PRODUCT INFORMATION PACKET

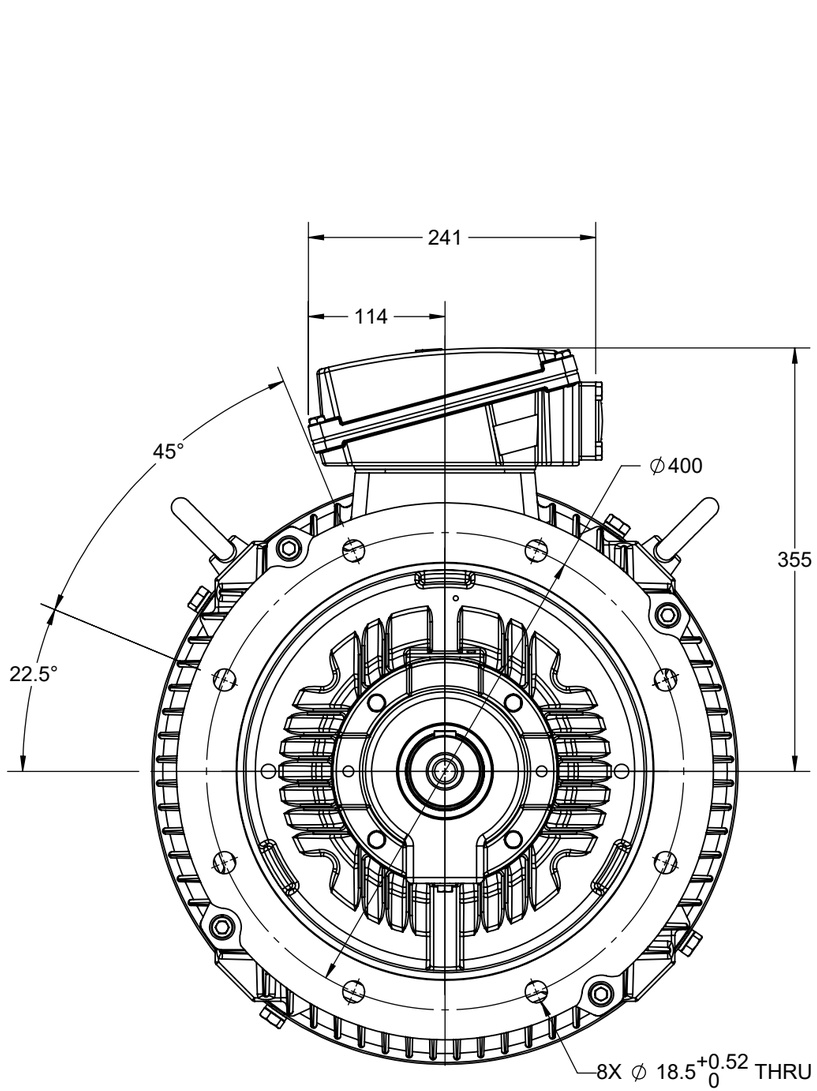
Model No: TCT18P4A1121GAA001
Catalog No: TCT18P4A1121GAA001
IE3, 18.5kW, DUST IGNITION PROOF MOTORS, 3 phase, 8 Pole, 400V, 738RPM, 50Hz, 90.1%, 225S Frame, TEFC

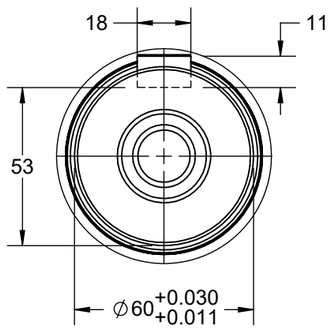
Nameplate Specifications

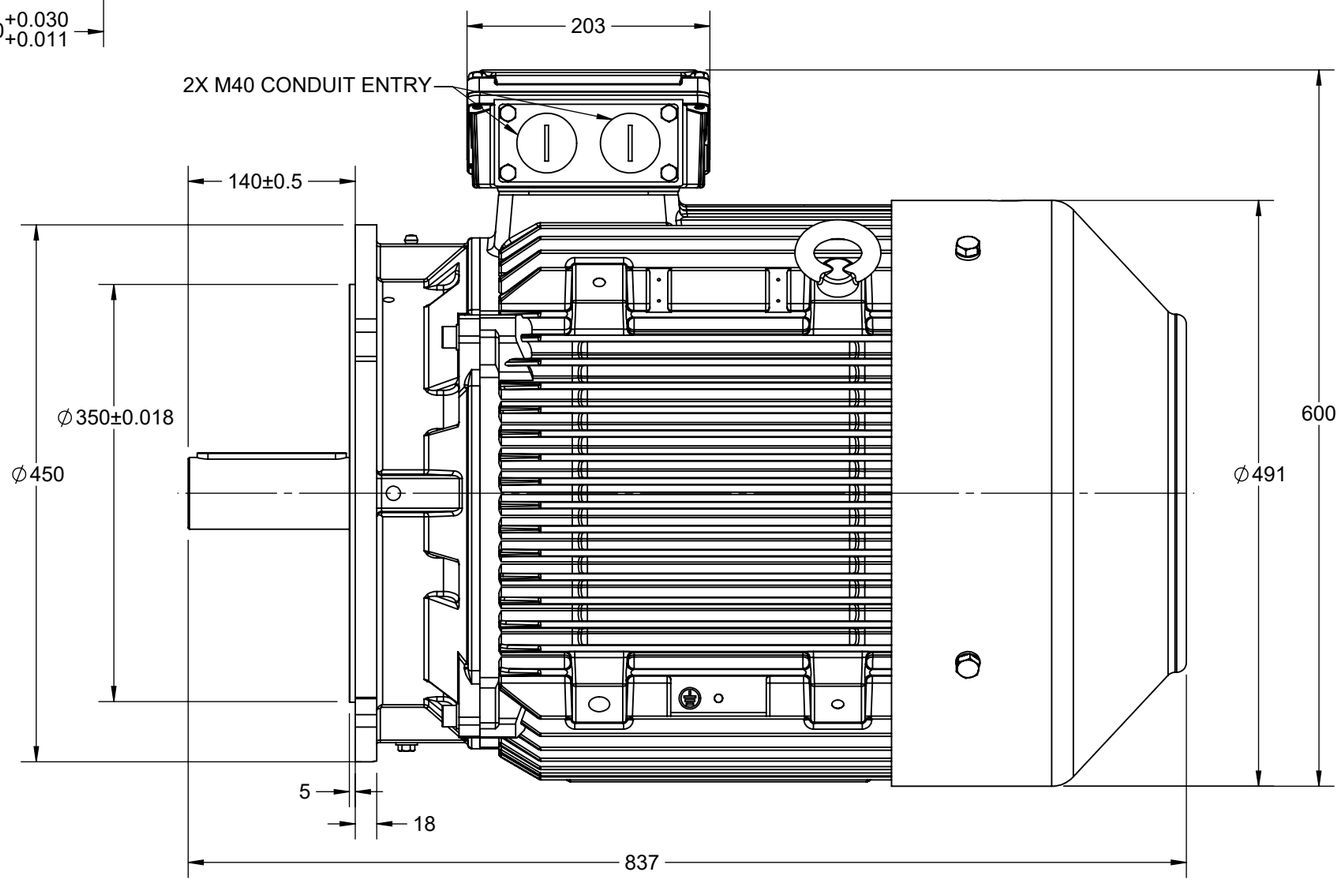
Output HP	**25 Hp**	Output KW	**18.5 kW**
Frequency	**50 Hz**	Voltage	**400 V**
Current	**38.5 A**	Speed	**738 rpm**
Service Factor	**1**	Phase	**3**
Efficiency	**90.1 %**	Power Factor	**0.77**
Duty	**S1**	Insulation Class	**F**
Frame	**225S**	Enclosure	**Totally Enclosed Fan Cooled**
Thermal Protection	**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	**66**
Number of Speeds	**1**	Efficiency Class	**IE3**

Technical Specifications

Electrical Type	**Squirrel Cage**	Starting Method	**Direct On Line**
Poles	**8**	Rotation	**Bi-Directional**
Mounting	**B5**	Motor Orientation	**Horizontal**
Drive End Bearing	**C3**	Opp Drive End Bearing	**C3**
Frame Material	**Cast Iron**	Shaft Type	**Keyed**
Overall Length	**837 mm**	Frame Length	**400 mm**
Shaft Diameter	**60 mm**	Shaft Extension	**140 mm**
Assembly/Box Mounting	**Top**		
Connection Drawing	**8442000085**	Outline Drawing	**0222500544**



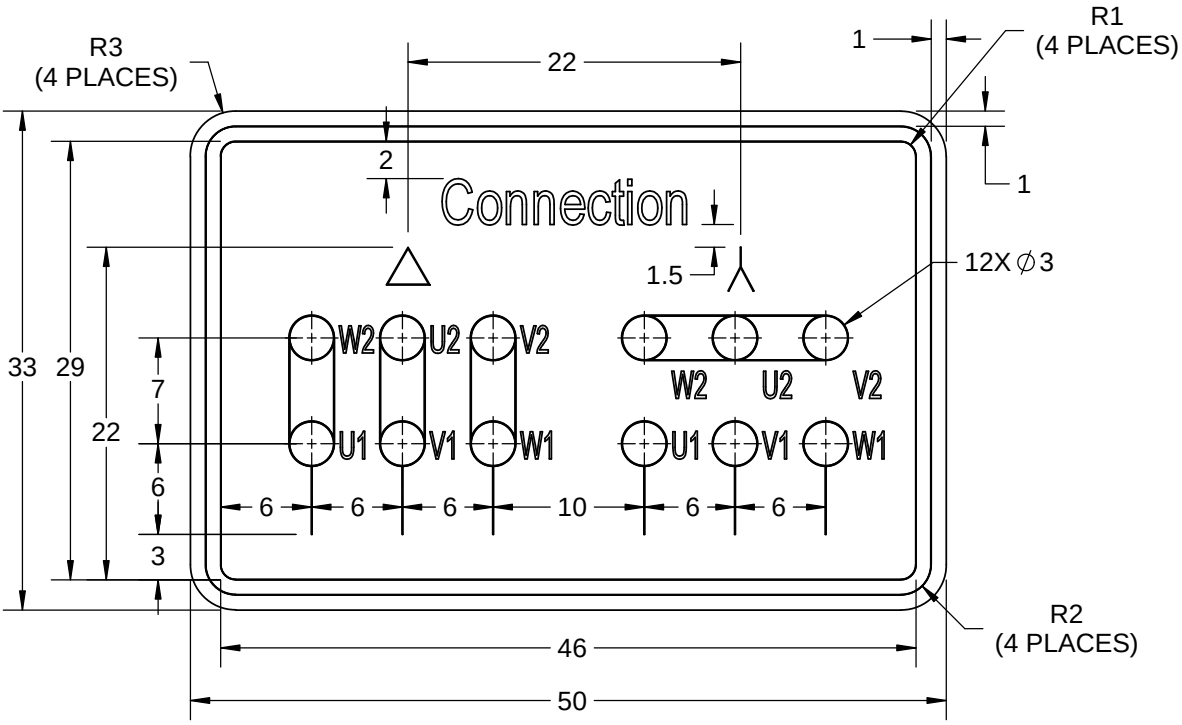




DRAWING REVISION C	REVISION BY LK	DATE 22/01/2021		DRAWN BY MR	marathon™ Motors
ECO ECO-0191566	APPROVED BY JAY	DATE 22/01/2021		DATE 17/04/2015	
ECO DESCRIPTION MODEL UPDATED				APPROVED BY SBD	DESCRIPTION OUTLINE TCA-225S-4~8P-B5
				DATE 17/04/2015	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0222500544 / 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. TCT18P4A1121GAA001

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	18.5	25	38.5	738	241.24	IE3	-	90.1	90.1	90.5	0.77	0.72	0.59	5.2	1.7	2.3

Motor type	TCT	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	225S	
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 tb	
Zone classification	Zone 21	
Gas group	Group III	
Temperature class	T135	
Rotor type	Aluminum die cast	
Bearing type	Anti-friction ball	
DE / NDE bearing	6313 C3 / 6213 C3	
Lubrication method	Regreasable	
Type of grease	CHEVRON SRI-2 or Equivalent	

Degree of protection	IP 66	
Mounting type	IM B5	
Cooling method	IC 411	
Motor weight - approx.	382	kg
Gross weight - approx.	412	kg
Motor inertia	0.8781	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.2	mm/s
Noise level (1meter distance from motor)	61	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	TOP	
Maximum cable size/conduit size	1R x 3C x 50mm²/2 x M40 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 60079-31

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

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marathon® Motors

TerraMAX®

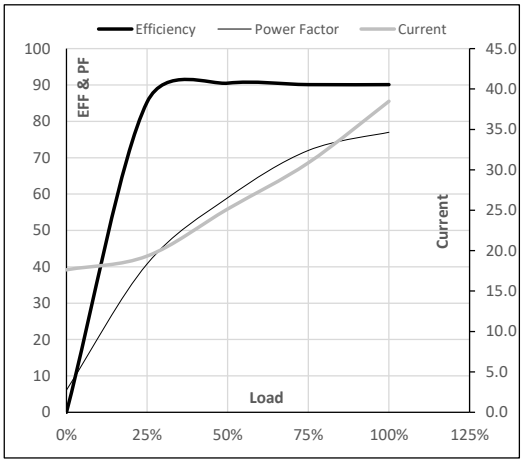
Model No. TCT18P4A1121GAA001

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	18.5	25.0	38.5	738	24.60	241.24	IE3	40	S1	1000	0.8781	382

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	17.6	19.3	25.2	30.9	38.5	
Torque	Nm	0.0	59.6	119.6	180.1	241.2	
Speed	r/min	750	747	744	742	738	
Efficiency	%	0.0	85.3	90.5	90.1	90.1	
Power Factor	%	6.1	40.8	59.0	72.0	77.0	

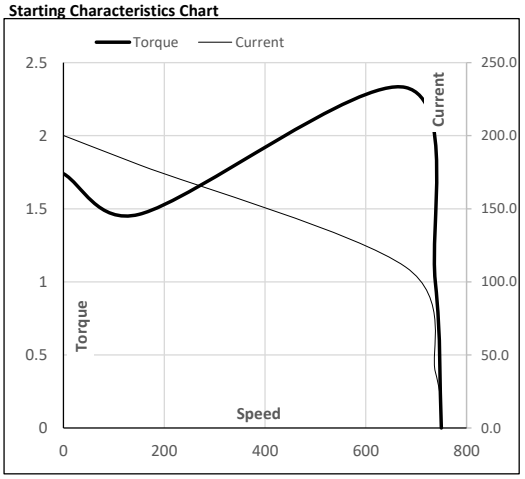
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	679	738	750
Current	A	200.1	180.1	110.2	38.5	17.6
Torque	pu	1.7	1.5	2.3	1	0

Starting Characteristics Chart



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

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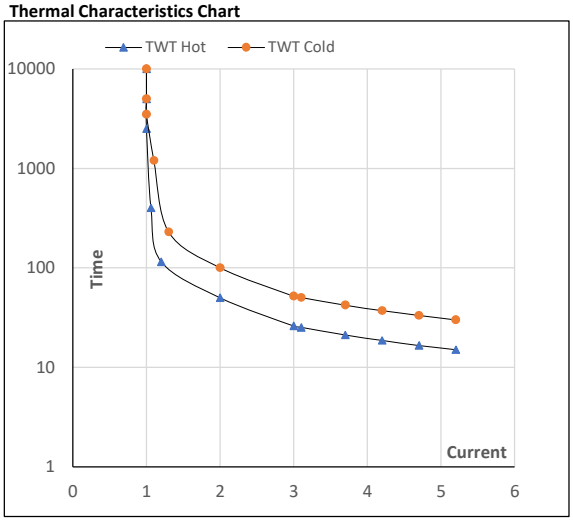
Model No. TCT18P4A1121GAA001

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	18.5	25	38.5	738	24.60	241.24	IE3	40	S1	1000	0.8781	382

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	26	20	18	16	15
TWT Cold	s	10000	100	52	40	35	32	30
Current	pu	1	2	3	4	4.5	5	5.2

Thermal Characteristics Chart



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