

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCAP751A3131GACD01

Catalog No: TCAP751A3131GACD01

0.75 kW General Purpose Low Voltage IEC Motor, 3 phase, 3000 RPM, 415 V, 80M Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

Nameplate Specifications

Output HP	1 Hp	Output KW	0.75 kW
Frequency	50 Hz	Voltage	415 V
Current	1.6 A	Speed	2881 rpm
Service Factor	1	Phase	3
Efficiency	80.7 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	80M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6204
Opp Drive End Bearing Size	6204	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	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	281 mm	Frame Length	140 mm
Shaft Diameter	19 mm	Shaft Extension	40 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0208000180

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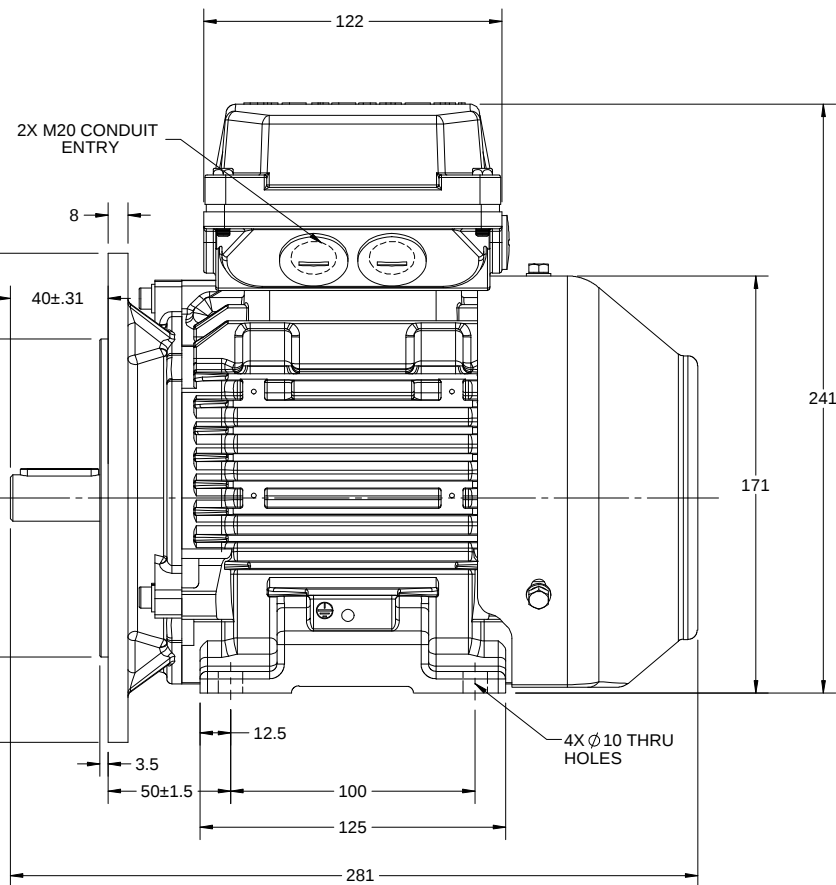
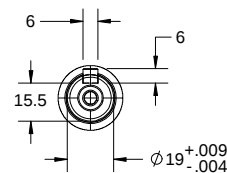
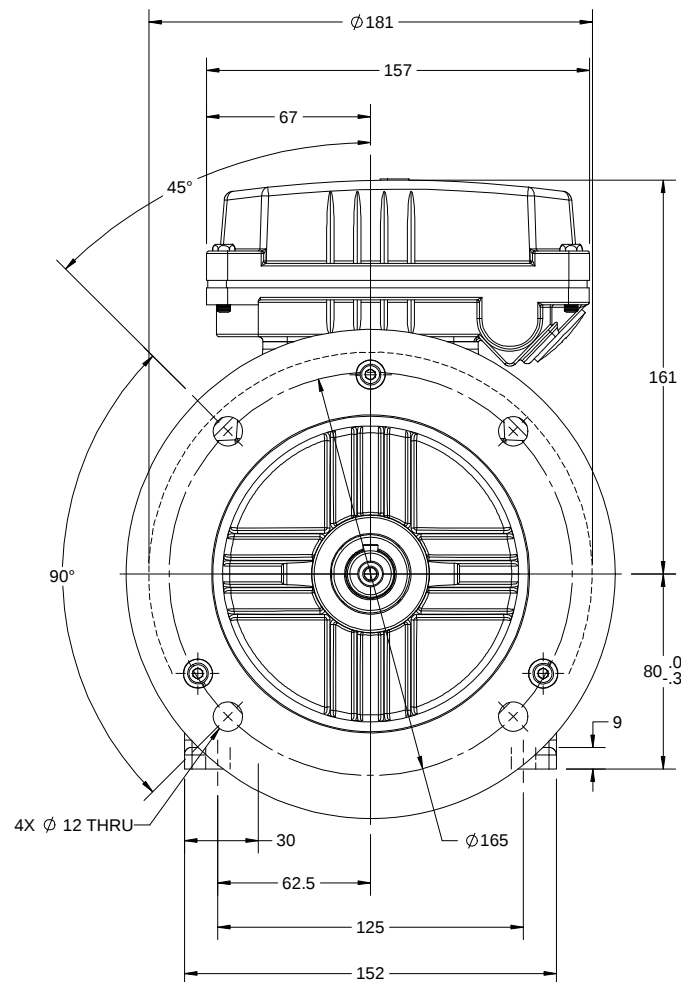
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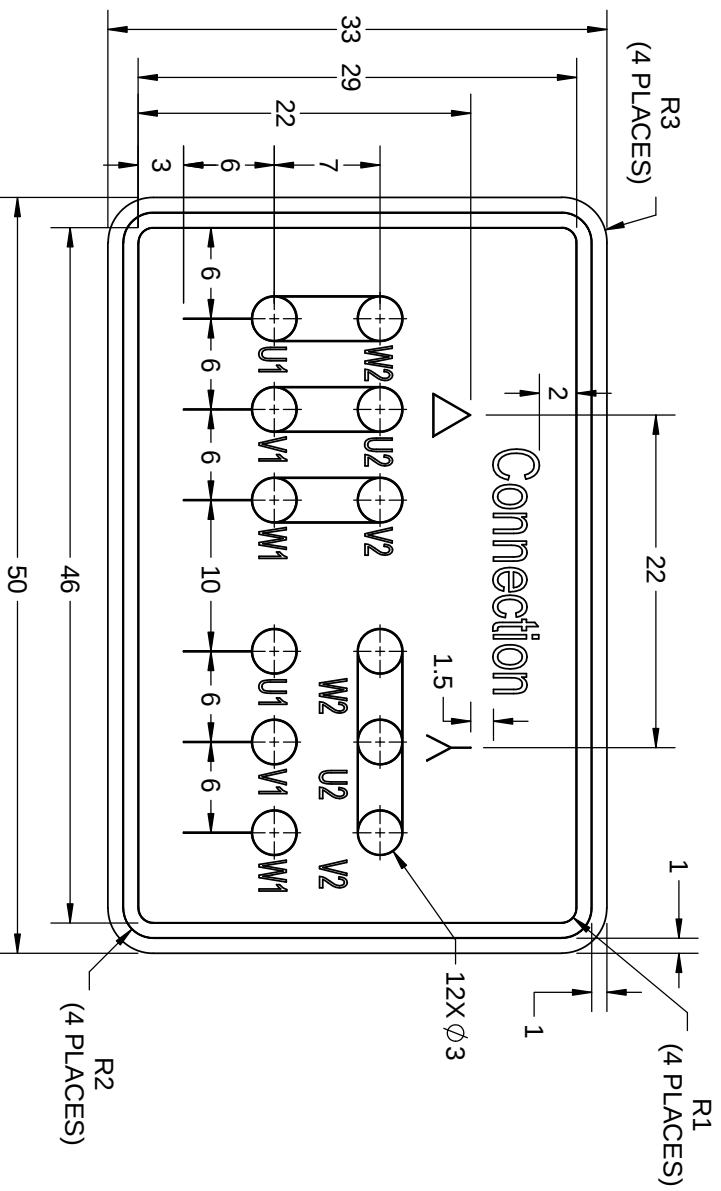
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DRAWING REVISION B	REVISION BY S.MUDDA	DATE 20/06/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 21/06/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER THE NEW 3D STRUCTURING		
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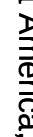
DRAWN BY SMAR		
DATE 21/04/2013		
APPROVED BY SBD	DESCRIPTION OUTLINE 80 FR- B35 MTG. MOTOR TYPE TCA	
DATE 02/06/14		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0208000180
		SHEET 1 OF 1

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. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
 2. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
 - 3.

Regal Beloit America, Inc.

				DRAWN BY		SN			
				DATE		16/12/2016			
				APPROVED BY		SBD			
				DATE		16/12/2016			
				REFERENCE					
THIRD ANGLE PROJECTION				SIZE		DRAWING NUMBER		SHEET	
A				84420000085		1 OF 1			
MATERIAL		PROCESS/FINISH		DESCRIPTION					
				CONN DIAGRAM-NAMEPLATE					
 Regal Beloit America, Inc.									

Model No. TCAP751A3131GACD01

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	Y	50	0.75	1.0	1.6	2881	2.47	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.5	3.1	3.4

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	80M	Motor weight - approx.	19.7 kg
Duty	S1	Gross weight - approx.	20.7 kg
Voltage variation *	± 10%	Motor inertia	0.0013 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)	56 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)	7/15 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	6204-2Z / 6204-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm ² /2 x M20 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	-	-	-

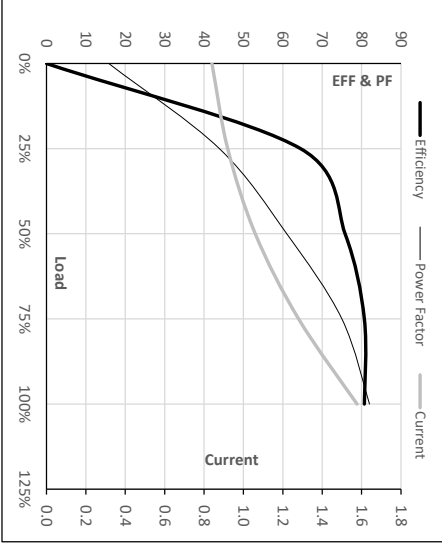
Model No. TCAP751A3131GACD01

Enclosure	U [V]	Δ / Y Com	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	Y	50	0.75	1.0	1.6	2881	0.25	2.47	IE3	50	S1	1000	0.0013	19.7

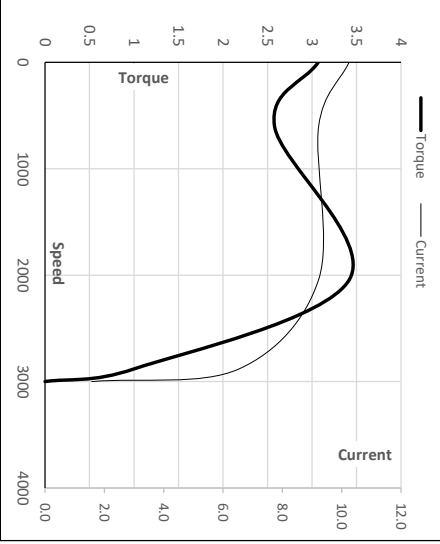
Motor Speed Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	0.8	0.9	1.1	1.3	1.6
Torque	Nm	0.0	0.8	1.6	2.5	2.5
Speed	r/min	3000	2969	2943	2914	2881
Efficiency	%	0.0	64.5	75.8	80.7	80.7
Power Factor	%	15.8	43.9	61.0	75.0	82.0

Performance vs Load Chart



Starting Characteristics Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	600	2041	2881	3000
Current	A	10.2	9.2	6.5	1.6	0.8
Torque	pu	3.1	2.6	3.4	1	0

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

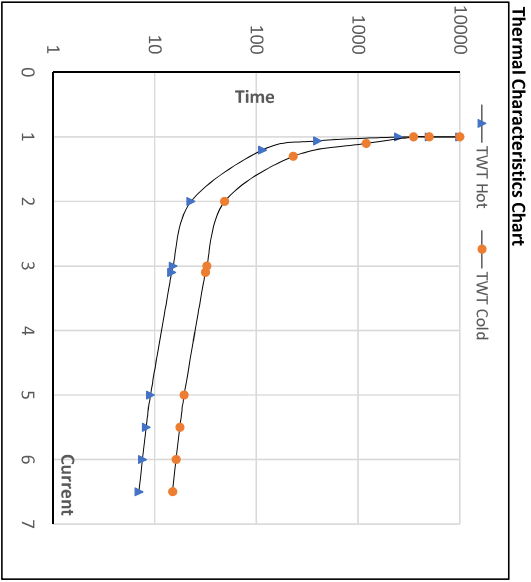
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Y	50	0.75	1.0	1.6	2881	0.25	2.47	IE3	50	S1	1000	0.0013	19.7

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s	10000	23	15	12	9	8	7
TWT Cold	s	10000	49	33	25	20	18	15
Current	pu	1	2	3	4	5	5.5	6.5



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

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