

# PRODUCT INFORMATION PACKET

Model No: SCA0302A3121GAAD01

Catalog No: SCA0302A3121GAAD01

30kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B5, 50Hz, 92.3%, 200L Frame, TEFC  
Cast Iron IE2 Efficiency Motors



### Nameplate Specifications

Output HP	<b>40 Hp</b>	Output KW	<b>30.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>415 V</b>
Current	<b>53.5 A</b>	Speed	<b>1476 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>
Ambient Temperature	<b>50 °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>		

### 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>B5</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>789 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>0220000639</b>

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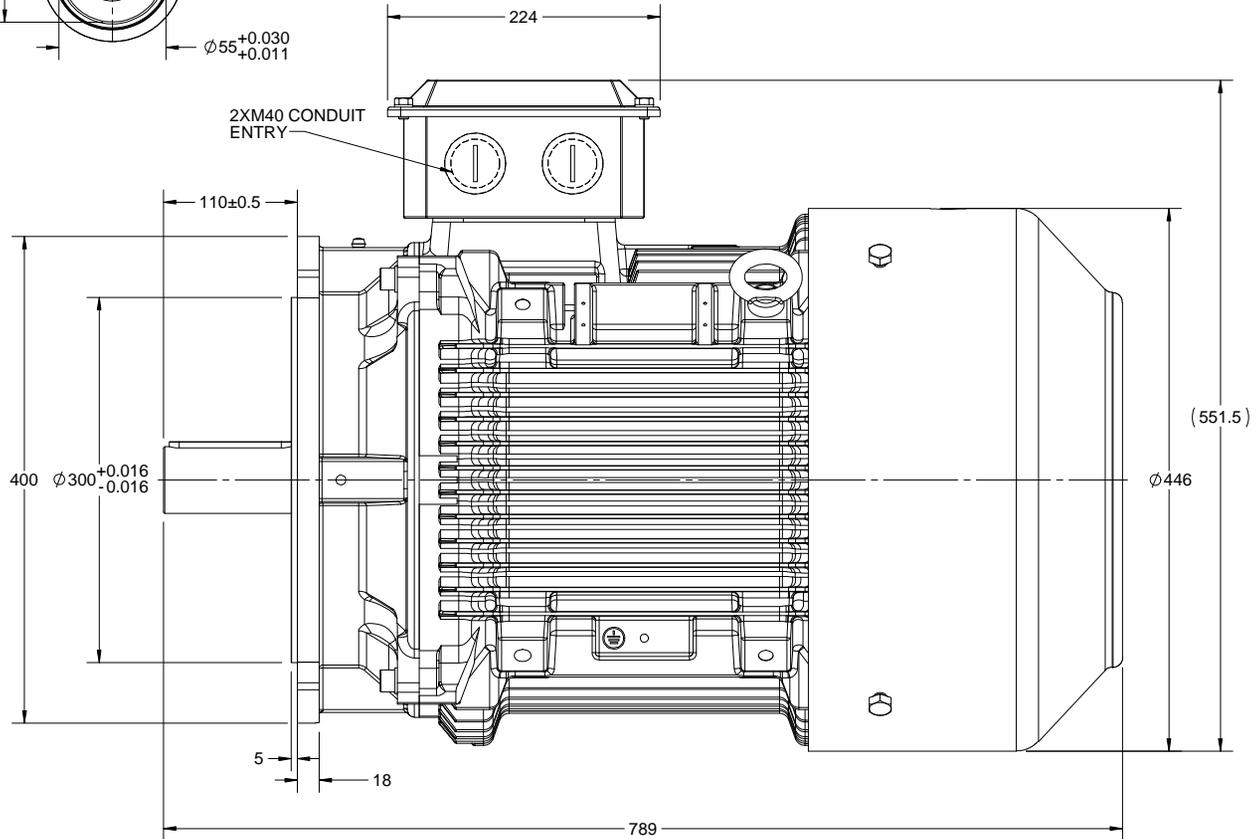
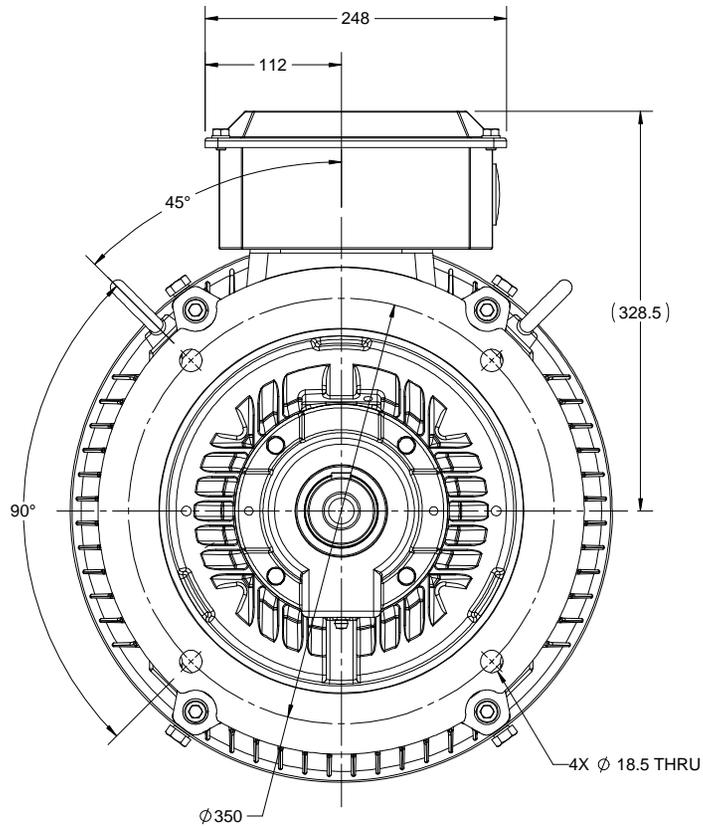
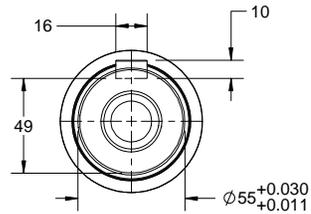
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B

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A

A



DRAWING REVISION A	REVISION BY A. KEETHA	DATE 09/11/2018
ECO ECO-0153779	APPROVED BY JAY	DATE 09/11/2018

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DRAWN BY A. KEETHA
DATE 09/11/2018
APPROVED BY JAY
DATE 09/11/2018
REFERENCE

**marathon**  
Motors

DESCRIPTION  
**OUTLINE**  
200L FRAME B5 MTG. MOTOR TYPE:SCA

MATERIAL PROCESS/FINISH

THIRD ANGLE PROJECTION

SIZE **B** DRAWING NUMBER **0220000639** SHEET **1 OF 1**

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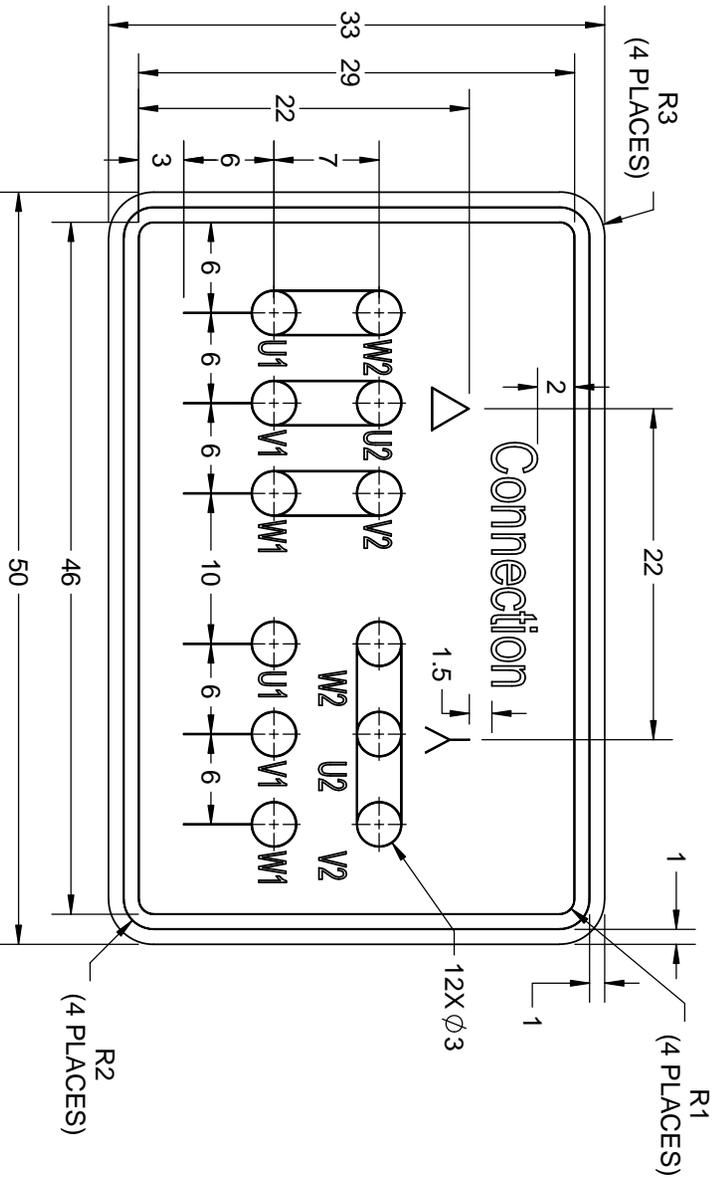
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A	SN	13/01/2017
ECO-0116390	APPROVED BY SBD	DATE 13/01/2017
ECO DESCRIPTION NEW DRAWING RELEASE		

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.

8WD.442.2017

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



Model No. SCA0302A3121GAAD01

U (V)	Δ / Y Conn	f (Hz)	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I <sub>w</sub> /I <sub>N</sub> [pu]	T <sub>k</sub> /T <sub>N</sub> [pu]	T <sub>k</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	30	40	53.5	1476	193.41	IE2	-	92.3	92.3	92.9	0.85	0.80	0.68	6.6	2.6	3.3

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	301 kg
Duty	S1	Gross weight - approx.	331 kg
Voltage variation *	± 10%	Motor inertia	0.3013 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)	75 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)	7/15 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	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	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

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

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

T<sub>k</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	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-



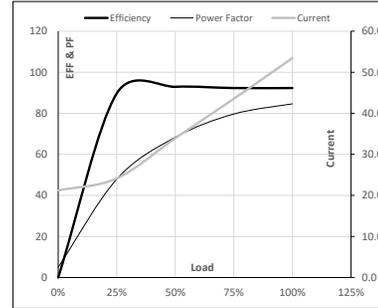
Model No. SCA0302A3121GAAD01

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	415	Δ	50	30	40	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	301

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	21.2	24.1	33.9	43.5	53.5	
Torque	Nm	0.0	47.7	95.7	144.1	193.4	
Speed	r/min	1500	1494	1488	1482	1476	
Efficiency	%	0.0	89.7	92.9	92.3	92.3	
Power Factor	%	5.0	47.9	68.3	79.7	84.6	

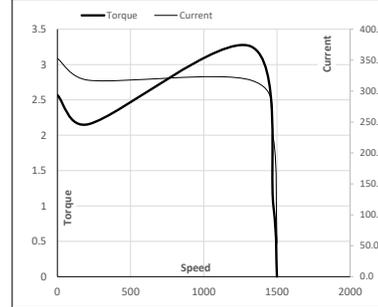
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1323	1476	1500
Current	A	352.8	317.5	223.2	53.5	21.2
Torque	pu	2.6	2.2	3.3	1	0

**Starting Characteristics Chart**



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

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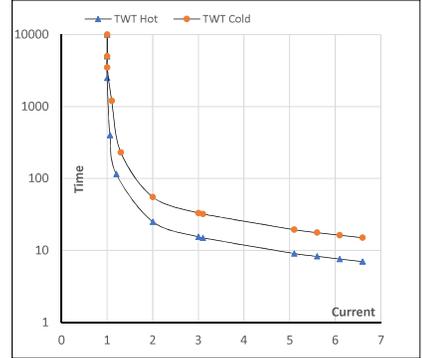
Model No. SCA0302A3121GAAD01

Enclosure	U (V)	$\Delta / Y$ 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	415	$\Delta$	50	30	40	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	301

**Motor Speed Torque Data**

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR	
TWT Hot	s 10000	25	15	12	9	8	7	
TWT Cold	s 10000	55	33	25	19	18	15	
Current	pu	1	2	3	4	5	5.5	6.6

**Thermal Characteristics Chart**



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

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