PRODUCT INFORMATION PACKET

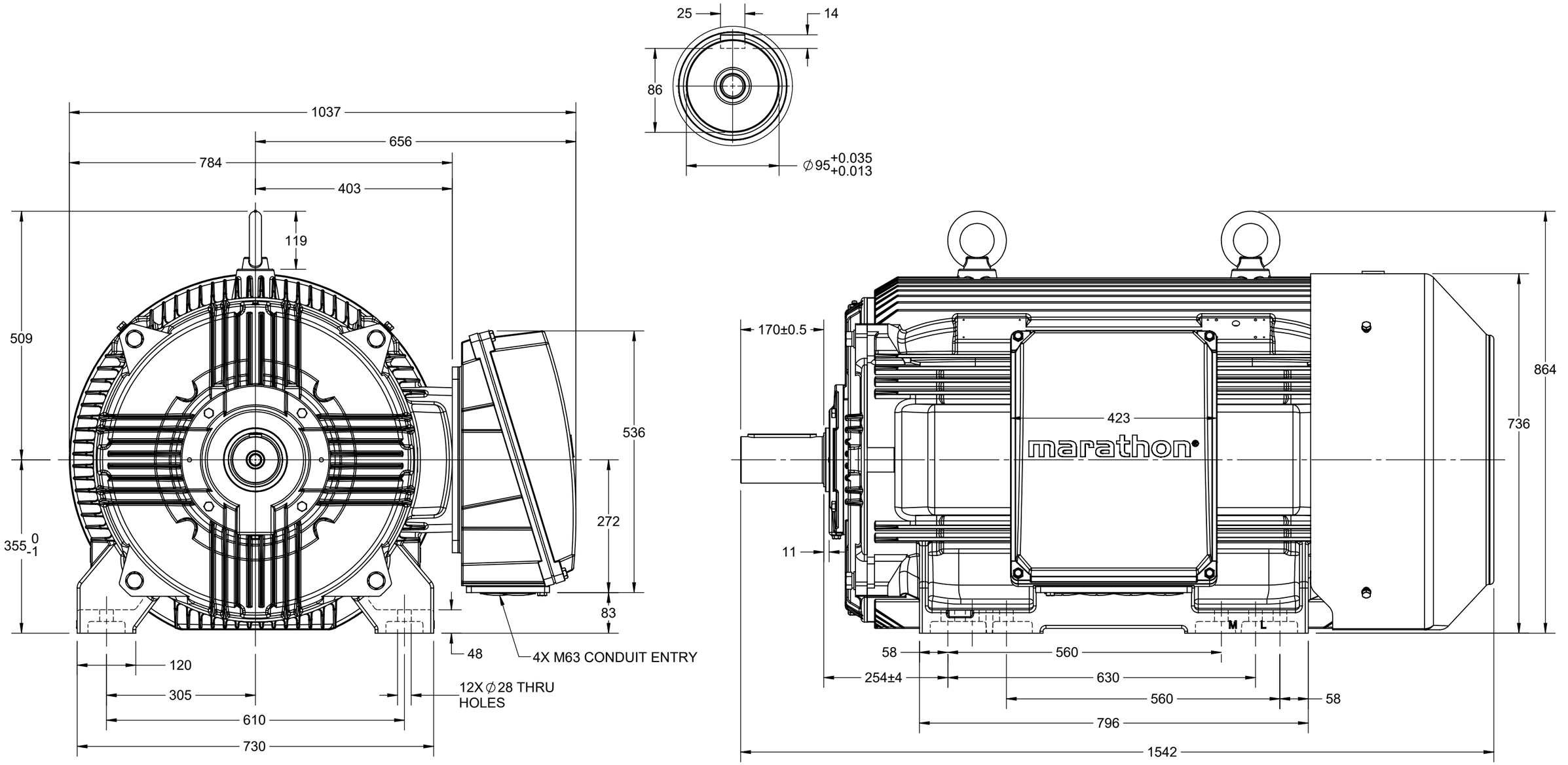
Model No: TCN2003A1113GAC010
Catalog No: TCN2003A1113GAC010
TerraMAX® Cast Iron Motor, 270 HP, 3 Ph, 50 Hz, 400 V, 1000 RPM, 355M Frame, TEFC

Nameplate Specifications

Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	400 V
Current	354.5 A	Speed	991 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6322	Opp Drive End Bearing Size	6322
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

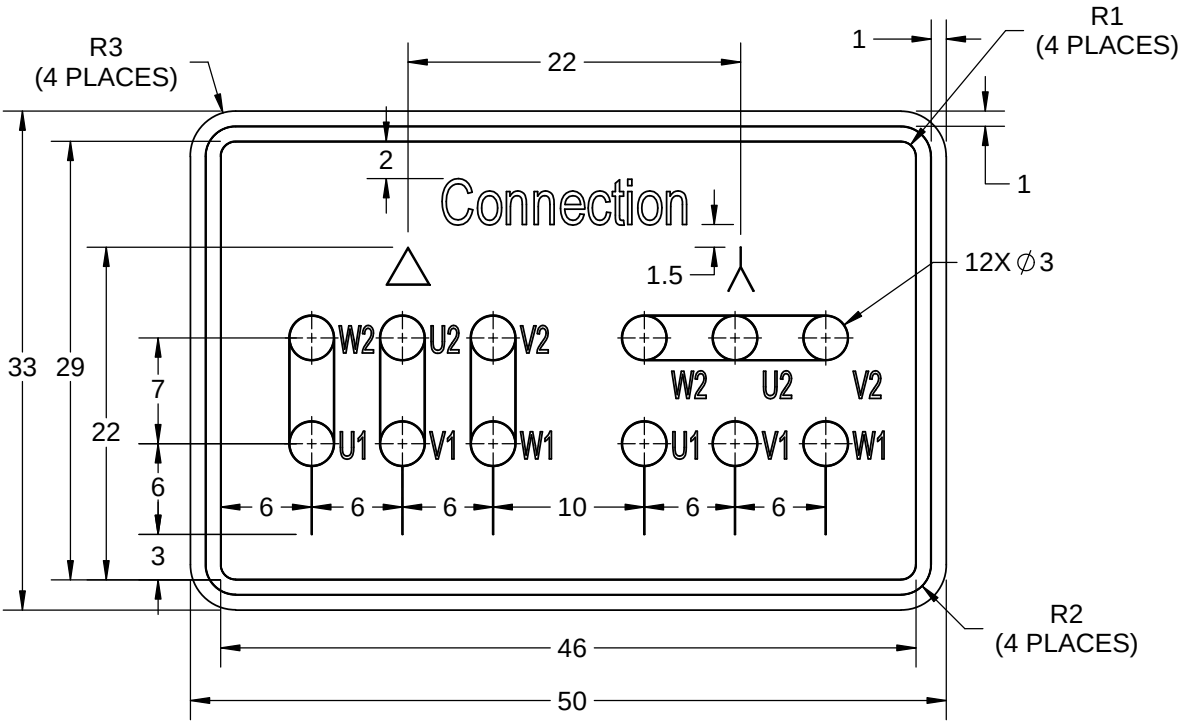
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1542 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	R Side		
Connection Drawing	8442000085	Outline Drawing	0235502296



DRAWING REVISION C	REVISION BY LK	DATE 07/09/2020	DRAWN BY SKM	marathon™ Motors
ECO CR-0000087	APPROVED BY JAY	DATE 07/09/2020	DATE 11/08/2017	
ECO DESCRIPTION MODEL UPDATED			APPROVED BY JAY	DESCRIPTION OUTLINE 355L-4~8P-B3
			DATE 11/08/2017	
			REFERENCE	MATERIAL / PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0235502296 / SHEET 1 OF 1

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC 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: SN	REGAL™ 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	SHEET: 1 OF 1

marathon® Motors

TerraMAX®

Model No. TCN2003A1113GAC010

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
400	Δ	50	200	270	354.5	991	1941.2	IE3	-	95.8	95.8	95.9	0.85	0.82	0.73	6	1.9	2.5

Motor type	TCN	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	355M	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +40	°C
Temperature rise (by resistance)	80 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	Ex nA	
Zone classification	Zone 2	
Gas group	IIC	
Temperature class	T3	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball	
DE / NDE bearing	6322 C3 / 6322 C3	
Lubrication method	Regreasable	
Type of grease	CHEVRON SRI-2 or Equivalent	

Degree of protection	IP 55	
Mounting type	IM B3	
Cooling method	IC 411	
Motor weight - approx.	1735	kg
Gross weight - approx.	1780	kg
Motor inertia	9.9148	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.8	mm/s
Noise level (1meter distance from motor)	70	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
LR withstand time (hot/cold)	15/30	s
Direction of rotation	Bi-directional	
Standard rotation	Clockwise form DE	
Paint shade	RAL 5014	
Accessories		
Accessory - 1	PTC 150°C	
Accessory - 2	-	
Accessory - 3	-	
Terminal box position	RHS	
Maximum cable size/conduit size	1R x 3C x 300mm²/4 x M63 x 1.5	
Auxiliary terminal box	NA	

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown 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

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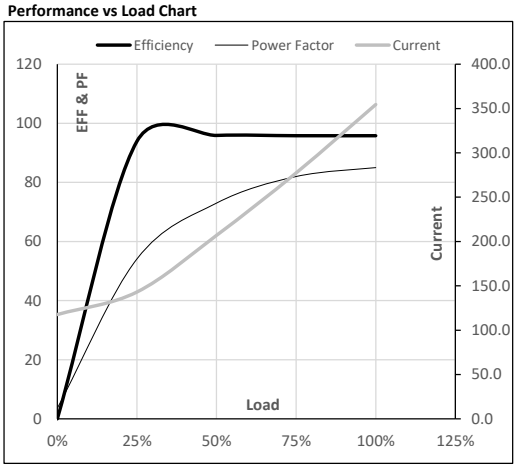
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	200	270	354.5	991	197.95	1941.20	IE3	40	S1	1000	9.9148	1735

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	117.6	143.0	206.9	277.4	354.5	
Torque	Nm	0.0	481.8	965.8	1452.1	1941.2	
Speed	r/min	1000	998	996	993	991	
Efficiency	%	0.0	93.9	95.9	95.8	95.8	
Power Factor	%	3.6	54.1	73.0	82.0	85.0	

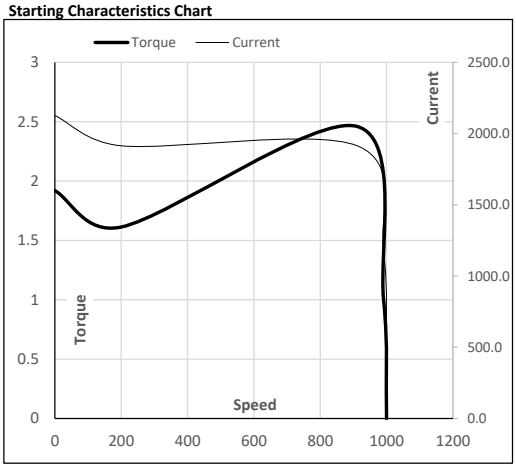
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	912	991	1000
Current	A	2127.0	1914.3	1170.7	354.5	117.6
Torque	pu	1.9	1.6	2.5	1	0

Starting Characteristics Chart



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

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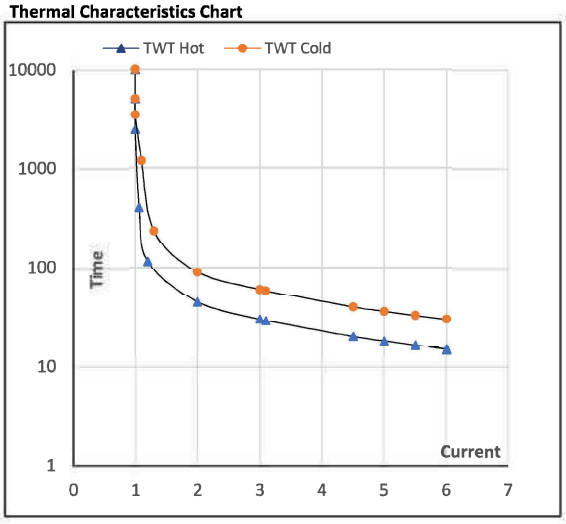
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	200	270.0	354.5	991	197.95	1941.20	IE3	40	S1	1000	9.9148	1735

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	45	30	25	18	16	15
TWT Cold	s	10000	90	60	45	36	33	30
Current	pu	1	2	3	4	5	5.5	6

Thermal Characteristics Chart



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