

# PRODUCT INFORMATION PACKET

Model No: TCN1P11A1181GAC010

Catalog No: TCN1P11A1181GAC010

TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 80M Frame, TEFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2022 Regal Rexnord Corporation, All Rights Reserved. MC017097E



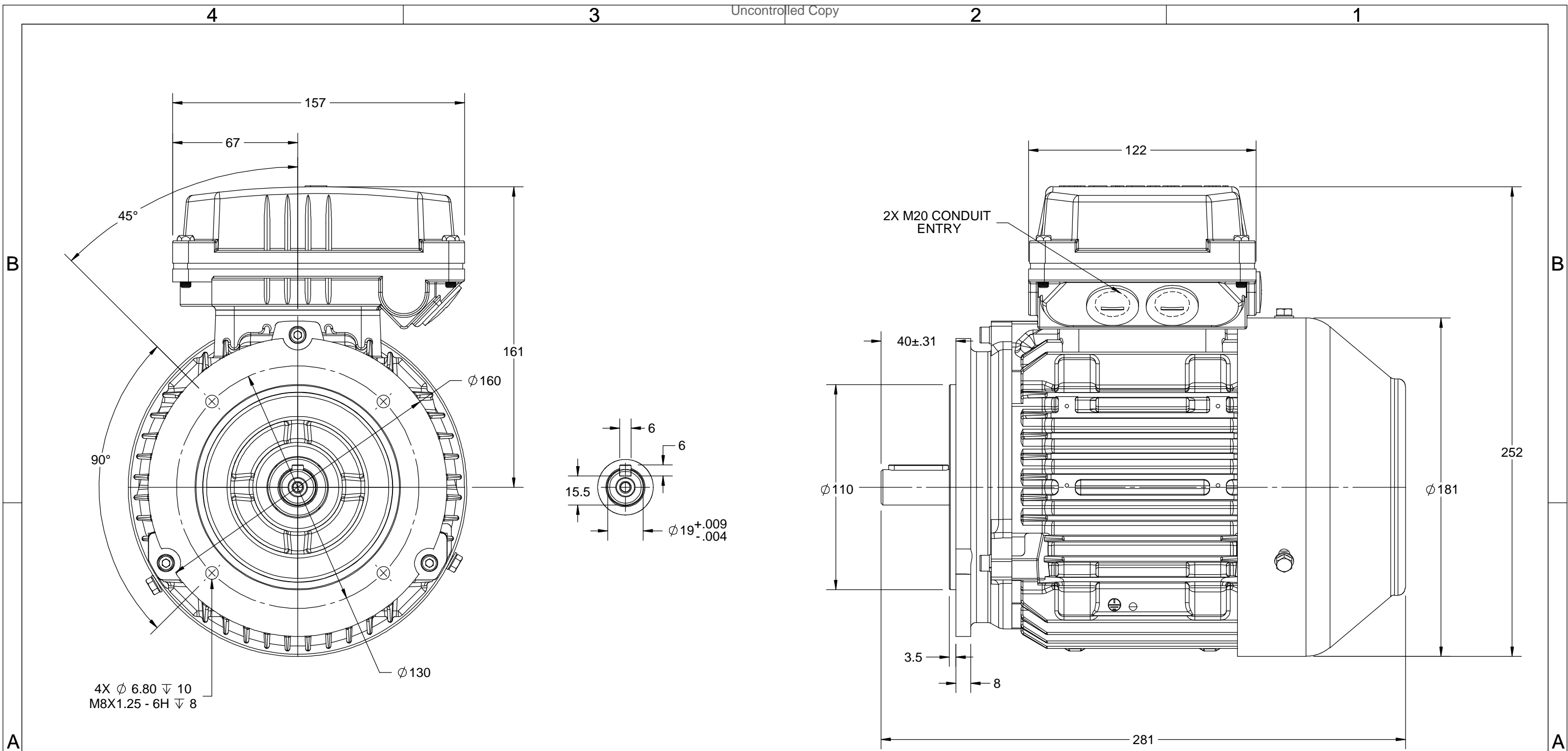
### Nameplate Specifications

Output HP	1.50 Hp	Output KW	1.1 kW
Frequency	50 Hz	Voltage	400 V
Current	2.3 A	Speed	2878 rpm
Service Factor	1	Phase	3
Efficiency	82.7 %	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	IE3

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	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	281 mm	Frame Length	140 mm
Shaft Diameter	19 mm	Shaft Extension	40 mm
Assembly/Box Mounting	Top		
Outline Drawing	0208000183	Connection Drawing	8442000085

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:12/02/2022



DRAWING REVISION B	REVISION BY S.MUDDA	DATE 26/06/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 26/06/2018
ECO DESCRIPTION OUTLINE UPDATED FOR NEW 3D STRUCTURING		
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.          PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF          REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY          INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,          BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED          TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT          AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL          BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN          RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		

DRAWN BY SMAR		
DATE 30/08/13		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 30/08/13	80 FR.- B14B MTG. MOTOR TYPE: TCA	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0208000183
		SHEET 1 OF 1

COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. UNAUTHORIZED REPRODUCTION OR DISTRIBUTION OF THIS DOCUMENT IS PROHIBITED. REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.

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

Model No. TCN1P11A1181GAC010

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]	$T_K/T_N$ [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Y	50	1.1	1.5	2.3	2878	3.71	IE3	-	82.7	82.7	79.3	0.84	0.77	0.64	6.8	3.2	3.3

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	80M	Motor weight - approx.	21 kg
Duty	S1	Gross weight - approx.	22 kg
Voltage variation *	± 10%	Motor inertia	0.0016 kgm <sup>2</sup>
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)	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)	7/15 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex nA	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 5014
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
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 $T_K/T_N$  - Breakdown Torque / Rated Torque $T_A/T_N$  - Locked Rotor Torque / Rated Torque**NOTE**

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-15

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	China	India	Aus/Nz	Brazil	Global IEC
	IEC:60034-30-1	-	-	GEMS 2019	-	IEC:60034-30-1

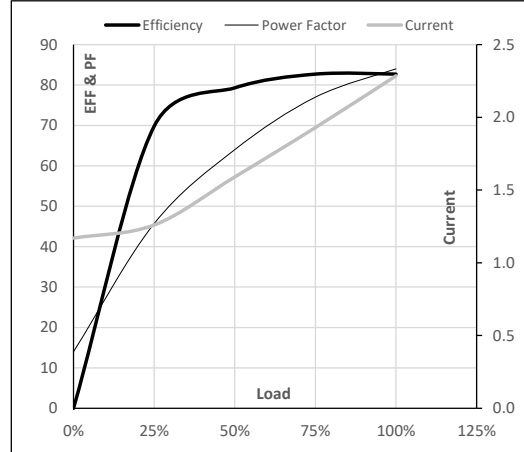
**Model No.** TCN1P11A1181GAC010

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	Y	50	1.1	1.5	2.3	2878	0.38	3.71	IE3	40	S1	1000	0.0016	21

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.2	1.3	1.6	1.9	2.3	
Torque	Nm	0.0	0.9	1.8	2.8	3.7	
Speed	r/min	3000	2970	2943	2912	2878	
Efficiency	%	0.0	69.8	79.3	82.7	82.7	
Power Factor	%	14.0	45.7	64.0	77.0	84.0	

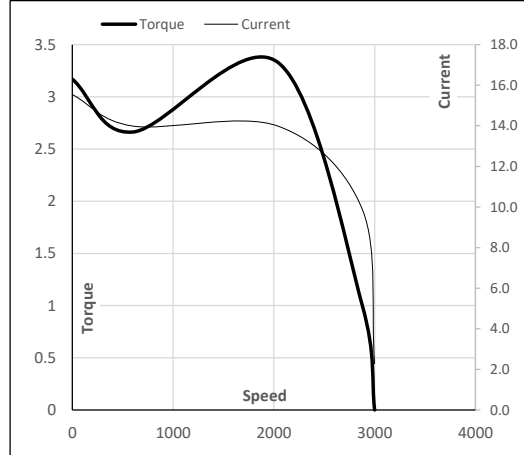
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2040	2878	3000
Current	A	15.5	14.0	9.9	2.3	1.2
Torque	pu	3.2	2.7	3.3	1	0

**Starting Characteristics Chart**



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

Issued By  
Issued Date



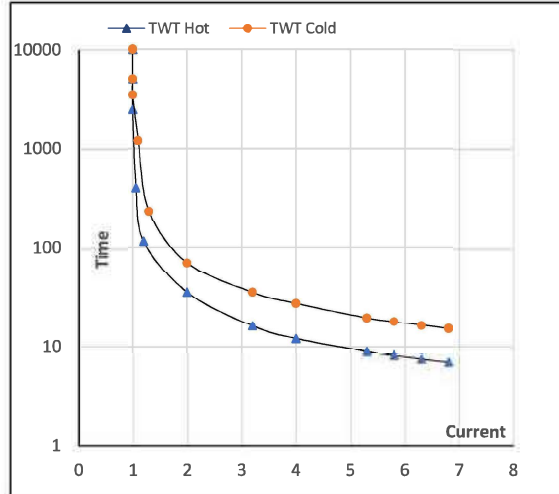
**Model No.** TCN1P11A1181GAC010

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	Y	50	1.1	1.5	2.3	2878	0.38	3.71	IE3	40	S1	1000	0.0016	21

**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	35	20	12	10	9	7	
TWT Cold	s 10000	70	40	27	23	19	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

Issued By  
Issued Date

