PRODUCT INFORMATION PACKET

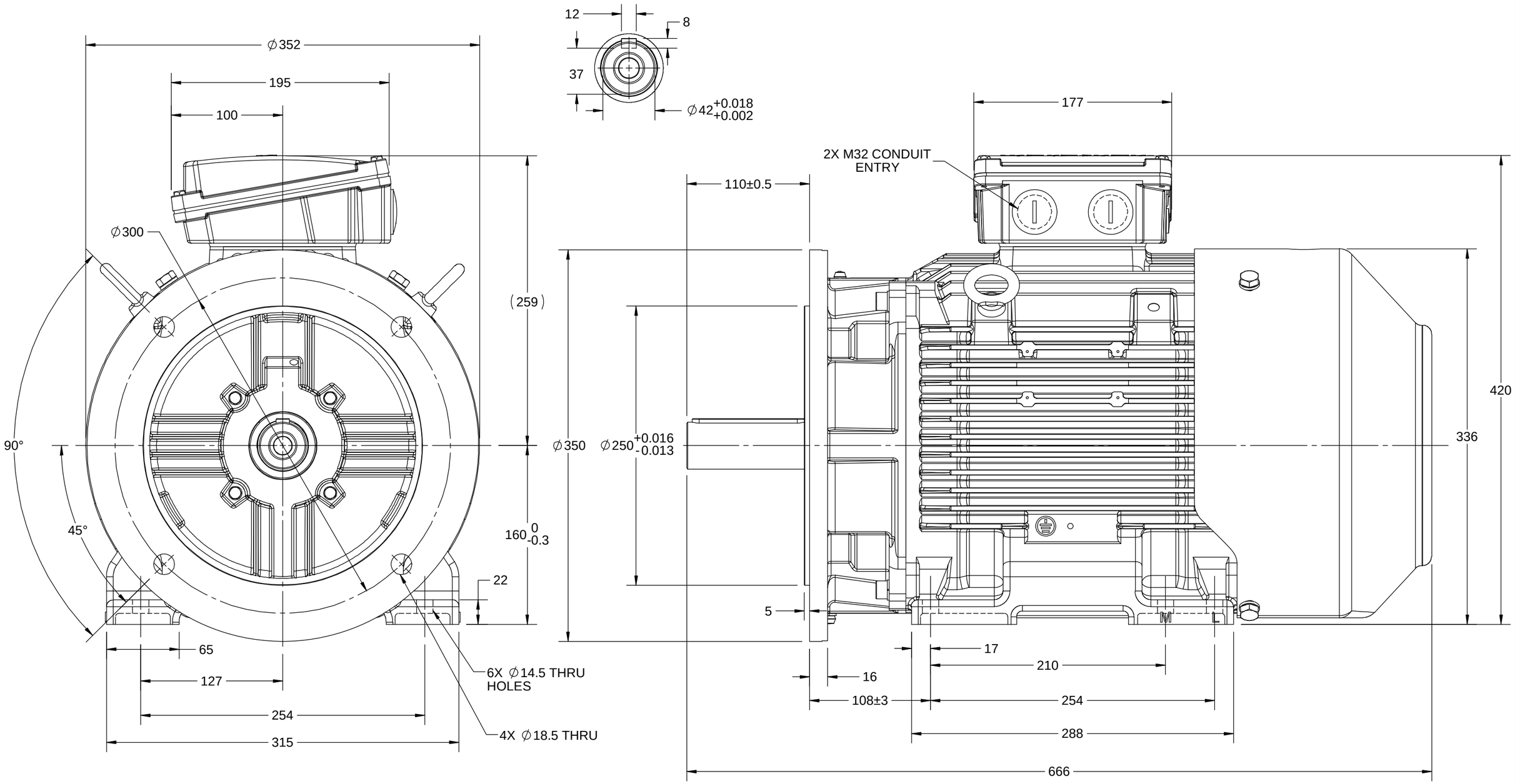
Model No: TCA7P54A3131GACD01
Catalog No: TCA7P54A3131GACD01
Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 160L Frame, TEFC

Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	415 V
Current	16.6 A	Speed	728 rpm
Service Factor	1	Phase	3
Efficiency	87.3 %	Power Factor	0.72
Duty	S1	Insulation Class	F
Frame	160L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

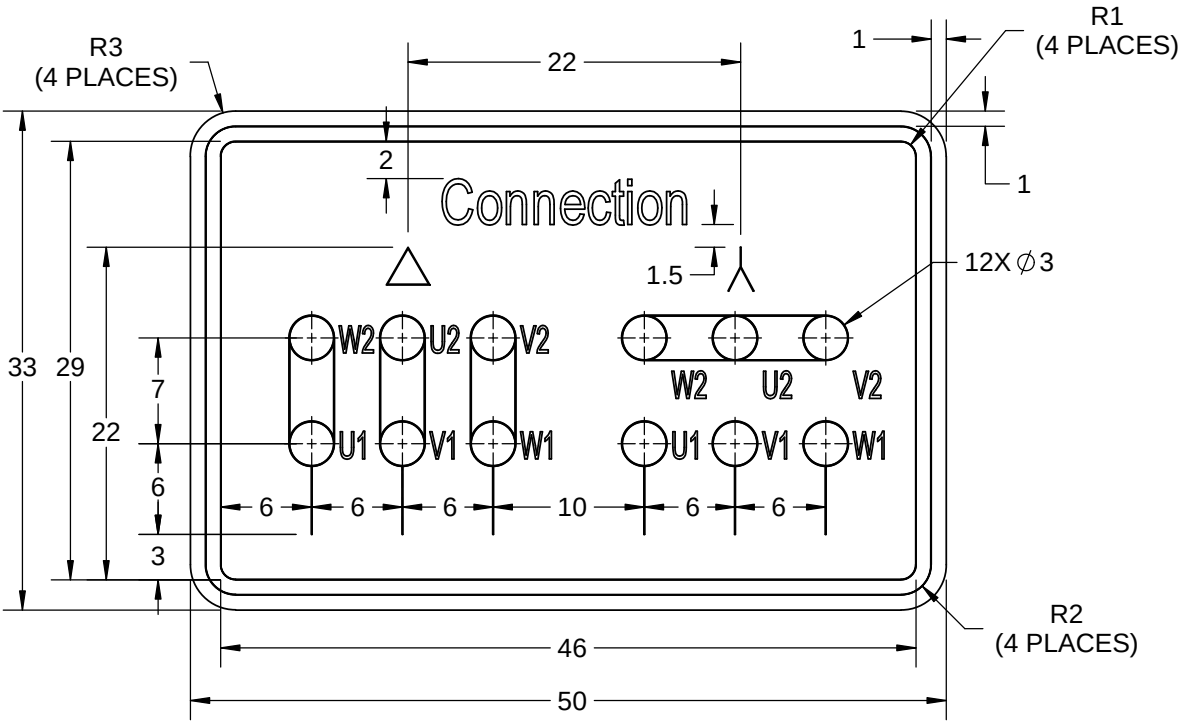
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	666 mm	Frame Length	298 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0216000442	Connection Drawing	8442000085



DRAWING REVISION B	REVISION BY A. KEETHA	DATE 02/07/2018	DRAWN BY JOY	Regal Beloit America, Inc.
ECO ECO-0147359	APPROVED BY JAY	DATE 02/07/2018	DATE 04/07/2014	
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING			APPROVED BY SBD	DESCRIPTION OUTLINE 160FR B35 MTG. MOTOR TYPE TCA
			DATE 04/07/2014	
			REFERENCE	MATERIAL / PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0216000442 / 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. TCA7P54A3131GACD01

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]
415	Δ	50	7.5	10	16.6	728	97.96	IE3	-	87.3	87.3	87.5	0.72	0.65	0.52	5.4	1.8	2.3

Motor type	TCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	160L	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +50	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	NA	
Zone classification	NA	
Gas group	NA	
Temperature class	NA	
Rotor type	Aluminum die cast	
Bearing type	Anti-friction ball bearing	
DE / NDE bearing	6309-2Z / 6209-2Z	
Lubrication method	Greased for life	
Type of grease	NA	

Degree of protection	IP 55
Mounting type	IM B35
Cooling method	IC 411
Motor weight - approx.	178 kg
Gross weight - approx.	198 kg
Motor inertia	0.2040 kgm^2
Load inertia	Customer to Provide
Vibration level	2.2 mm/s
Noise level (1meter distance from motor)	59 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	-
Accessory - 2	-
Accessory - 3	-
Terminal box position	TOP
Maximum cable size/conduit size	1R x 3C x 35mm²/2 X M32 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

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	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

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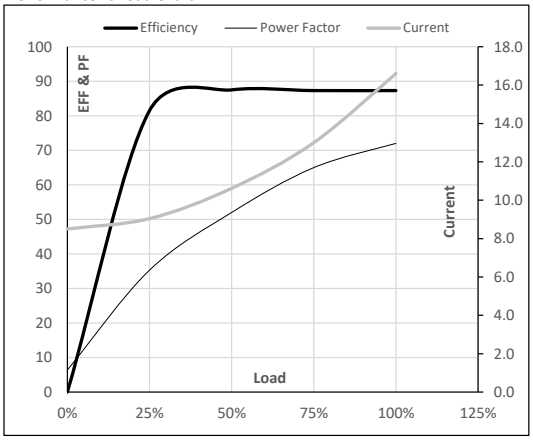
Model No. TCA7P54A3131GACD01

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	415	Δ	50	7.5	10.0	16.6	728	9.99	97.96	IE3	50	S1	1000	0.204	178

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	8.5	9.0	10.6	13.0	16.6	
Torque	Nm	0.0	24.0	48.2	72.8	98.0	
Speed	r/min	750	745	740	734	728	
Efficiency	%	0.0	81.5	87.5	87.3	87.3	
Power Factor	%	6.4	35.3	52.0	65.0	72.0	

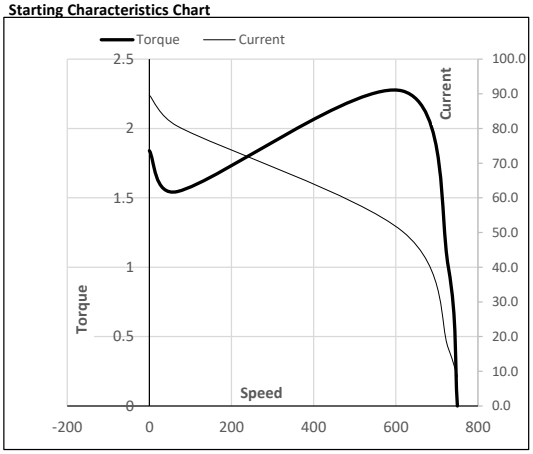
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	68	617	728	750
Current	A	89.6	80.7	50.3	16.6	8.5
Torque	pu	1.8	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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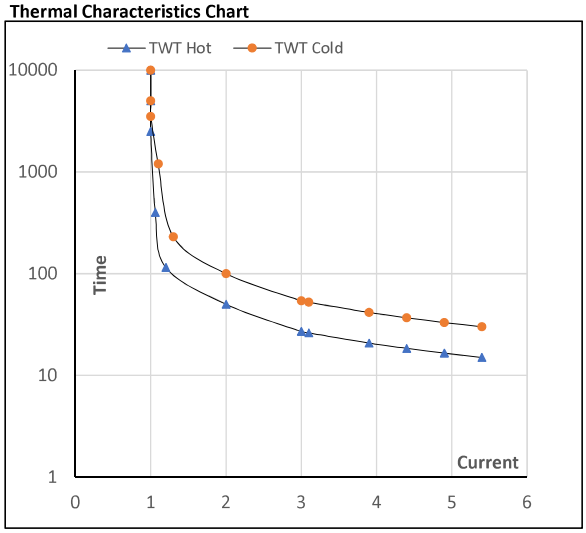
Model No. TCA7P54A3131GACD01

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	415	Δ	50	7.5	10	16.6	728	9.98	97.96	IE3	50	S1	1000	0.2040	178

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	27	20	18	16	15
TWT Cold	s	10000	100	54	40	36	31	30
Current	pu	1	2	3	4	4.5	5	5.4

Thermal Characteristics Chart



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