

# PRODUCT INFORMATION PACKET

Model No: QCA1P11AF121GAA001

Catalog No: QCA1P11AF121GAA001

TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 380 V, 3000 RPM, 80M Frame, TEFC



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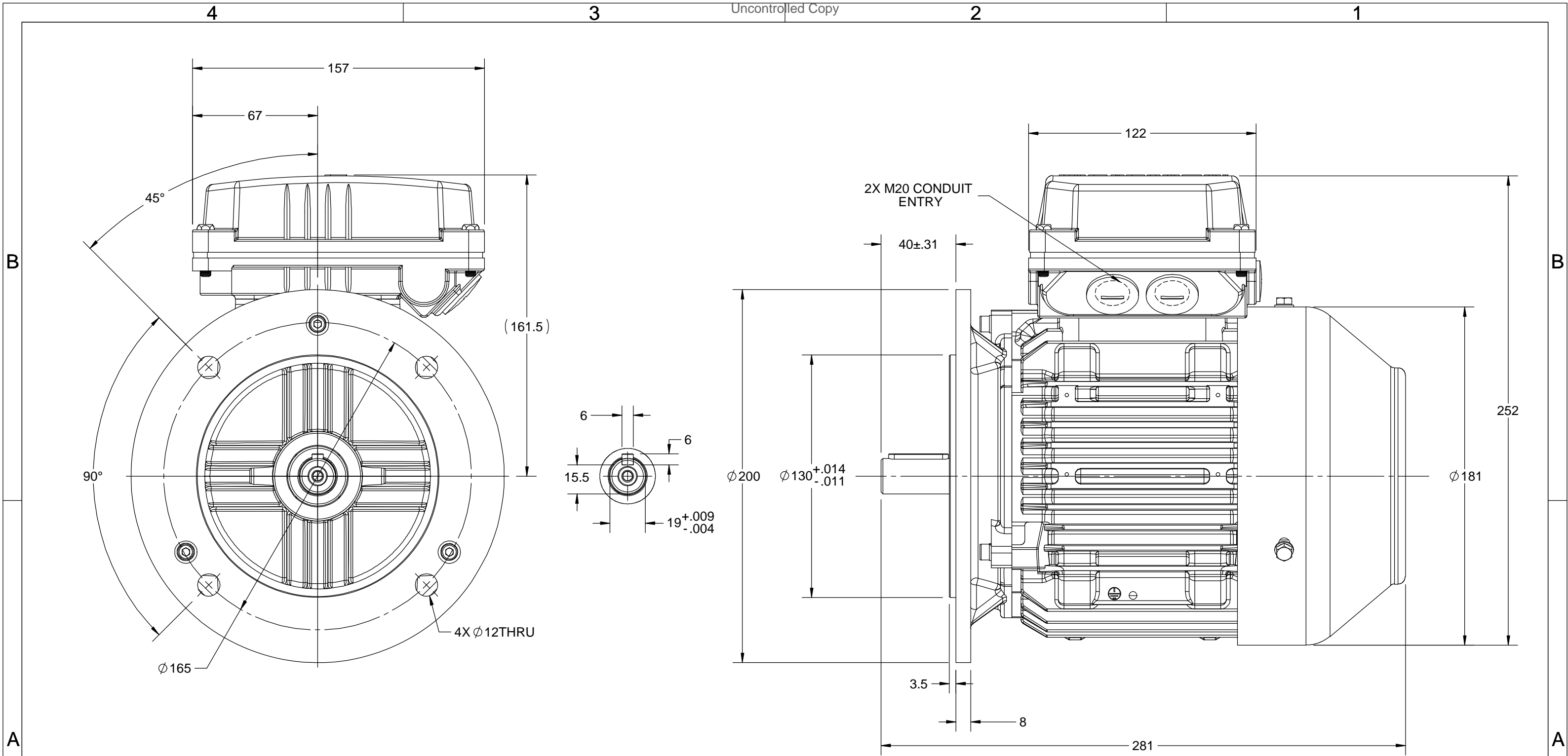
### Nameplate Specifications

Output HP	1.50 Hp	Output KW	1.1 kW
Frequency	50 Hz	Voltage	380 V
Current	2.4 A	Speed	2891 rpm
Service Factor	1	Phase	3
Efficiency	85.2 %	Power Factor	0.84
Duty	S1	Insulation Class	F
Frame	80M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6204	Opp Drive End Bearing Size	6204
UL	No	CSA	No
CE	YES	IP Code	55
Number of Speeds	1	Efficiency Class	IE4

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	281 mm	Frame Length	140 mm
Shaft Diameter	19 mm	Shaft Extension	40 mm
Assembly/Box Mounting	Top		
Outline Drawing	0208000181	Connection Drawing	8442000085

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DRAWING REVISION B	REVISION BY I. RAMDAS	DATE 20/06/18
ECO ECO-0147359	APPROVED BY JAY	DATE 20/06/18
ECO DESCRIPTION OUTLINE UPDATED AS PER 3D STRUCTURING		
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DRAWN BY SMAR		
DATE 30/08/13		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 30/08/13	80 FR.- B5 MTG. MOTOR TYPE: TCA	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0208000181
		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>		<b>Regal Beloit America, Inc.</b>
	DATE <b>16/12/2016</b>		
	APPROVED BY <b>SBD</b>		DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>
	DATE <b>16/12/2016</b>		
	REFERENCE		
	MATERIAL		PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE <b>A</b>	DRAWING NUMBER <b>8442000085</b>	SHEET <b>1 OF 1</b>

**Model No.** QCA1P11AF121GAA001

U (V)	$\Delta / Y$ 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			
380	Y	50	1.1	1.5	2.4	2891	3.70	IE4	-	85.2	85.2	82.3	0.84	0.77	0.64	7.8	4.1	4.0

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	80M	Motor weight - approx.	22.7 kg
Duty	S1	Gross weight - approx.	23.7 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.0018 kgm <sup>2</sup>
Frequency variation *	$\pm 5\%$	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level ( 1meter distance from motor)	56 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)	10/20 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	6204-2Z / 6204-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm <sup>2</sup> /2 x M20 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

 $I_A/I_N$  - 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	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

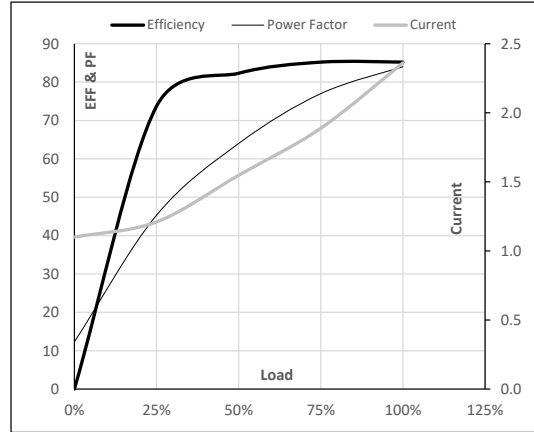
**Model No.** QCA1P11AF121GAA001

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	380	Y	50	1.1	1.5	2.4	2891	0.38	3.70	IE4	40	S1	1000	0.0018	22.7

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.1	1.2	1.5	1.9	2.4	
Torque	Nm	0.0	0.9	1.8	2.7	3.7	
Speed	r/min	3000	2972	2947	2920	2891	
Efficiency	%	0.0	73.7	82.3	85.2	85.2	
Power Factor	%	12.3	45.3	64.0	77.0	84.0	

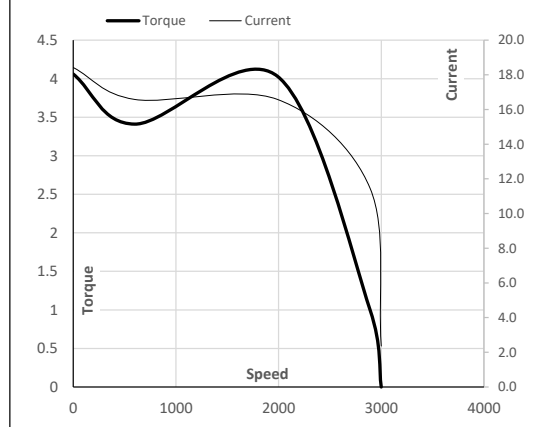
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	1990	2891	3000
Current	A	18.4	16.6	11.5	2.4	1.1
Torque	pu	4.1	3.4	4.0	1	0

**Starting Characteristics Chart**



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

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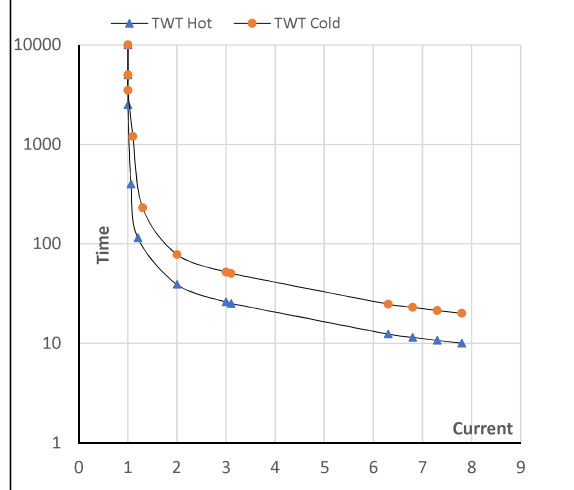
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Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	Y	50	1.1	1.5	2.4	2891	0.38	3.70	IE4	40	S1	1000	0.0018	22.7

**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	39	26	23	19	15	10	
TWT Cold	s 10000	78	52	45	35	30	20	
Current	pu	1	2	3	4	5	5.5	7.8

**Thermal Characteristics Chart**



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

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