

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: QCA0452A1131GAA001

Catalog No: QCA0452A1131GAA001

TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 225M Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	400 V
Current	82.6 A	Speed	1486 rpm
Service Factor	1	Phase	3
Efficiency	95.4 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	225M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6213
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	4	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	862 mm	Frame Length	425 mm
Shaft Diameter	60 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Outline Drawing	0222500463	Connection Drawing	8442000085

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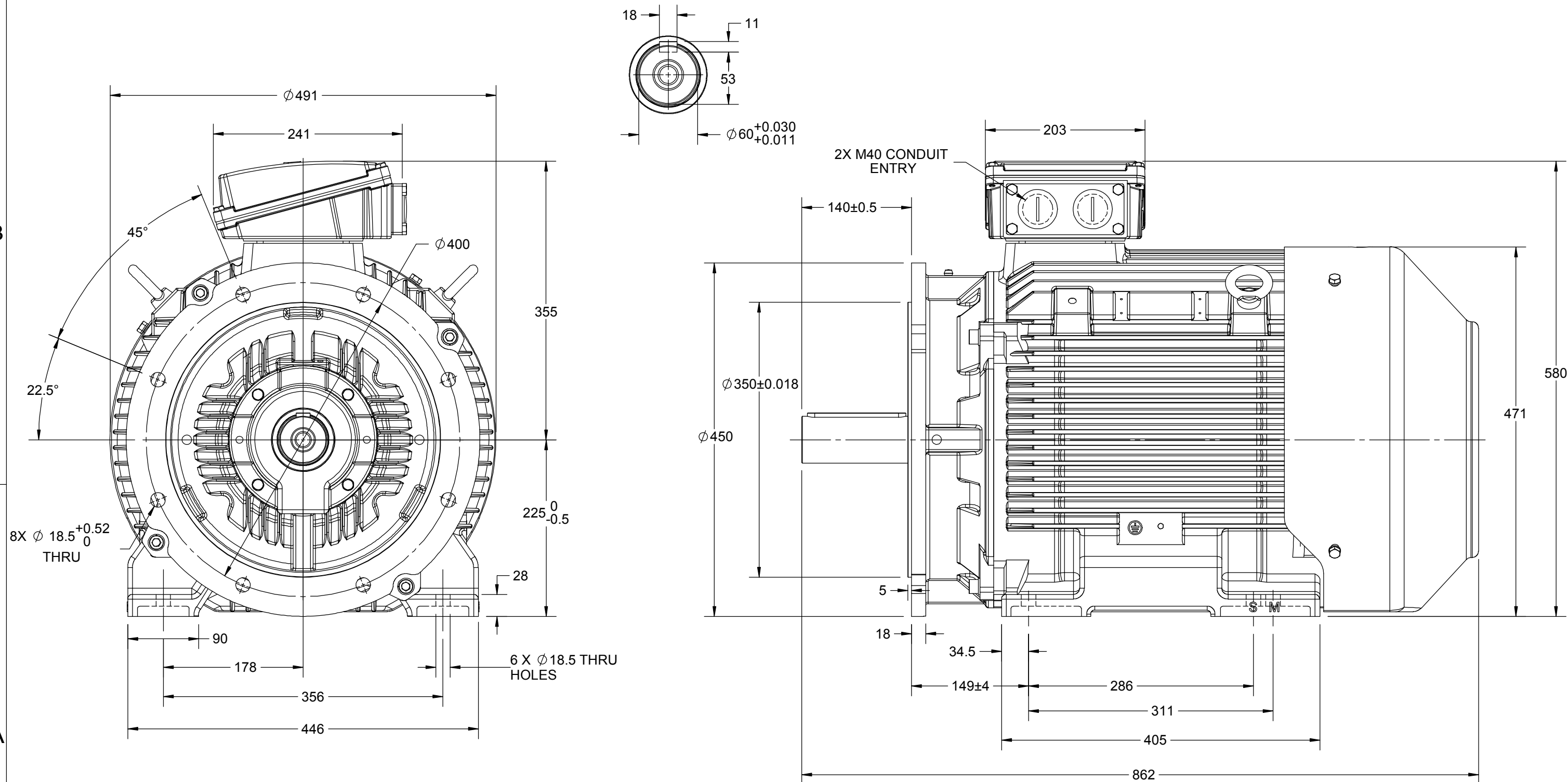
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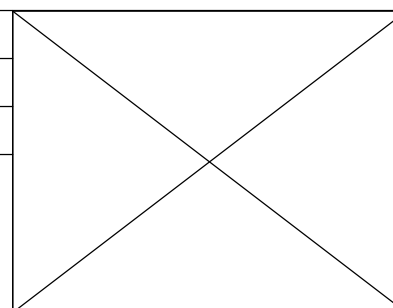
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DRAWING REVISION B	REVISION BY NIV	DATE 24/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 24/04/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY JOY	<b>marathon™</b> Motors		
DATE 18/07/2014			
APPROVED BY SBD	DESCRIPTION OUTLINE		
DATE 18/07/2014	225FR-B35 MTG MOTOR TYPE: TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0222500463	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>	<b>DESCRIPTION</b> <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.** QCA0452A1131GAA001

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 <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]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	45	60	82.0	1486	287.64	IE4	-	95.4	95.4	94.7	0.83	0.77	0.66	8.4	3.0	3.6

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	225M	Motor weight - approx.	440 kg
Duty	S1	Gross weight - approx.	470 kg
Voltage variation *	± 10%	Motor inertia	0.8148 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)	65 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	6313 C3 / 6213 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	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 combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

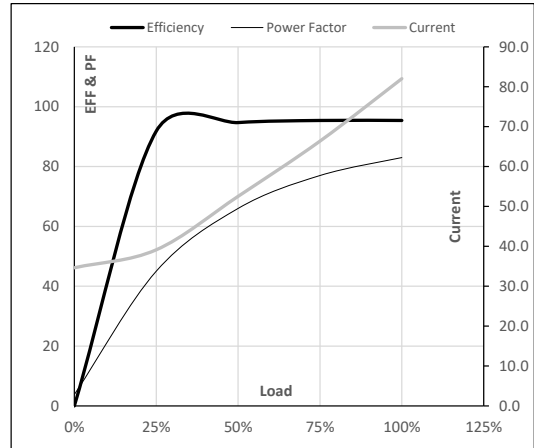
Efficiency Standards	Europe IEC 60034-30-1	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC 60034-30-1
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**Model No.** QCA0452A1131GAA001

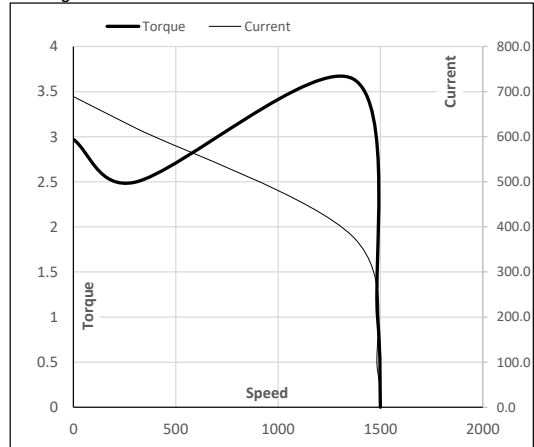
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	45	60	82.0	1486	29.33	287.64	IE4	40	S1	1000	0.8148	440

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	34.6	39.1	52.5	66.4	82.0	
Torque	Nm	0.0	71.4	143.1	215.2	287.6	
Speed	r/min	1500	1496	1493	1489	1486	
Efficiency	%	0.0	91.8	94.7	95.4	95.4	
Power Factor	%	3.8	45.0	66.0	77.0	83.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1367	1486	1500
Current	A	689.0	620.1	377.6	82.0	34.6
Torque	pu	3.0	2.5	3.6	1	0

**Starting Characteristics Chart**

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

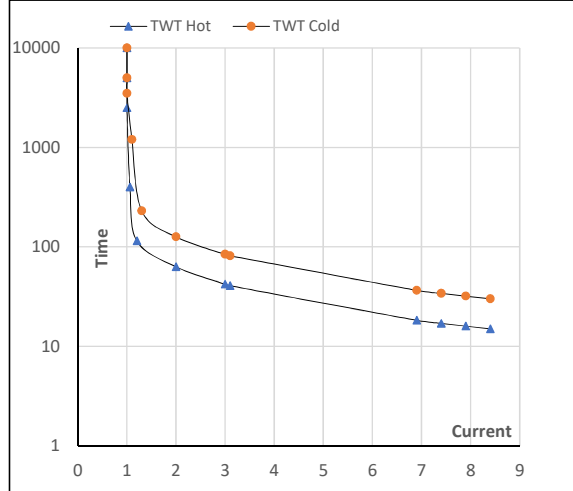
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Issued Date

**Model No.** QCA0452A1131GAA001

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	400	$\Delta$	50	45	60	82.0	1486	29.33	287.64	IE4	40	S1	1000	0.8148	440

**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	63	42	34	25	20	15
TWT Cold	s	10000	126	84	70	55	50	30
Current	pu	1	2	3	4	5	5.5	8.4

**Thermal Characteristics Chart**

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

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