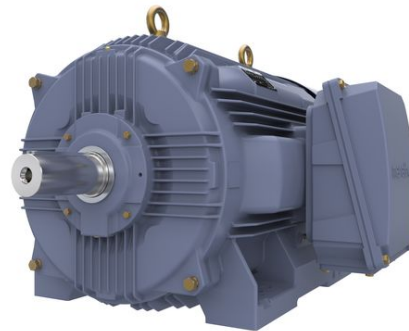


PRODUCT INFORMATION PACKET

Model No: SCA1601A3113GAAD01

Catalog No: SCA1601A3113GAAD01

160kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B3, 50Hz, 94.8%, 315L Frame, TEFC
Cast Iron IE2 Efficiency 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	B3	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	0231501361

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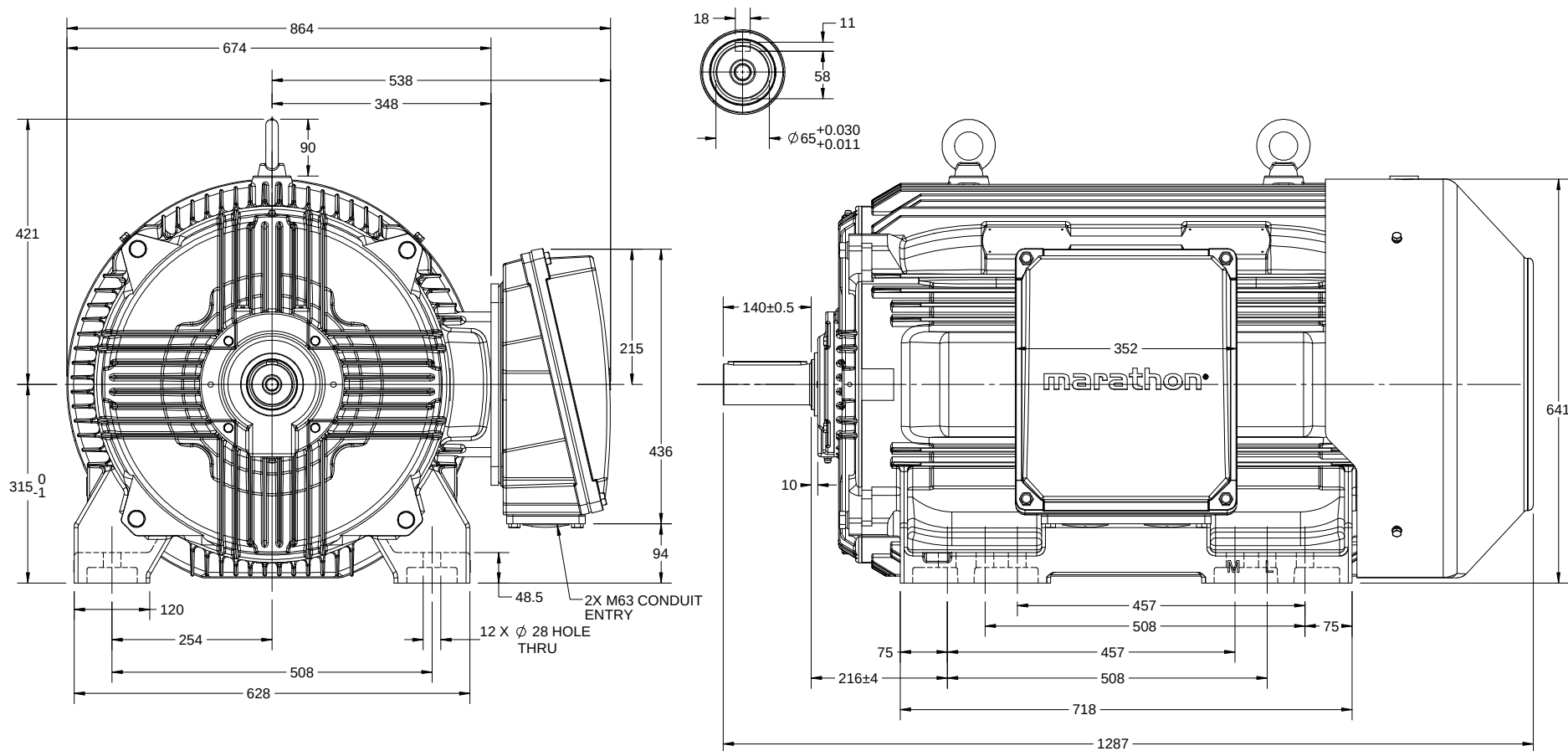
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B

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A

A

DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DATE 08/11/2017
APPROVED BY JAY
DATE 08/11/2017
REFERENCE

THIRD ANGLE
PROJECTION

marathon[®] Motors	
DESCRIPTION OUTLINE FR-315L-2P-B3 MTG. TCA/QCA-RHS TB	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER 0231501361
SHEET 1 OF 1	

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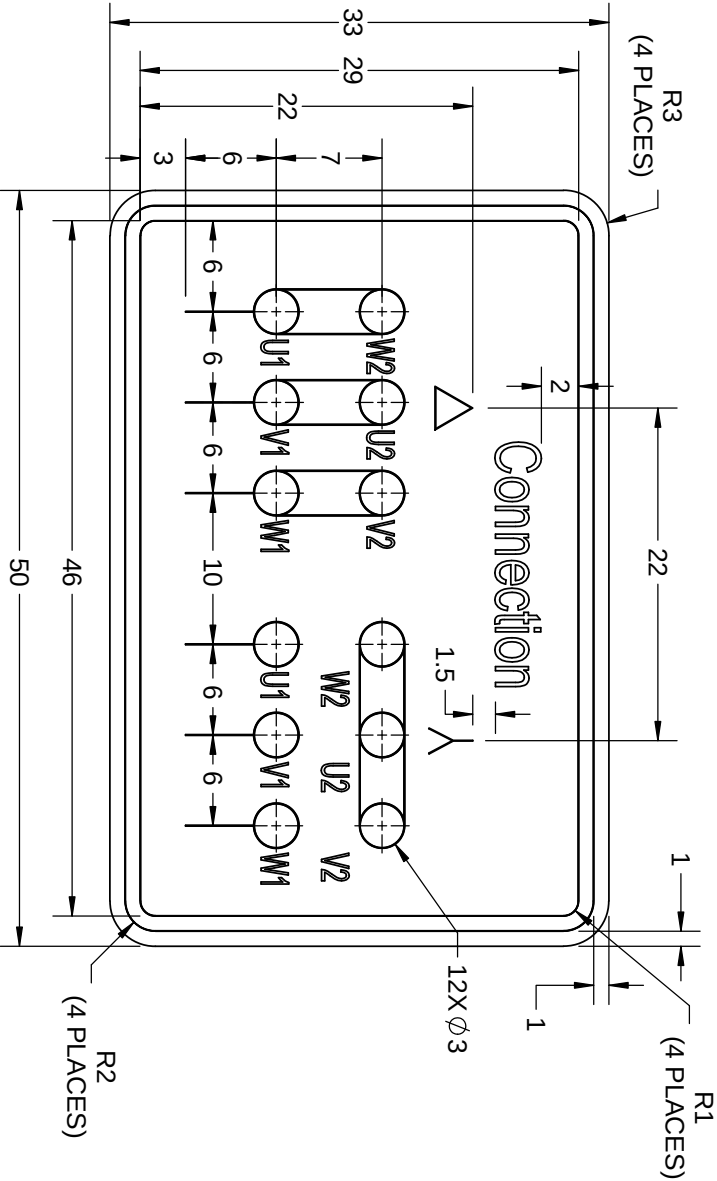
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DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO-0116390	APPROVED BY SBD	DATE 13/01/2017
ECO DESCRIPTION NEW DRAWING RELEASE		

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		 Regal Beloit America, Inc.	
DATE 16/12/2016			
APPROVED BY SBD			
DATE 16/12/2016			
REFERENCE		DESCRIPTION CONN DIAGRAM-NAMEPLATE	
THIRD ANGLE PROJECTION		SIZE A	DRAWING NUMBER 8442000085
		PROCESS/FINISH	

8WD.442.2017

Model No. SCA1601A3113GAAD01

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	257.5	2981	513.67	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.7	1.9	3.0
									-	94.8	94.8	93.8	0.91	0.90	0.86			

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1104 kg
Duty	S1	Gross weight - approx.	1149 kg
Voltage variation *	± 10%	Motor inertia	2.5678 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)	83 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	6316 C3 / 6316 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	-	-	-



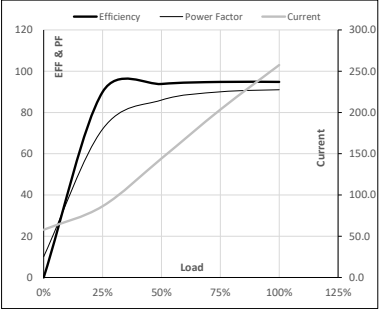
Model No. SCA1601A3113GAAD01

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	1104

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	

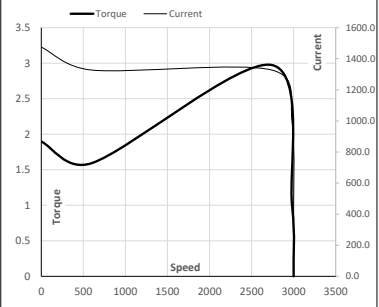
Performance vs Load Chart



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

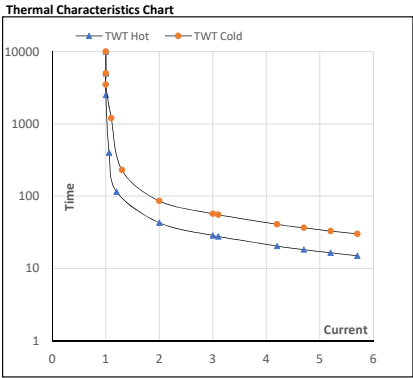
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REGAL

Model No. SCA1601A3113GAAD01

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	1104

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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