

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCE0031A5111GAA001

Catalog No: TCE0031A5111GAA001

TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 4 HP, 3 Ph, 50 Hz, 400 V,
2893 RPM, 100L Frame



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RegalRexnord

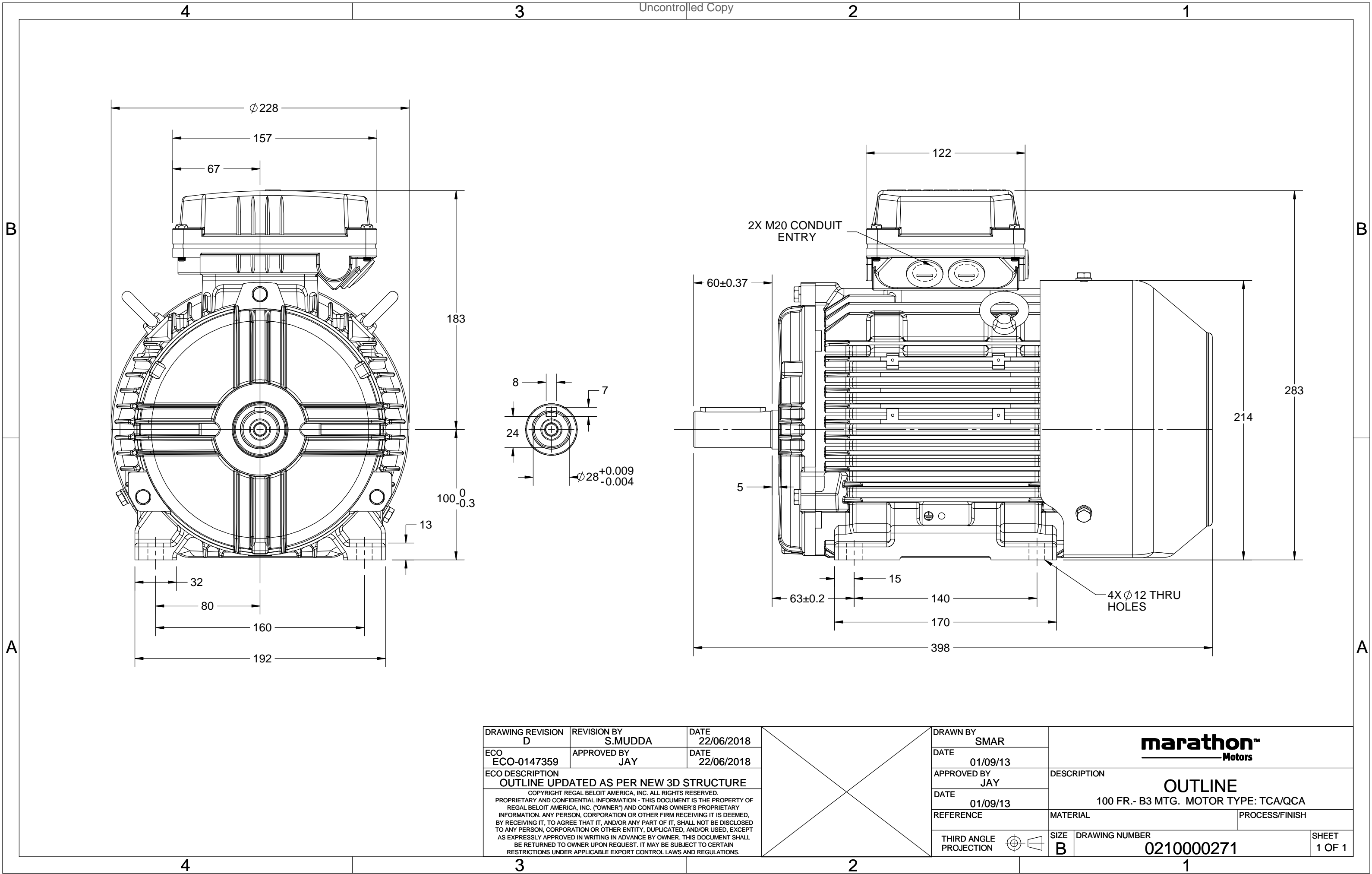
Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	50 Hz	Voltage	400 V
Current	5.5 A	Speed	2893 rpm
Service Factor	1	Phase	3
Efficiency	87.1 %	Power Factor	0.9
Duty	S1	Insulation Class	F
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	3		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	398 mm	Frame Length	200 mm
Shaft Diameter	28.000 mm	Shaft Extension	60 mm
Assembly/Box Mounting	Top		
Outline Drawing	0210000271	Connection Drawing	8442000085

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DRAWING REVISION A	REVISION BY SN	DATE 13/01/2017
ECO 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.

8WD.442.2017



DRAWN BY SN	 Regal Beloit America, Inc.	
	DESCRIPTION CONN DIAGRAM-NAMEPLATE	
	DATE 16/12/2016	
APPROVED BY SBD	MATERIAL	
DATE 16/12/2016	PROCESS/FINISH	
REFERENCE	SIZE A	
THIRD ANGLE PROJECTION 	DRAWING NUMBER 8442000085	
	SHEET 1 OF 1	

Model No. TCE0031A5111GAA001

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 _K /T _N [pu]
400	Δ	50	3	4.0	5.5	2893	9.84	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	8.4	3.7	4.0

Motor type	TCE	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	100L	Motor weight - approx.	41 kg
Duty	S1	Gross weight - approx.	44 kg
Voltage variation *	± 10%	Motor inertia	0.0046 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)	63 dB(A)
Service factor	1.0	No. of starts hot/cold/Equally spread	2/3/4
Insulation class	F	Starting method	DOL
Ambient temperature	-15 to +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [Class B] K	tE time	5 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex eb	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 7016
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6206-2Z / 6206-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm ² /2 x M20 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

T_K/T_N - Breakdown Torque / Rated Torque

T_A/T_N - Locked Rotor Torque / Rated Torque

NOTE

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-7

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC:60034-30-1		-	-	-	IEC:60034-30-1

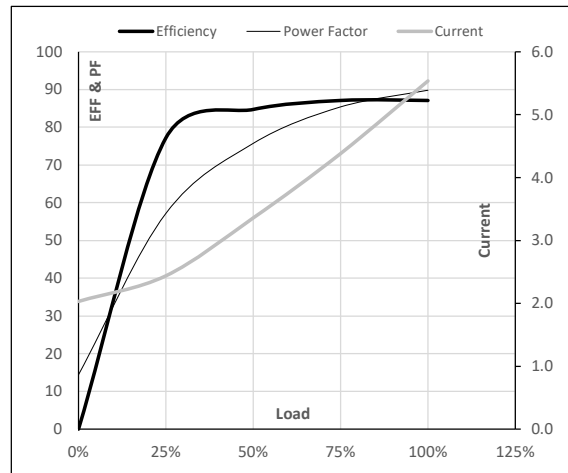
Model No. TCE0031A5111GAA001

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	400	Δ	50	3	4	5.5	2893	1.00	9.84	IE3	40	S1	1000	0.0046	41

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	2.0	2.4	3.4	4.4	5.5	
Torque	Nm	0.0	3.3	6.5	9.9	9.8	
Speed	r/min	3000	2972	2947	2921	2893	
Efficiency	%		77.2	84.7	87.1	87.1	
Power Factor	%	14.4	57.2	75.7	85.4	89.8	

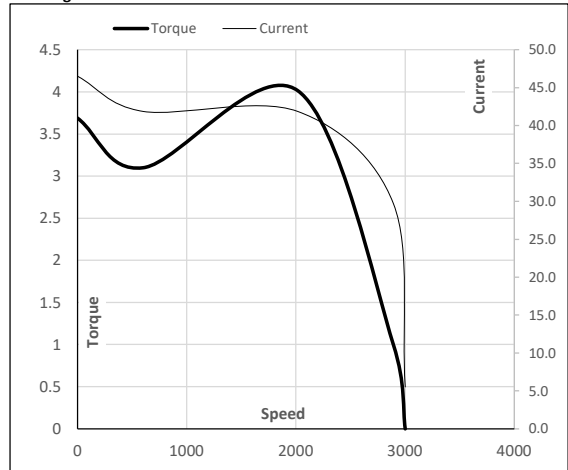
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2016	2893	3000
Current	A	46.5	41.9	29.7	5.5	2.0
Torque	pu	3.7	3.1	4.0	1	0

Starting Characteristics Chart



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

Issued By

Issued Date