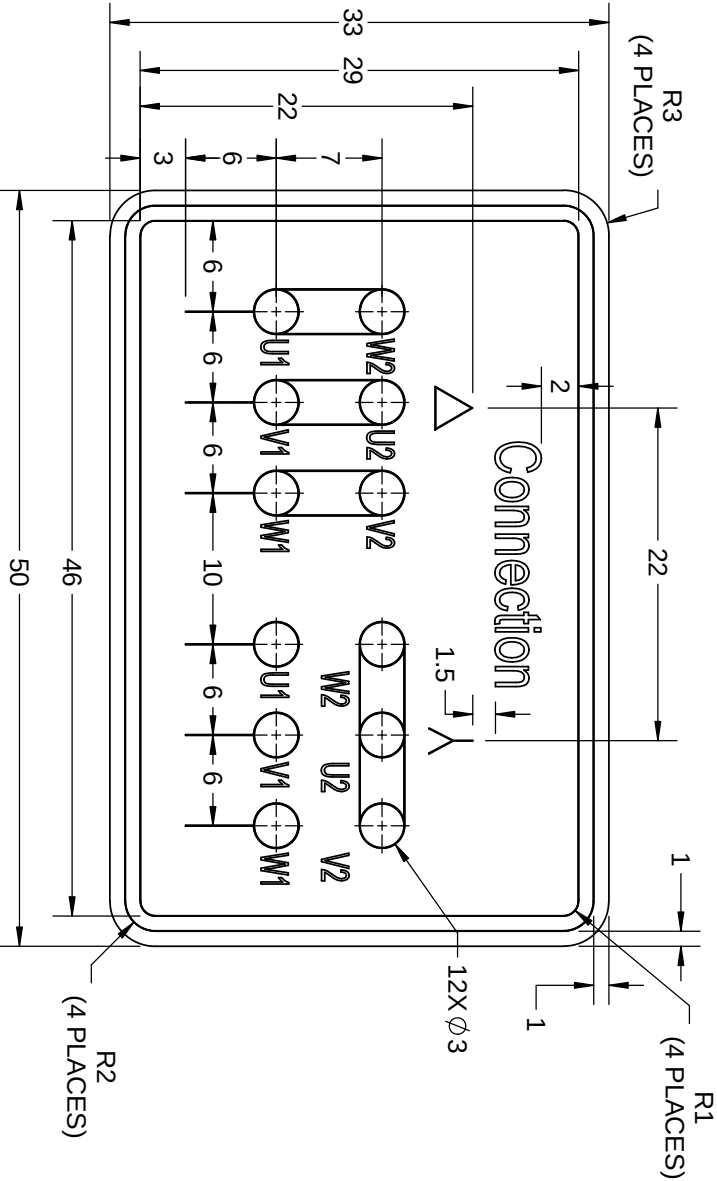


DRAWING REVISION A	REVISION BY GSR	DATE 15/11/2017
ECO ECO-0134564	APPROVED BY JAY	DATE 15/11/2017
ECO DESCRIPTION NEW DRAWING RELEASE.		
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DRAWN BY GSR		
DATE 15/11/2017		
APPROVED BY JAY	DESCRIPTION OUTLINE 315L 4P-8P B5 MTG. TCA-RHS TB	
DATE 15/11/2017		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231501396
		SHEET 1 OF 1

DRAWING REVISION		REVISION BY	DATE
A		SN	13/01/2017
ECO	ECO-0116390	APPROVED BY	DATE
		SBD	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.

				DRAWN BY		SN	
				DATE		16/12/2016	
				APPROVED BY		SBD	
				DATE		16/12/2016	
				REFERENCE			
THIRD ANGLE PROJECTION				SIZE	DRAWING NUMBER		SHEET
				A	8442000085		1 OF 1

REGALTM

Regal Beloit America, Inc.

DESCRIPTION

CONN DIAGRAM-NAMEPLATE

MATERIAL

PROCESS/FINISH

8WD.442.2017

Model No. SCA1602A3123GAAD01

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	160	215	263.2	1487	1029.9	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.6	1.9	2.7
									-	94.9	94.9	95.7	0.89	0.87	0.81			

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1149 kg
Duty	S1	Gross weight - approx.	1194 kg
Voltage variation *	± 10%	Motor inertia	4.4423 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)	69 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	6319 C3 / 6319 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 240mm ² /2 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	-	-	-



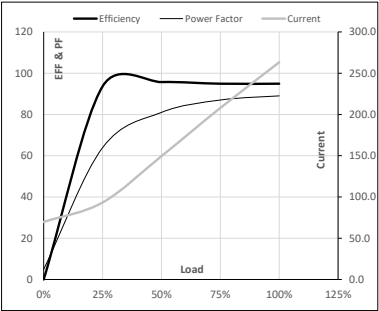
Model No. SCA1602A3123GAAD01

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	160	215	263.2	1487	105.02	1029.92	IE2	50	S1	1000	4.4423	1149

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	69.7	93.3	149.4	207.9	263.2	
Torque	Nm	0.0	255.7	512.5	770.6	1029.9	
Speed	r/min	1500	1497	1494	1490	1487	
Efficiency	%	0.0	93.6	95.7	94.9	94.9	
Power Factor	%	4.9	63.9	81.0	87.0	89.0	

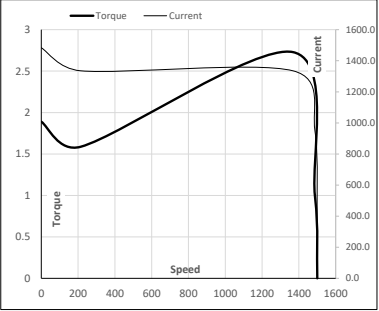
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1368	1487	1500
Current	A	1483.6	1335.2	951.7	263.2	69.7
Torque	pu	1.9	1.6	2.7	1	0

Starting Characteristics Chart



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

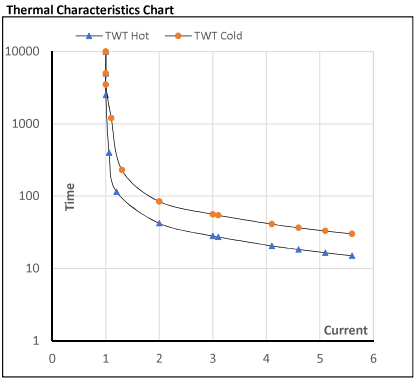
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	160	215	263.2	1487	105.02	1029.92	IE2	50	S1	1000	4.4423	1149

Motor Speed Torque Data								
Load		FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s	10000	42	28	20	17	16	15
TWT Cold	s	10000	84	56	39	35	31	30
Current	pu	1	2	3	4	5	5.5	5.6



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

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