

# PRODUCT INFORMATION PACKET



Model No: TCN0374A1131GAC010

Catalog No: TCN0374A1131GAC010

TerraMAX® Cast Iron Motor, 50 HP, 3 Ph, 50 Hz, 400 V, 750 RPM, 280S Frame, TEFC





### Nameplate Specifications

Phase	3	Output HP	50 Hp
Output KW	37.0 kW	Voltage	400 V
Speed	742 r/min	Service Factor	1
Frame	280S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	91.8 %
Ambient Temperature	40 °C	Frequency	50 Hz
Current	74.6 A	Power Factor	0.78
Duty	S1	Insulation Class	F
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
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	8	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	1060 mm	Frame Length	549 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0228000610

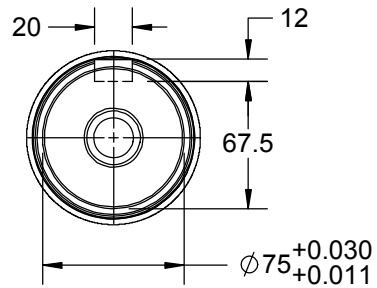
This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:05/16/2025

4

3

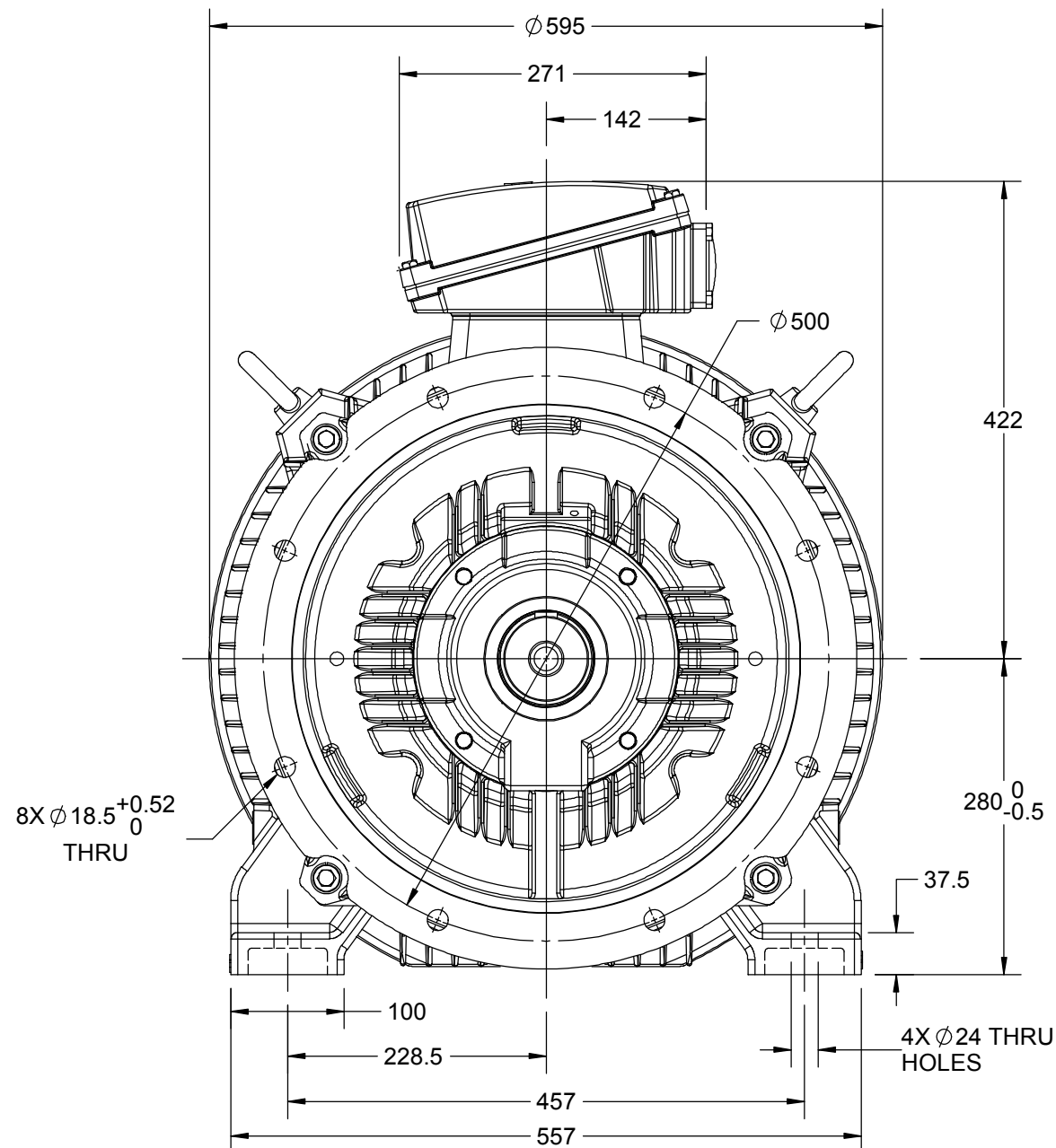
2

1



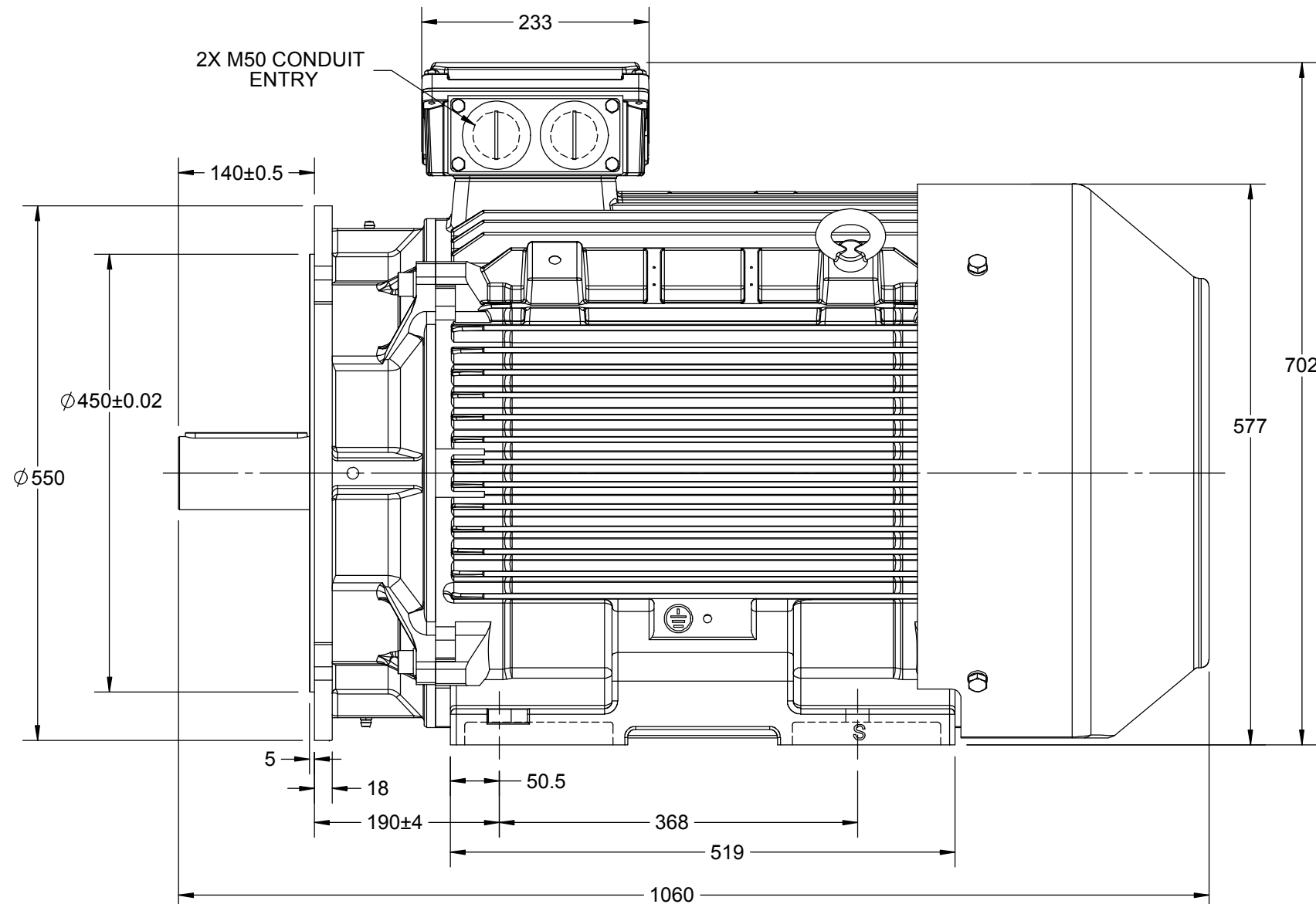
B

B



A

A



DRAWING REVISION C	REVISION BY LK	DATE 25/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 25/04/2019
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE		
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.		

DRAWN BY KCS	<b>marathon™</b> Motors		
DATE 11/11/2014			
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b> 280-S FR-B35 MTG. MOTOR TYPE: TCA		
DATE 11/11/2014			
REFERENCE	MATERIAL		PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0228000610	SHEET 1 OF 1

4

3

2

1

RIGHTS RESERVED. Copy

### 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 <b>CONN DIAGRAM-NAMEPLATE</b>
	DATE 16/12/2016		
	REFERENCE		
	THIRD ANGLE PROJECTION		
SIZE <b>A</b>		DRAWING NUMBER <b>8442000085</b>	SHEET 1 OF 1

**Model No.** TCN0374A1131GAC010

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]
400	Δ	50	37	50	74.6	742	480.01	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6	2.1	2.4

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	280S	Motor weight - approx.	741 kg
Duty	S1	Gross weight - approx.	776 kg
Voltage variation *	± 10%	Motor inertia	3.2584 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)	64 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	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	6317 C3 / 6317 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 95mm <sup>2</sup> /2 x M50 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**

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.

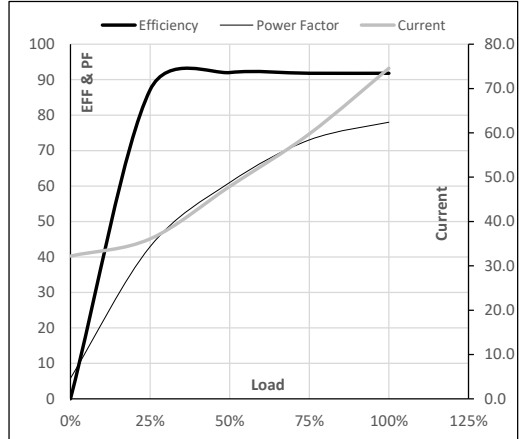
Efficiency Standards	Europe IEC:60034-30-1	China -	India -	Aus/Nz GEMS 2019	Brazil -	Global IEC IEC:60034-30-1
----------------------	--------------------------	------------	------------	---------------------	-------------	------------------------------

**Model No.** TCN0374A1131GAC010

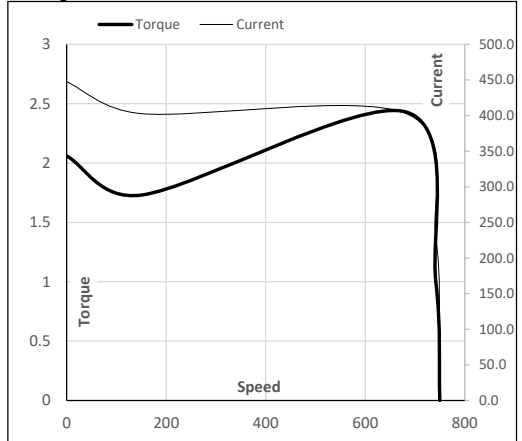
Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	37	50	74.6	742	48.95	480.01	IE3	40	S1	1000	3.2584	741

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	32.2	36.1	47.9	59.8	74.6	
Torque	Nm	0.0	119.1	238.7	359.0	480.0	
Speed	r/min	750	748	746	744	742	
Efficiency	%	0.0	87.1	92.0	91.8	91.8	
Power Factor	%	5.8	42.9	61.0	73.0	78.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	683	742	750
Current	A	447.5	402.8	228.0	74.6	32.2
Torque	pu	2.1	1.7	2.4	1	0

**Starting Characteristics Chart**

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

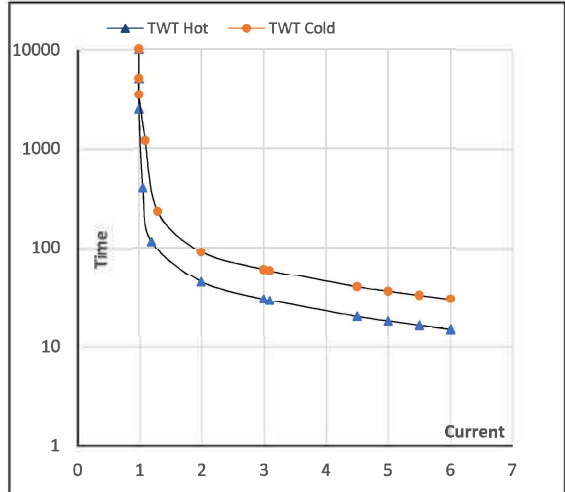
 Issued By  
Issued Date

**Model No. TCN0374A1131GAC010**

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	37	50.0	74.6	742	48.95	480.01	IE3	40	S1	1000	3.2584	741

**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	45	30	25	18	16	15	
TWT Cold	s 10000	90	60	46	36	33	30	
Current	pu	1	2	3	4	5	5.5	6

**Thermal Characteristics Chart**

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

 Issued By  
Issued Date

**REGAL**