

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCN7P52A1181GAC010

Catalog No: TCN7P52A1181GAC010

TerraMAX® Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 132M Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	400 V
Current	14.4 A	Speed	1470 rpm
Service Factor	1	Phase	3
Efficiency	90.4 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	132M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
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	4	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	503 mm	Frame Length	240 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0213201188

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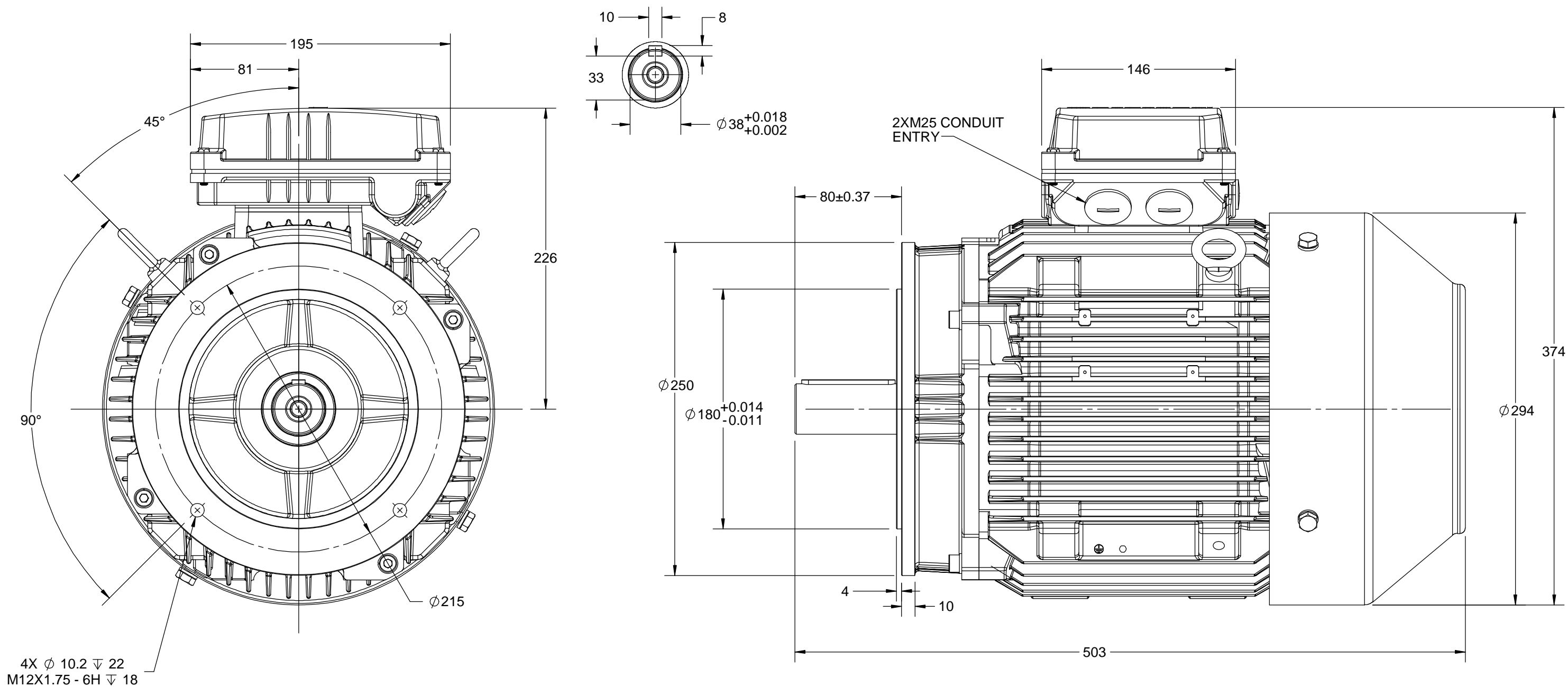
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DRAWING REVISION A	REVISION BY NIV	DATE 17/12/2018
ECO ECO-0158679	APPROVED BY SBD	DATE 17/12/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY NIV	marathon™ Motors		
DATE 17/12/2018			
APPROVED BY SBD	DESCRIPTION OUTLINE		
DATE 17/12/2018	132 FR- B14B MTG. MOTOR TYPE: TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0213201188	SHEET 1 OF 1

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

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 SN	 Regal Beloit America, Inc.		
	DESCRIPTION CONN DIAGRAM-NAMEPLATE		
	MATERIAL		PROCESS/FINISH
	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. TCN7P52A1181GAC010

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			
400	Δ	50	7.5	10	14.4	1470	48.47	IE3	-	90.4	90.4	90.4	0.83	0.77	0.65	7.5	2.8	3.0

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132M	Motor weight - approx.	94 kg
Duty	S1	Gross weight - approx.	97 kg
Voltage variation *	± 10%	Motor inertia	0.0550 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)	61 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)	10/20 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	6308-2Z / 6208-2Z	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

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

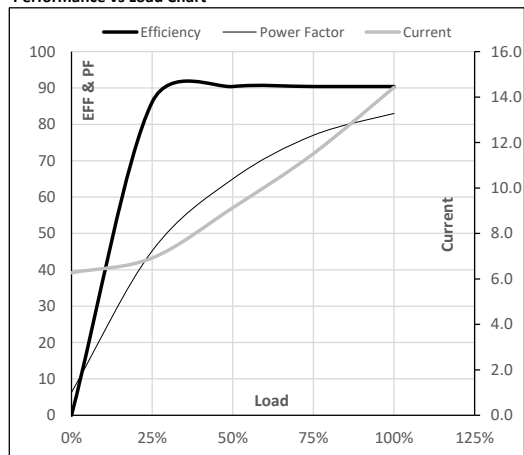
Model No. TCN7P52A1181GAC010

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	7.5	10	14.4	1470	4.94	48.47	IE3	40	S1	1000	0.055	94

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	6.3	6.9	9.1	11.5	14.4	
Torque	Nm	0.0	11.9	24.0	36.1	48.5	
Speed	r/min	1500	1493	1486	1478	1470	
Efficiency	%	0.0	86.1	90.4	90.4	90.4	
Power Factor	%	6.3	45.2	65.0	77.0	83.0	

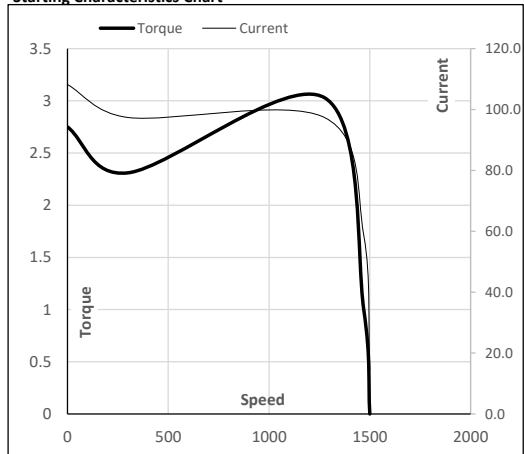
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1275	1470	1500
Current	A	108.2	97.4	58.7	14.4	6.3
Torque	pu	2.8	2.3	3.0	1	0

Starting Characteristics Chart



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

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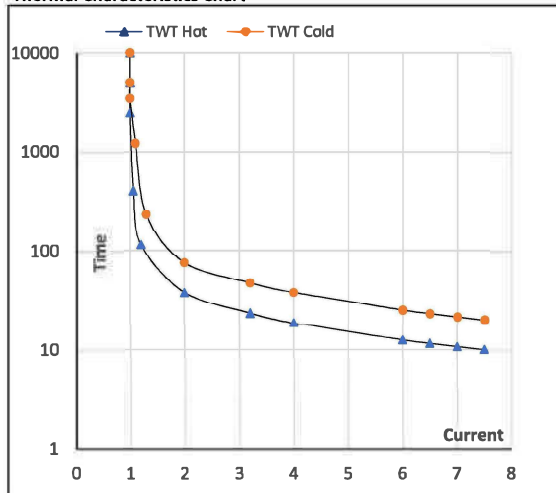
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	400	Δ	50	7.5	10.0	14.4	1470	4.94	48.47	IE3	40	S1	1000	0.055	93

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	38	26	19	16	13	10
TWT Cold	s 10000	75	50	38	35	24	20
Current	pu 1	2	3	4	5	5.5	7.5

Thermal Characteristics Chart



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

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