PRODUCT INFORMATION PACKET

Model No: SCA1601A3123GAAD01
Catalog No: SCA1601A3123GAAD01
160kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B5, 50Hz, 94.8%, 315L Frame, TEFC
Cast Iron IE2 Efficiency Motors

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marathon® Motors

Nameplate Specifications

Output HP	**215 Hp**	Output KW	**160.0 kW**
Frequency	**50 Hz**	Voltage	**415 V**
Current	**257.5 A**	Speed	**2981 rpm**
Service Factor	**1**	Phase	**3**
Efficiency	**94.8 %**	Power Factor	**0.91**
Duty	**S1**	Insulation Class	**F**
Frame	**315L**	Enclosure	**Totally Enclosed Fan Cooled**
Ambient Temperature	**50 °C**	Drive End Bearing Size	**6316**
Opp Drive End Bearing Size	**6316**	UL	**No**
CSA	**No**	CE	**Yes**
IP Code	**55**		

Technical Specifications

Electrical Type	**Squirrel Cage**	Starting Method	**Direct On Line**
Poles	**2**	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	**1287 mm**	Frame Length	**840 mm**
Shaft Diameter	**65 mm**	Shaft Extension	**140 mm**
Assembly/Box Mounting	**SIDE**		
Connection Drawing	**8442000085**	Outline Drawing	**0231501395**

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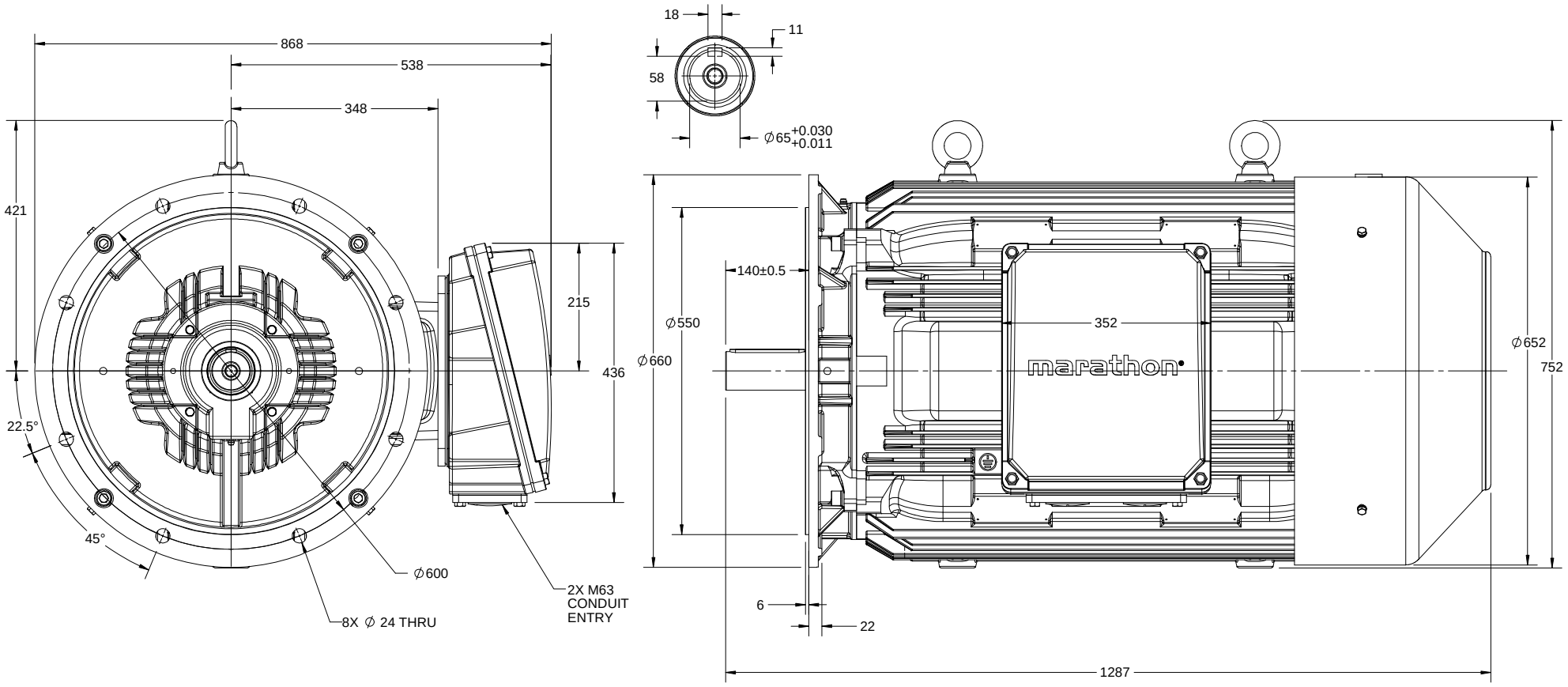
OUTLINE



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	marathon Motors		
DATE: 15/11/2017	DESCRIPTION: OUTLINE FR-315L-2P-B5 MTG. TCA-RHS TB		
APPROVED BY: JAY			
DATE: 15/11/2017			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE: B	DRAWING NUMBER: 0231501395	SHEET: 1 OF 1

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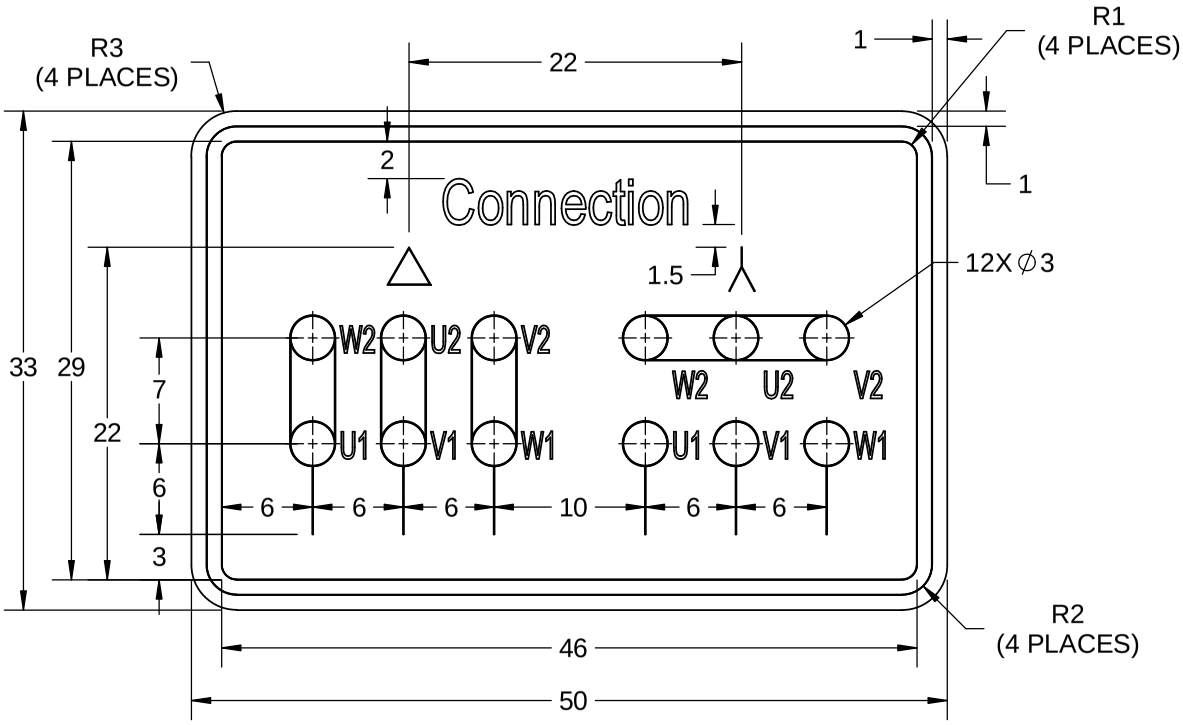
DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC 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: SN	REGAL™ 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

marathon® Motors

TerraMAX®

Model No. SCA1601A3123GAAD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I_A/I_N	T_A/T_N	T_K/T_N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Δ	50	160	215	257.5	2981	513.67	IE2	-	94.8	94.8	93.8	0.91	0.90	0.86	5.7	1.9	3.0

Motor type	SCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	315L	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +50	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	NA	
Zone classification	NA	
Gas group	NA	
Temperature class	NA	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball	
DE / NDE bearing	6316 C3 / 6316 C3	
Lubrication method	Regreasable	
Type of grease	Shell Gadus S5 V100 or Equivalent	

Degree of protection	IP 55	
Mounting type	IM B5	
Cooling method	IC 411	
Motor weight - approx.	1095	kg
Gross weight - approx.	1140	kg
Motor inertia	2.5678	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.8	mm/s
Noise level (1meter distance from motor)	83	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
LR withstand time (hot/cold)	15/30	s
Direction of rotation	Bi-directional	
Standard rotation	Clockwise form DE	
Paint shade	RAL 5014	
Accessories		
Accessory - 1	-	
Accessory - 2	-	
Accessory - 3	-	
Terminal box position	RHS	
Maximum cable size/conduit size	1R x 3C x 240mm^2/2 x M63 x 1.5	
Auxiliary terminal box	Available on Request	

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown 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	-	-	-

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marathon® Motors

TerraMAX®

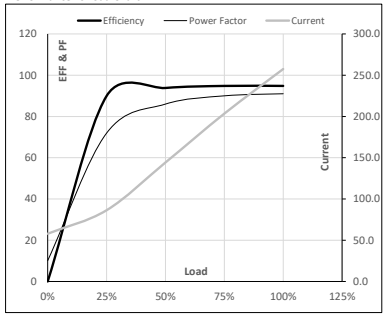
Model No. SCA1601A3123GAAD01

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	257.5	2981	52.38	513.67	IE2	50	S1	1000	2.5678	1095

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	57.9	86.3	144.2	203.4	257.5	
Torque	Nm	0.0	127.8	256.0	384.6	513.7	
Speed	r/min	3000	2995	2991	2986	2981	
Efficiency	%	0.0	89.9	93.8	94.8	94.8	
Power Factor	%	10.1	71.9	86.0	90.0	91.0	

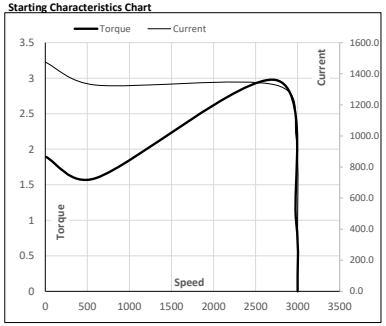
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2743	2981	3000
Current	A	1474.5	1327.1	997.0	257.5	57.9
Torque	pu	1.9	1.6	3.0	1	0

Starting Characteristics Chart



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

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TerraMAX®

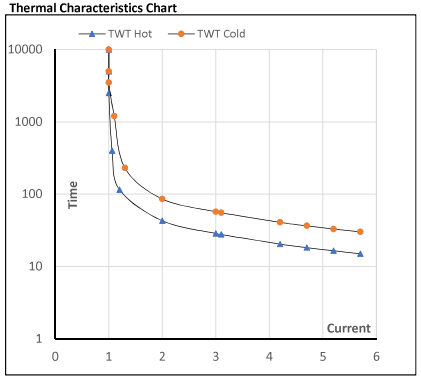
Model No. SCA1601A3123GAAD01

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	257.5	2981	52.38	513.67	IE2	50	S1	1000	2.5678	1095

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

Thermal Characteristics Chart



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