

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: QCA2P23AF181GAA001

Catalog No: QCA2P23AF181GAA001

TerraMAX® Cast Iron Motor, 3 HP, 3 Ph, 50 Hz, 380 V, 1000 RPM, 112M Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	3 Hp	Output KW	2.2 kW
Frequency	50 Hz	Voltage	380 V
Current	5.4 A	Speed	969 rpm
Service Factor	1	Phase	3
Efficiency	87.4 %	Power Factor	0.71
Duty	S1	Insulation Class	F
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
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	6	Rotation	Bi-Directional
Mounting	B14B	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	399 mm	Frame Length	174 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0211200266

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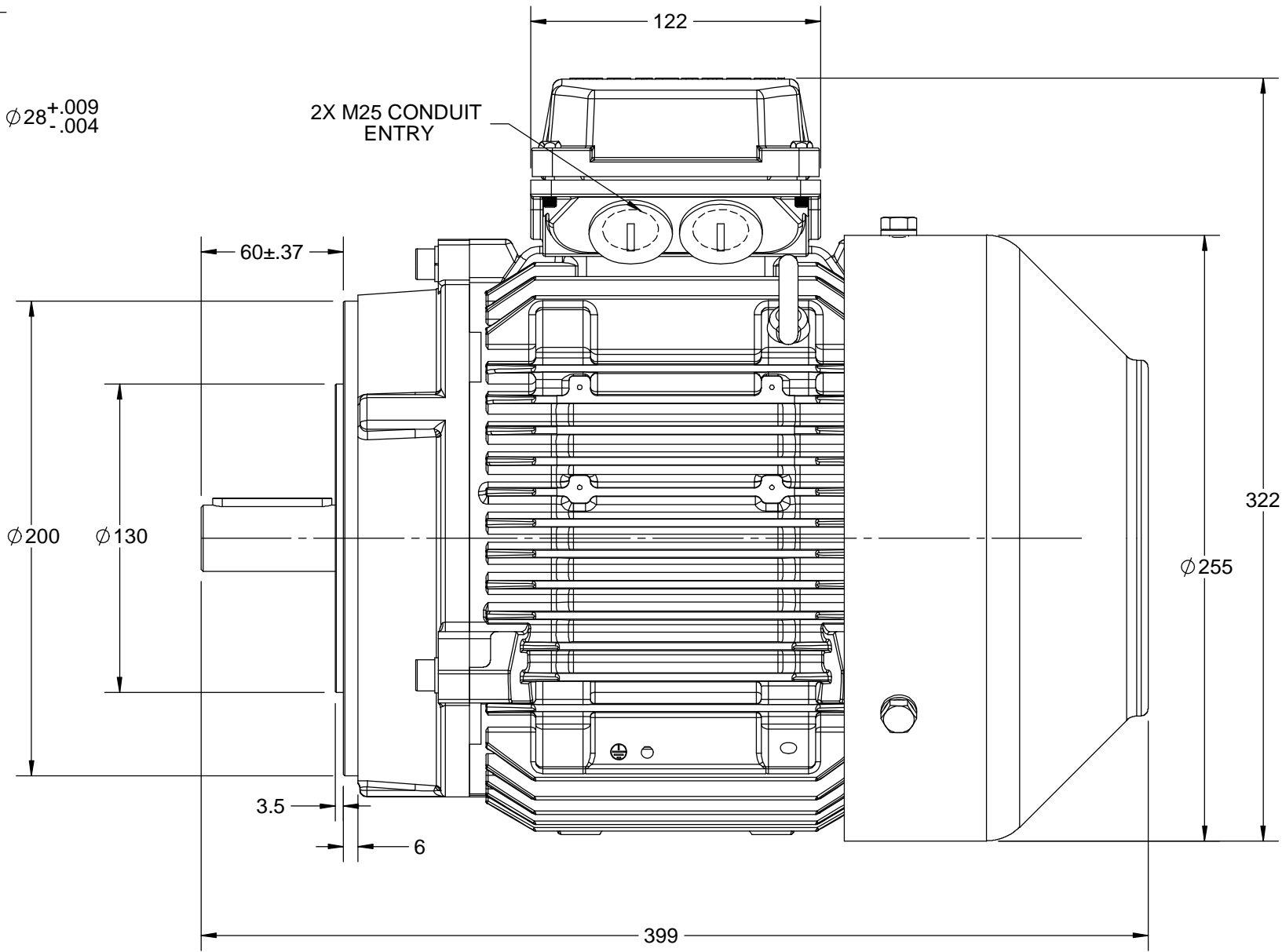
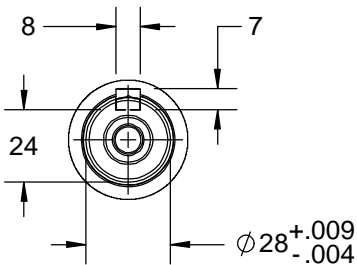
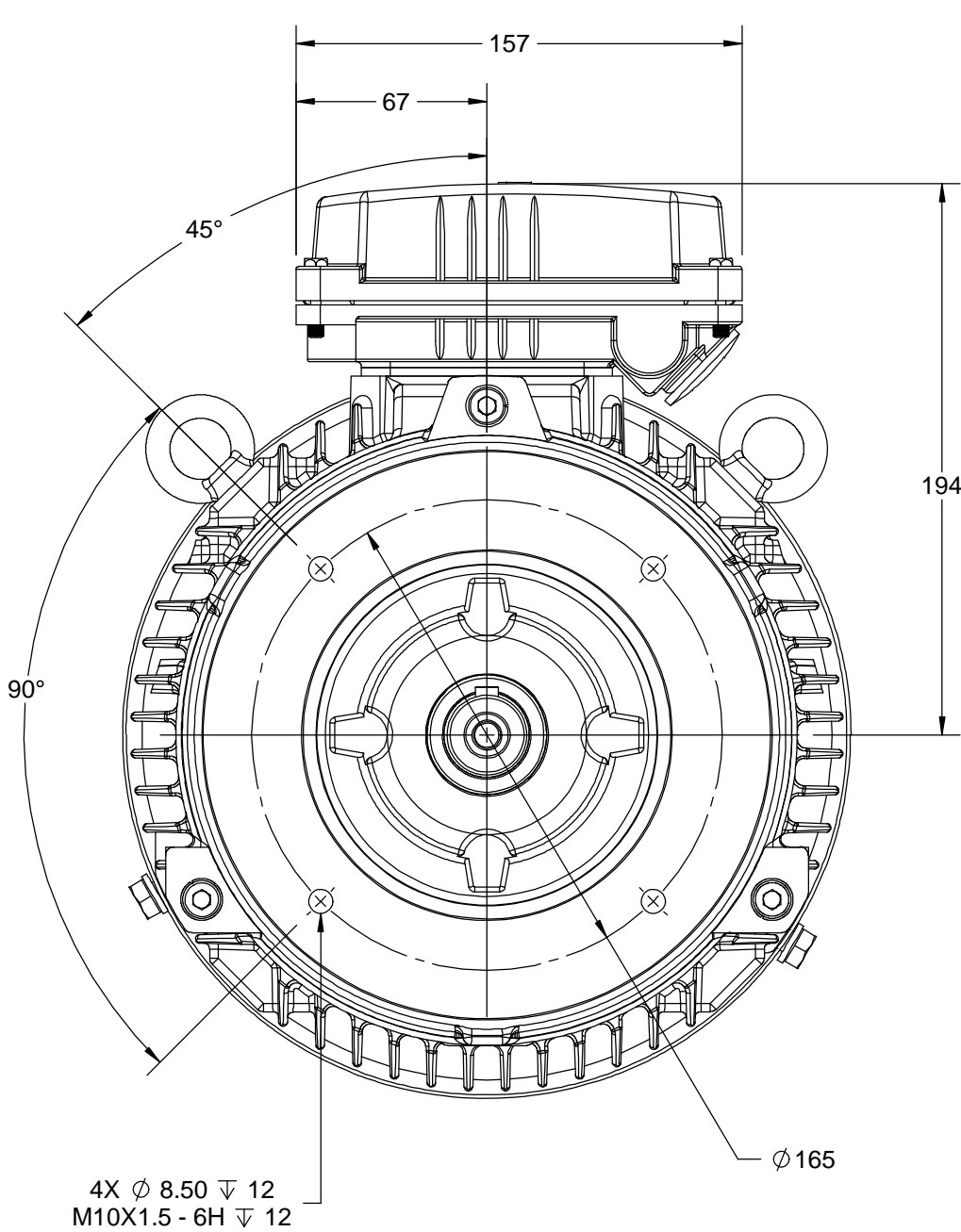
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A

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DRAWING REVISION B	REVISION BY S.MUDDA	DATE 9/7/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 9/7/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING		
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DRAWN BY SMAR			
DATE 02/09/13			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 02/09/13	112 FR.- B14B MTG. MOTOR TYPE: TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0211200266	SHEET 1 OF 1

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ECO DESCRIPTION

GEOMETRIC TOLERANCE

LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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	

Model No. QCA2P23AF181GAA001

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]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
380	Y	50	2.2	3.0	5.4	969	22.07	IE4	-	87.4	87.4	84.2	0.71	0.63	0.49	7.6	3.3	3.7

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	112M	Motor weight - approx.	58 kg
Duty	S1	Gross weight - approx.	61 kg
Voltage variation *	± 10%	Motor inertia	0.0226 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)	58 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)	15/30 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	6306-2Z / 6206-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm ² /2 x M25 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

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.

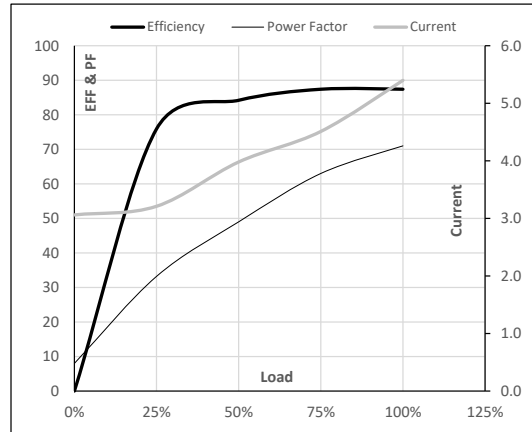
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

Model No. QCA2P23AF181GAA001

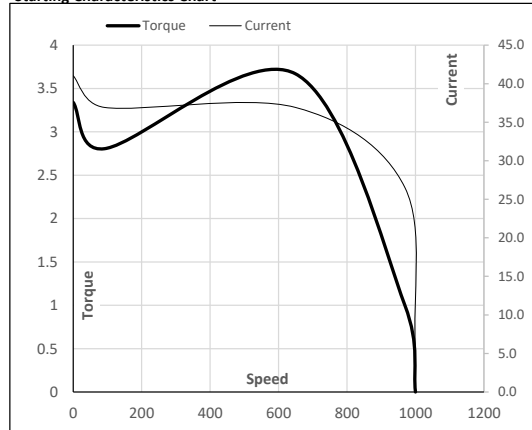
Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Y	50	2.2	3.0	5.4	969	2.25	22.07	IE4	40	S1	1000	0.0226	58

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.1	3.2	4.0	4.5	5.4	
Torque	Nm	0.0	5.4	10.9	16.4	22.1	
Speed	r/min	1000	992	985	978	969	
Efficiency	%	0.0	75.9	84.2	87.4	87.4	
Power Factor	%	8.0	33.2	49.0	63.0	71.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	649	969	1000
Current	A	41.0	36.9	26.5	5.4	3.1
Torque	pu	3.3	2.8	3.7	1	0

Starting Characteristics Chart

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

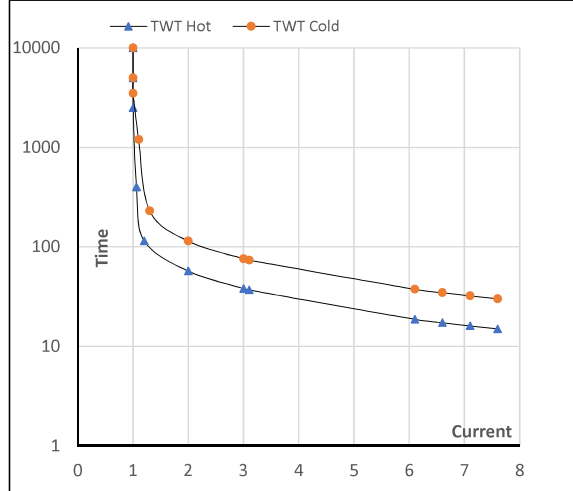
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Model No. QCA2P23AF181GAA001

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	380	Y	50	2.2	3.0	5.4	969	2.25	22.07	IE4	40	S1	1000	0.0226	58

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	57	38	30	25	20	15
TWT Cold	s 10000	114	76	65	45	40	30
Current	pu	1	2	4	5	5.5	7.6

Thermal Characteristics Chart

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

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