

PRODUCT INFORMATION PACKET

Model No: SCA0222A1111GAA001

Catalog No: SCA0222A1111GAA001

TerraMAX® Cast Iron Motor, 30 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 180L Frame, TEFC



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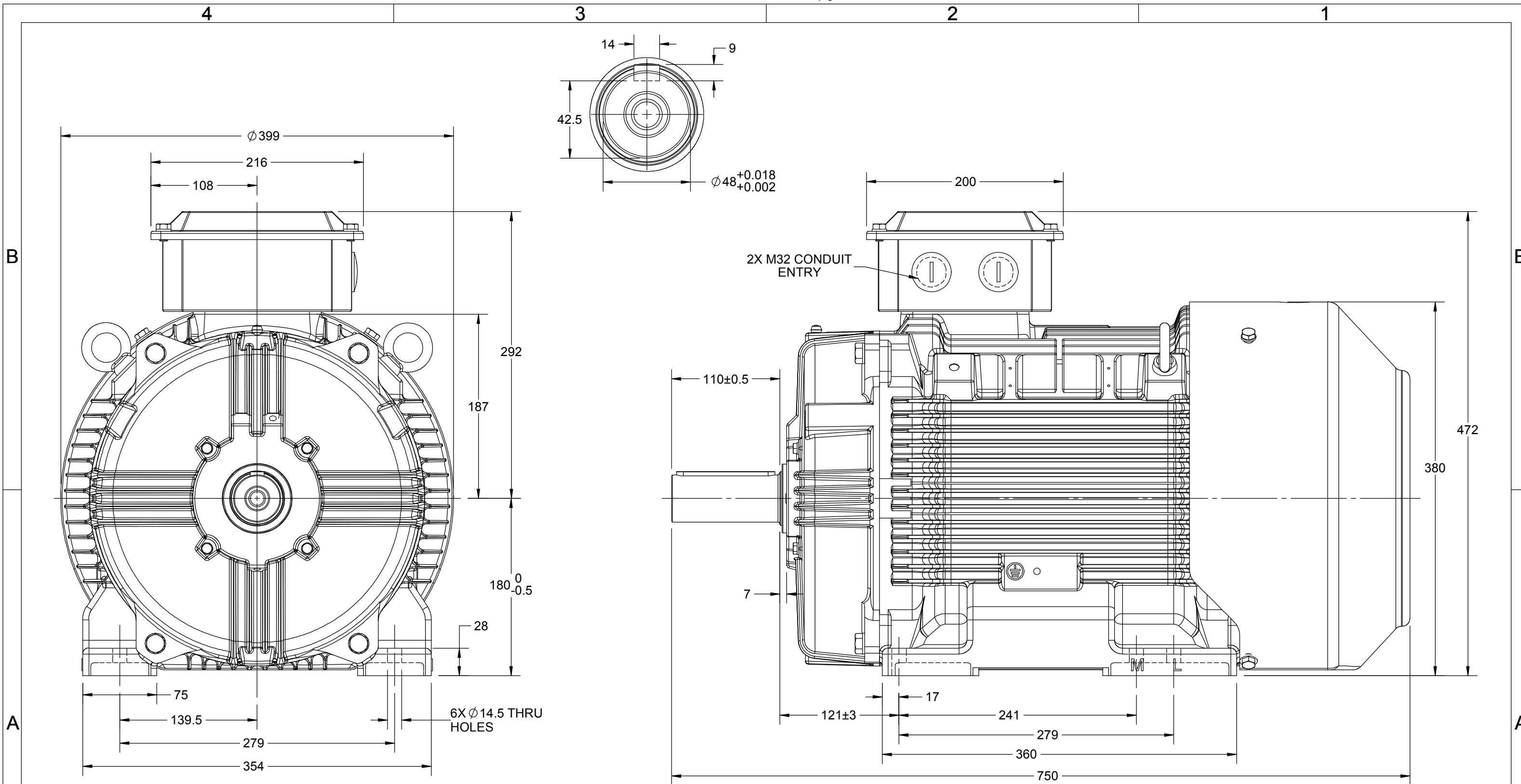
Nameplate Specifications

Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	400 V
Current	40.3 A	Speed	1471 rpm
Service Factor	1	Phase	3
Efficiency	91.6 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	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	750 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0218000833	Connection Drawing	8442000085

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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 20/03/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 20/03/2018	180L-FR-B3 MTG. MOTOR TYPE: SCA	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000833
		SHEET 1 OF 1

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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.
	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

Model No. SCA0222A1111GAA001

U (V)	Δ / Y Conn	f [Hz]	P		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 _R /T _N [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	22	30	40.3	1471	145.21	IE2	-	91.6	91.6	91.8	0.86	0.81	0.7	6.8	2.5	3.0

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180L	Motor weight - approx.	213 kg
Duty	S1	Gross weight - approx.	233 kg
Voltage variation *	± 10%	Motor inertia	0.1694 kgm ²
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)	15/7 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	6311-2Z / 6211-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	Available on Request

I_A/I_N - Locked Rotor Current / Rated Current

T_R/T_N - Breakdown Torque / Rated Torque

T_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 Standards	Europe IEC: 60034-30	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC: 60034-30

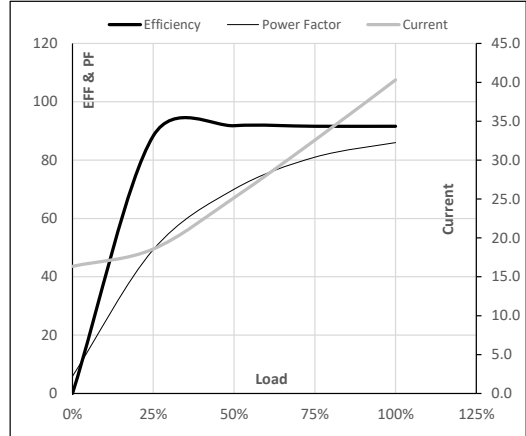
Model No. SCA0222A1111GAA001

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	22	30	40.3	1471	14.81	145.21	IE2	40	S1	1000	0.1694	213

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	16.3	18.6	25.2	32.6	40.3	
Torque	Nm	0.0	35.8	71.9	108.3	145.2	
Speed	r/min	1500	1493	1486	1479	1471	
Efficiency	%	0.0	88.3	91.8	91.6	91.6	
Power Factor	%	5.9	49.3	70.0	81.0	86.0	

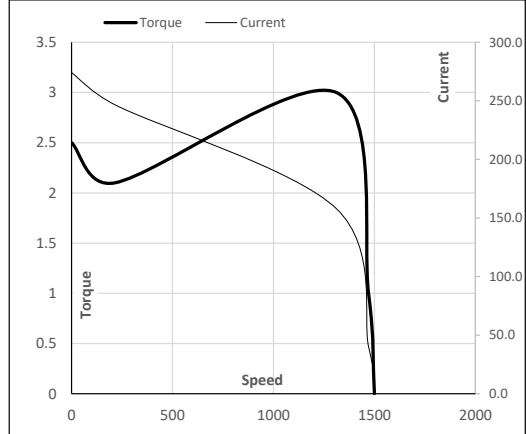
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1311	1471	1500
Current	A	274.1	246.7	158.1	40.3	16.3
Torque	pu	2.5	2.1	3.0	1	0

Starting Characteristics Chart



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

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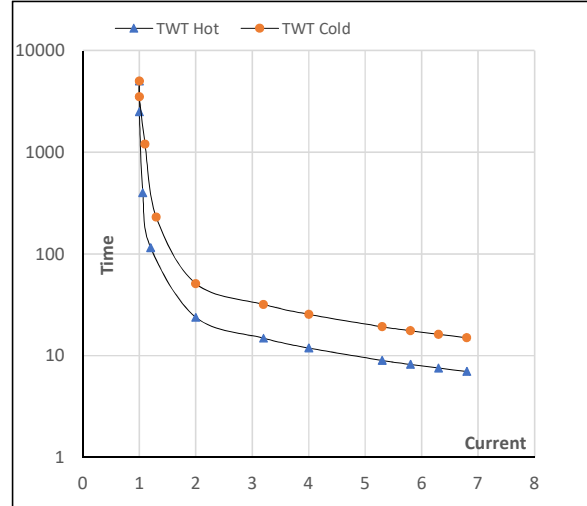
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	400	Δ	50	22	30	40.3	1471	14.81	145.21	IE2	40	S1	1000	0.1694	213

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	24	15	12	10	9	7
TWT Cold	s 10000	51	33	26	20	18	15
Current	pu 1	2	3	4	5	5.5	6.8

Thermal Characteristics Chart



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

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