

# PRODUCT INFORMATION PACKET

Model No: SCA0302A1111GAA001

Catalog No: SCA0302A1111GAA001

TerraMAX® Cast Iron Motor, 40 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 200L Frame, TEFC



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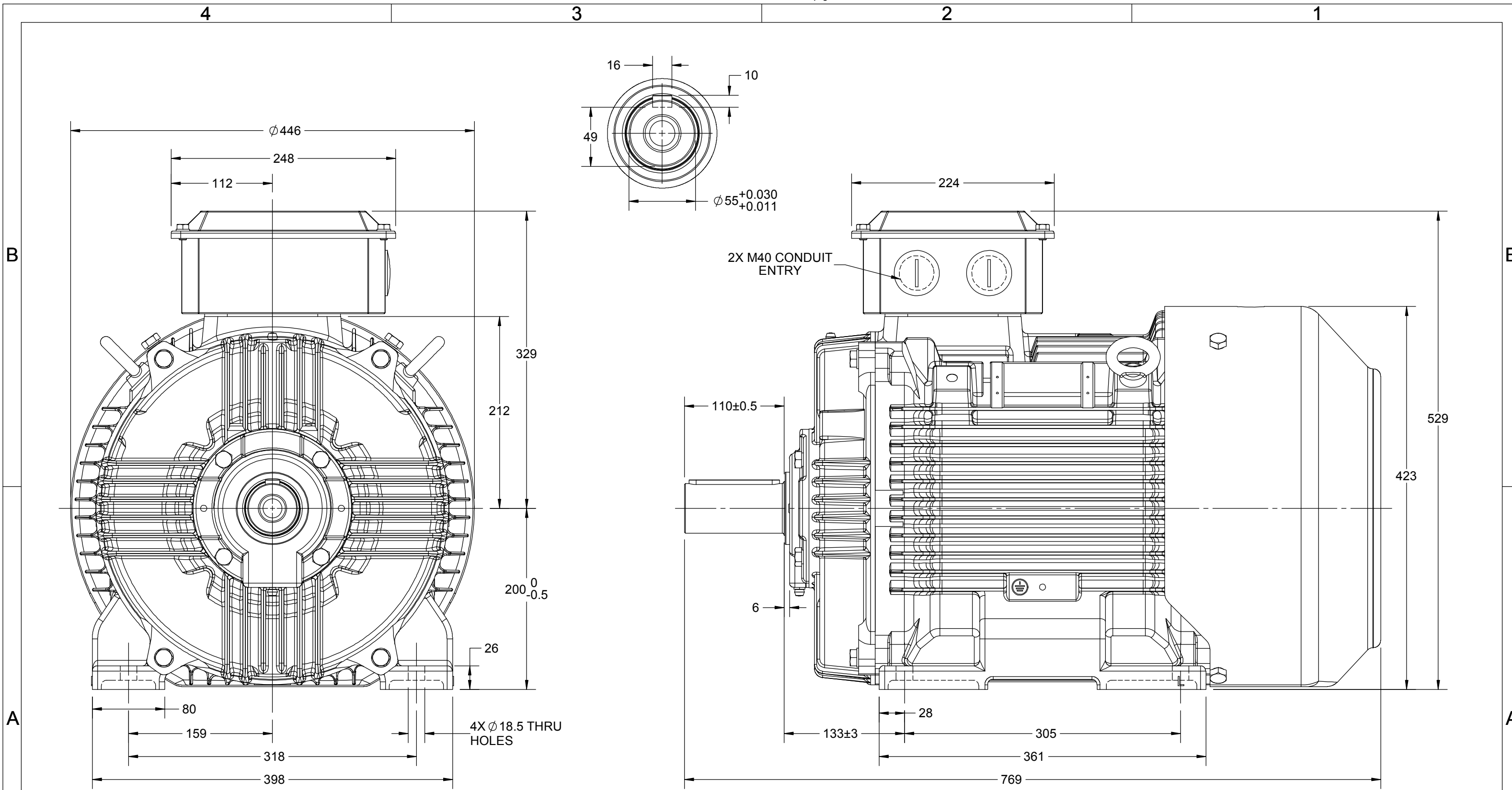
### Nameplate Specifications

Output HP	<b>40 Hp</b>	Output KW	<b>30.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>400 V</b>
Current	<b>55.2 A</b>	Speed	<b>1471 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>92.3 %</b>	Power Factor	<b>0.85</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>200L</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6312</b>	Opp Drive End Bearing Size	<b>6212</b>
UL	<b>No</b>	CSA	<b>No</b>
CE	<b>Yes</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE2</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>4</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>B3</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>C3</b>	Opp Drive End Bearing	<b>C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>769 mm</b>	Frame Length	<b>370 mm</b>
Shaft Diameter	<b>55 mm</b>	Shaft Extension	<b>110 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Connection Drawing	<b>8442000085</b>	Outline Drawing	<b>0220000598</b>

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DRAWING REVISION B	REVISION BY LK	DATE 27/06/2019
ECO ECO-0169536	APPROVED BY SR	DATE 27/06/2019
ECO DESCRIPTION MODEL UPDATED AS PER NEW 3D STRUCTURE		
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DRAWN BY NIV
DATE 04/01/2018
APPROVED BY JAY
DATE 04/01/2018
REFERENCE
THIRD ANGLE PROJECTION

<b>marathon™ Motors</b>	
<b>OUTLINE</b>	
200FR-B3 MTG. MOTOR TYPE: SCA	
DESCRIPTION	PROCESS/FINISH
MATERIAL	SIZE B
DRAWING NUMBER 0220000598	SHEET 1 OF 1

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

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

**Model No.** SCA0302A1111GAA001

U (V)	Δ / Y Conn	f [Hz]	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	30	40	55.2	1471	193.61	IE2	-	92.3	92.3	93	0.85	0.82	0.72	6.2	2.2	2.8

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	270 kg
Duty	S1	Gross weight - approx.	300 kg
Voltage variation *	± 10%	Motor inertia	0.2616 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level ( 1meter distance from motor)	66 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [ Class B ] K	LR withstand time (hot/cold)	25/12 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	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6312 C3 / 6212 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	Auxiliary terminal box	Available on Request

I<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>A</sub>/T<sub>N</sub> - 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 Standards	Europe IEC: 60034-30	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC: 60034-30



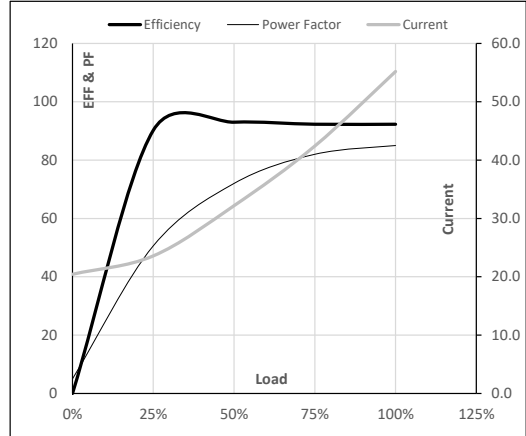
Model No. SCA0302A1111GAA001

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 <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	30	40	55.2	1471	19.74	193.61	IE2	40	S1	1000	0.2616	270

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	20.4	23.6	32.2	42.4	55.2	
Torque	Nm	0.0	47.7	95.8	144.4	193.6	
Speed	r/min	1500	1493	1487	1480	1471	
Efficiency	%	0.0	90.2	93.0	92.3	92.3	
Power Factor	%	5.0	50.6	72.0	82.0	85.0	

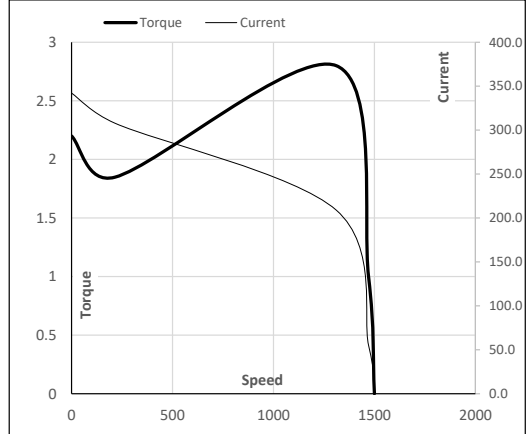
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1311	1471	1500
Current	A	342.2	308.0	209.0	55.2	20.4
Torque	pu	2.2	1.8	2.8	1	0

**Starting Characteristics Chart**



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

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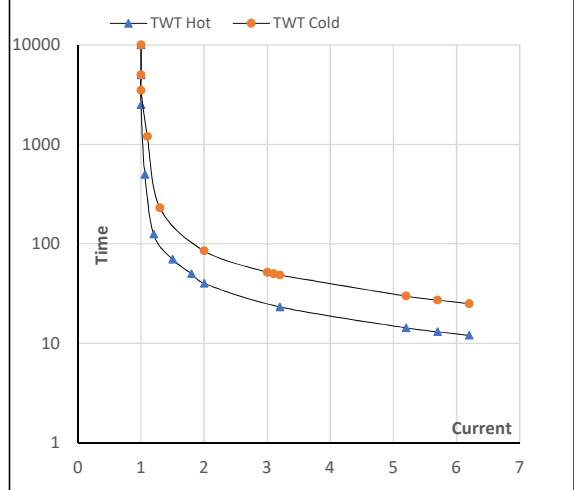
**Model No.** SCA0302A1111GAA001

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 <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	30	40	55.2	1471	19.74	193.61	IE2	40	S1	1000	0.2616	270

**Motor Speed Torque Data**

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR	
TWT Hot	s 10000	40	24	20	16	13	12	
TWT Cold	s 10000	50	49	40	32	28	25	
Current	pu	1	2	3	4	5	5.5	6.2

**Thermal Characteristics Chart**



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

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