

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0114A3131GACD01

Catalog No: TCA0114A3131GACD01

11.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 750 RPM, 415 V, 180L Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

Nameplate Specifications

Output HP	15 Hp	Output KW	11.0 kW
Frequency	50 Hz	Voltage	415 V
Current	24.0 A	Speed	731 rpm
Service Factor	1	Phase	3
Efficiency	88.6 %	Power Factor	0.72
Duty	S1	Insulation Class	F
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6311
Opp Drive End Bearing Size	6211	UL	No
CSA	No	CE	Yes
IP Code	55		

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	750 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0218000503

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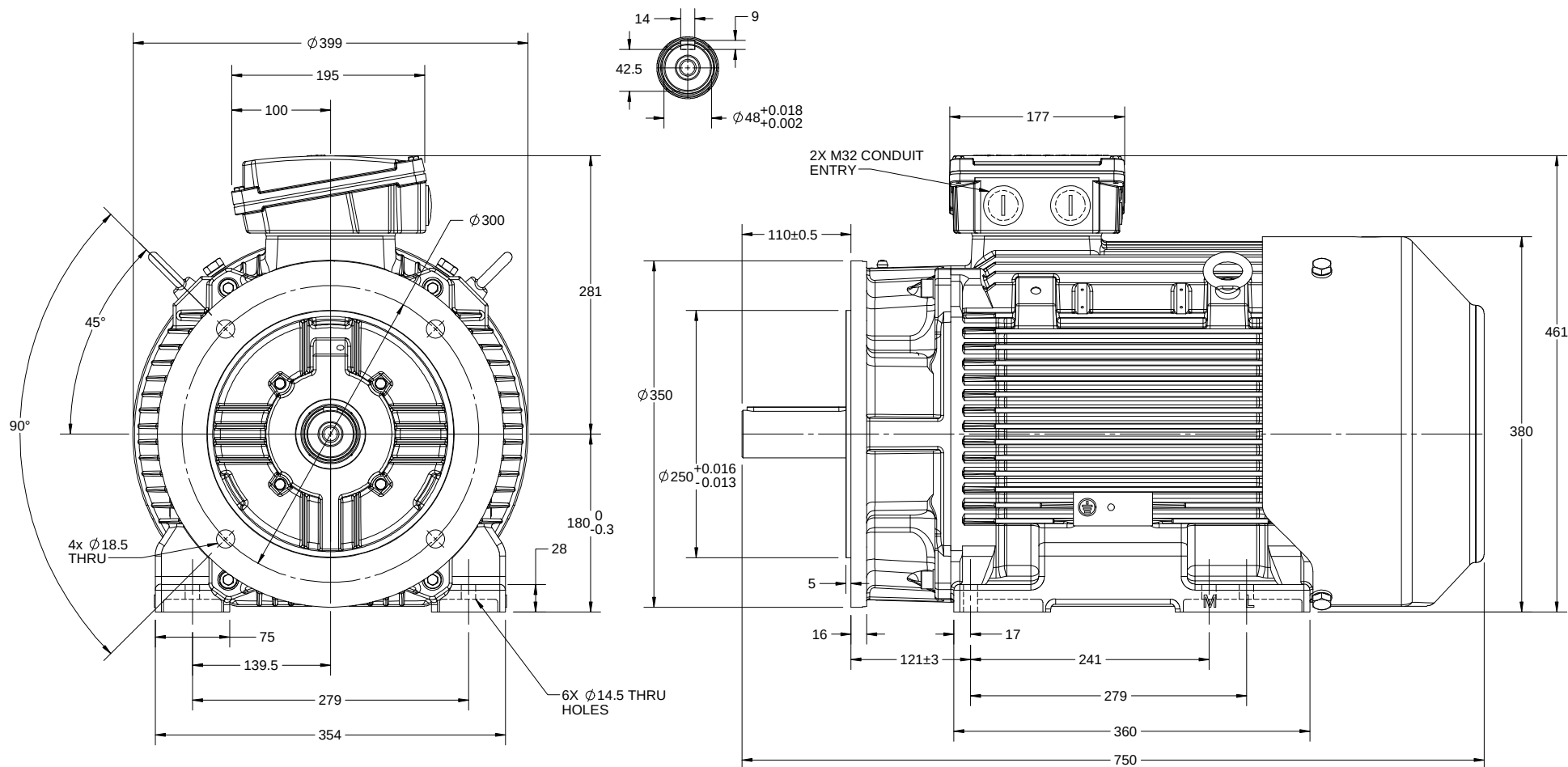
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B

B

A

A



DRAWING REVISION B	REVISION BY S.MUDDA	DATE 13/11/2018
ECO ECO-0156513	APPROVED BY JAY	DATE 13/11/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING		
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DRAWN BY JOY	marathon[™] Motors	
DATE 03/07/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 180FR-B35 MTG. MOTOR TYPE: TCA	
DATE 03/07/2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000503
		SHEET 1 OF 1

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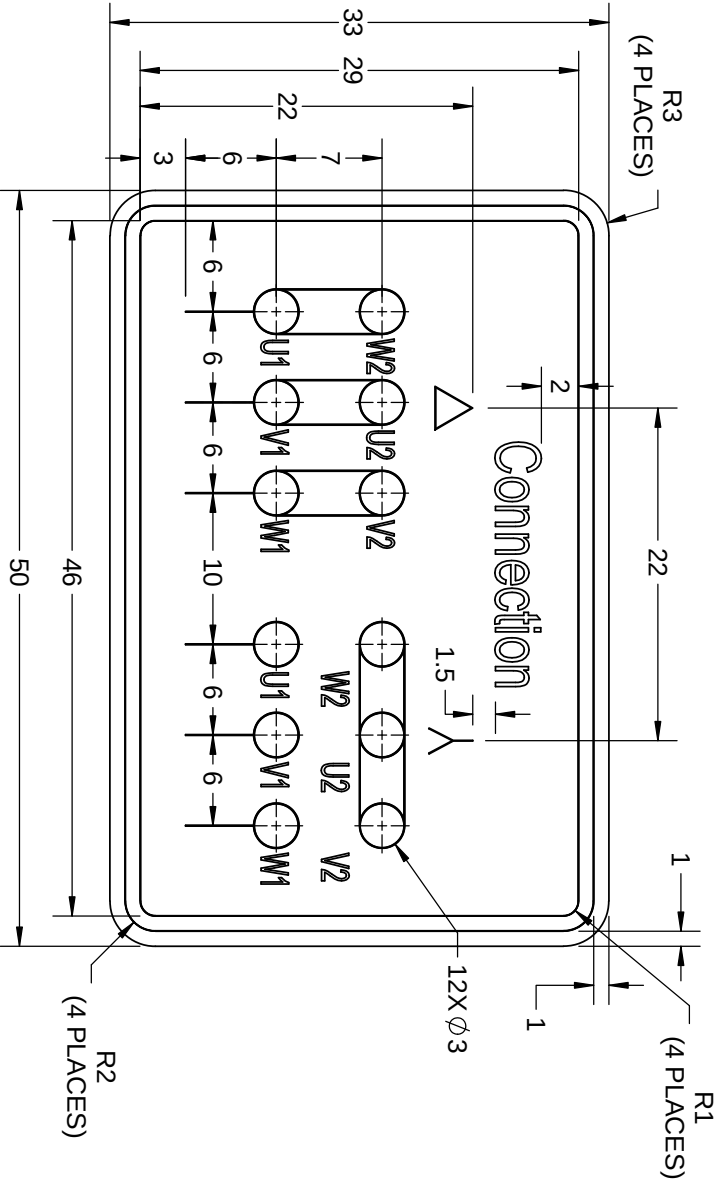
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DRAWING REVISION		REVISION BY	DATE
A		SN	13/01/2017
ECO	ECO-0116390	APPROVED BY	DATE
ECO DESCRIPTION		SBD	13/01/2017
NEW DRAWING RELEASE			

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.

				DRAWN BY		SN					
				DATE		16/12/2016					
				APPROVED BY		SBD					
				DATE		16/12/2016					
				REFERENCE							
				THIRD ANGLE PROJECTION		SIZE		DRAWING NUMBER		SHEET	
				A		8442000085		1 OF 1			
				MATERIAL		PROCESS/FINISH					
				DESCRIPTION							
				CONN DIAGRAM-NAMEPLATE							
				REGALTM Regal Beloit America, Inc.							

8WD.442.2017

Model No. TCA0114A3131GACD01

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 _b /T _N [pu]
415	Δ	50	11	15	24.0	731	146.37	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.7	1.9	3.1

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180L	Motor weight - approx.	238 kg
Duty	S1	Gross weight - approx.	258 kg
Voltage variation *	± 10%	Motor inertia	0.3337 kgm ²
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)	60 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 +50 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [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	NA	Standard rotation	Clockwise form DE
Zone classification	NA	Paint shade	RAL 5014
Gas group	NA	Accessories	
Temperature class	NA	Accessory - 1	-
Rotor type	Aluminum die cast	Accessory - 2	-
Bearing type	Anti-friction ball bearing	Accessory - 3	-
DE / NDE bearing	6311-22 / 6211-22	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I_a/I_N - Locked Rotor Current / Rated CurrentT_b/T_N - Breakdown Torque / Rated TorqueT_a/T_N - Locked Rotor 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 Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-



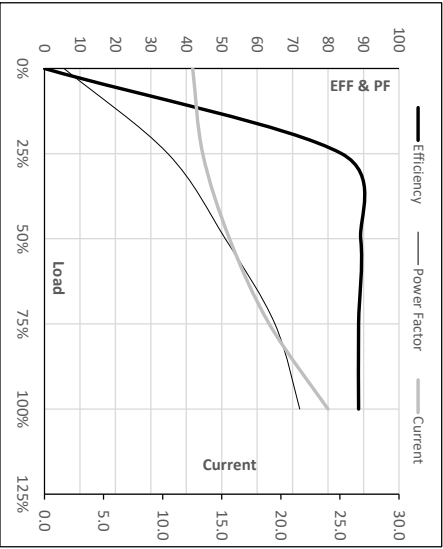
Model No. TCA0114A3131GACD01

Enclosure	U	Δ / Y	f	P	P	I	n	T	T	IE	Amb	Duty	Elevation	Inertia	Weight
(V)	Com	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]	S0	S1	1000	[kg·m ²]	[kg]
TFC	415	Δ	50	11	15	24.0	731	14.93	146.37	IE3	50	S1	1000	0.3337	238

Motor Load Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	12.5	13.4	15.7	19.0	24.0
Torque	Nm	0.0	35.9	72.2	109.0	146.4
Speed	r/min	750	745	741	736	731
Efficiency	%	0.0	83.8	89.2	88.6	88.6
Power Factor	%	5.5	34.8	51.0	65.0	72.0

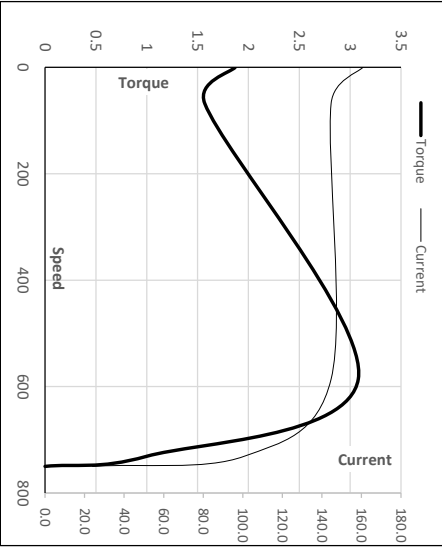
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	68	586	731	750
Current	A	160.7	144.7	100.7	24.0	12.5
Torque	pu	1.9	1.6	3.1	1	0

Starting Characteristics Chart



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

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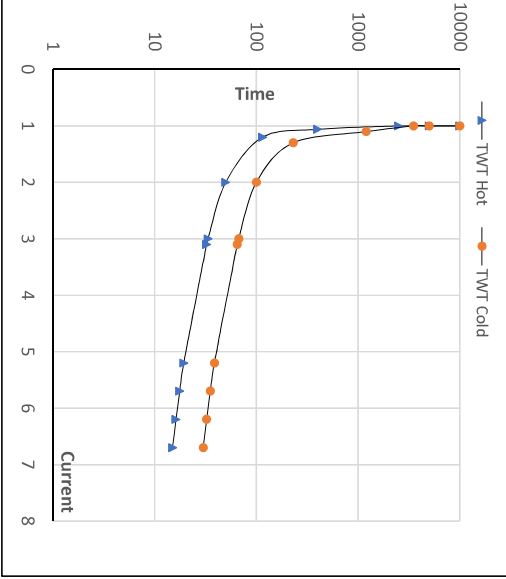
Model No. TCA0114A313IGACD01

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	11	15	24.0	731	14.92	146.37	IE3	50	S1	1000	0.3337	238

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s	10000	50	34	25	20	18	15
TWT Cold	s	10000	100	67	50	40	36	30
Current	pu	1	2	3	4	5	5.5	6.7

Thermal Characteristics Chart



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

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