

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0112A3111GACD01

Catalog No: TCA0112A3111GACD01

11.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1500 RPM, 415 V, 160M 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	19.7 A	Speed	1474 rpm
Service Factor	1	Phase	3
Efficiency	91.4 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6309
Opp Drive End Bearing Size	6209	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	622 mm	Frame Length	254 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0216000479	Connection Drawing	8442000085

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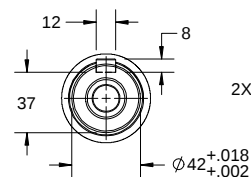
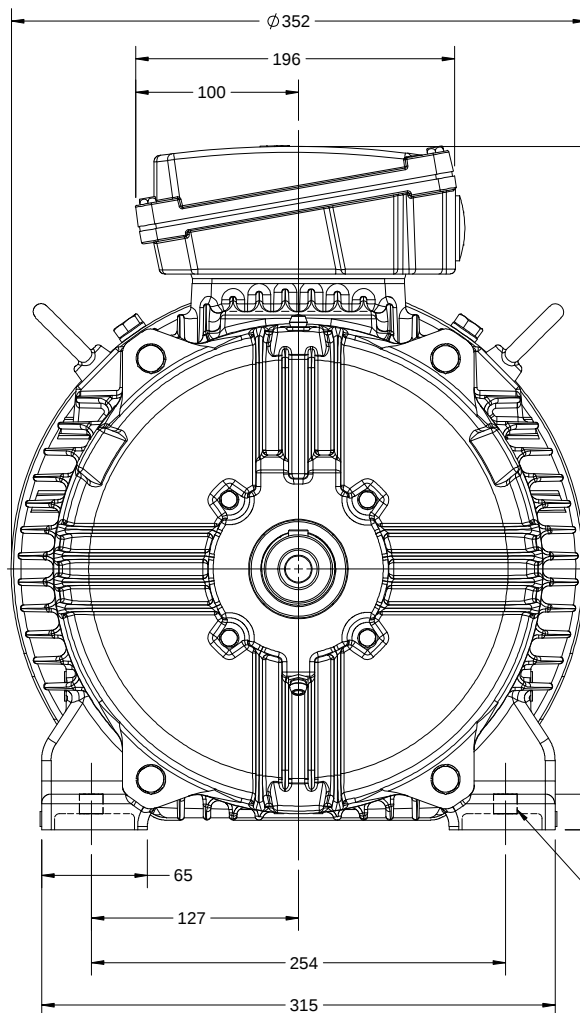
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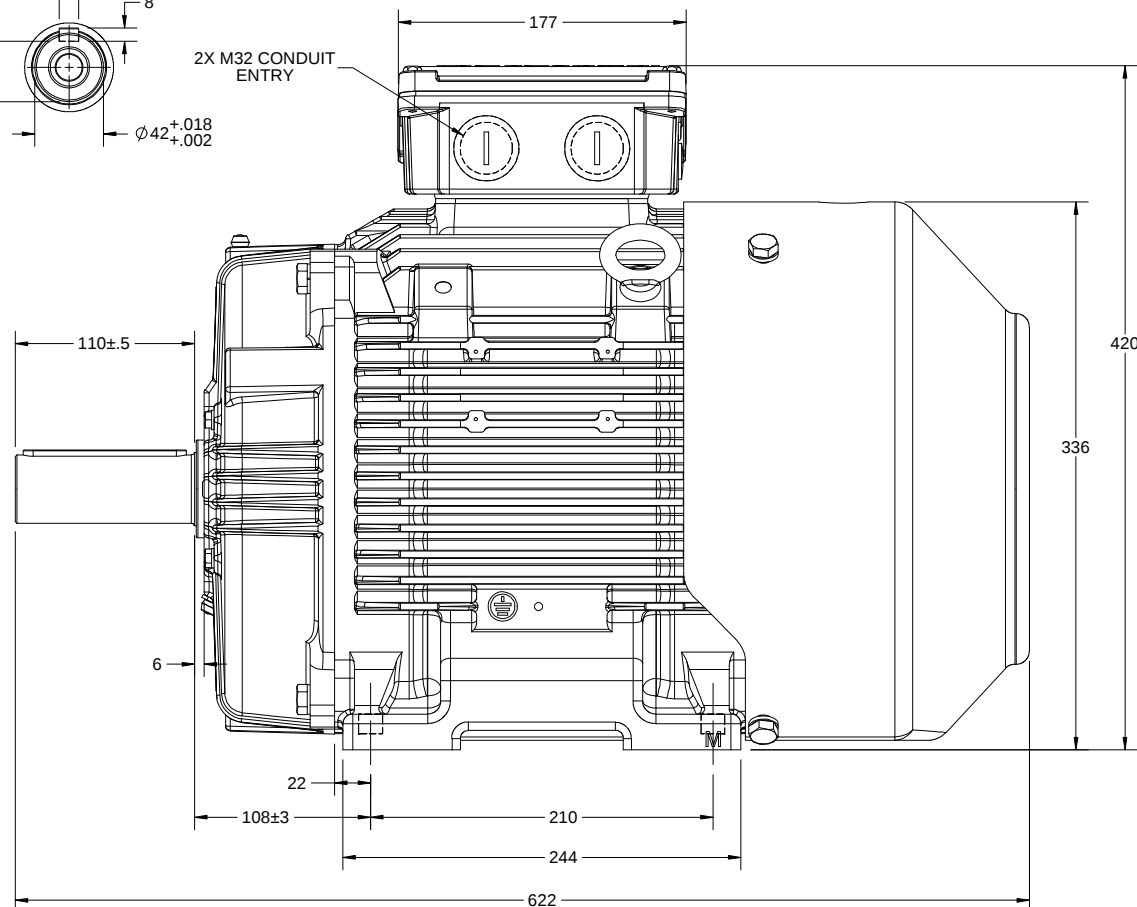
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2X M32 CONDUIT ENTRY



DRAWING REVISION C	REVISION BY I. RAMDAS	DATE 05/07/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 05/07/2018
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DRAWN BY KCS		
DATE 07/11/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 160M FR B3-MTG MOTOR TYPE TCAIQCA	
DATE 07/11/2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0216000479
		SHEET 1 OF 1

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Model No. TCA0112A3111GACD01

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	19.7	1474	72.48	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.9	2.4	3.1

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160M	Motor weight - approx.	147 kg
Duty	S1	Gross weight - approx.	167 kg
Voltage variation *	± 10%	Motor inertia	0.1200 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)	64 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)	12/25 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	6309-2Z / 6209-2Z	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	-	-	-

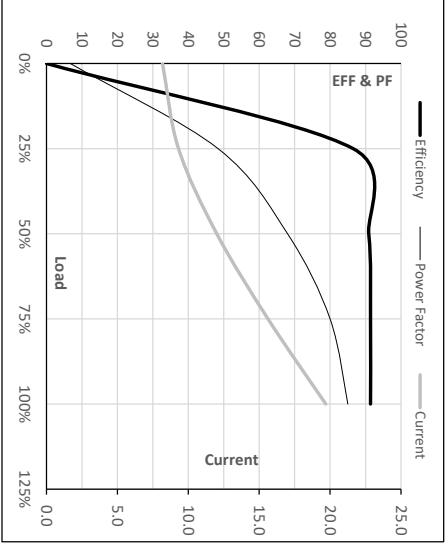
Model No. TCA012A3111GACD01

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	[m]	[kg·m ²]	[kg]
TEFC	415	Δ	50	11	15	19.7	1474	7.39	72.48	IE3	50	S1	1000	0.12	147

Motor Load Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	8.2	9.3	12.0	15.6	19.7
Torque	Nm	0.0	17.9	35.9	54.1	72.5
Speed	r/min	1500	1494	1487	1481	1474
Efficiency	%	0.0	86.5	90.9	91.4	91.4
Power Factor	%	6.7	48.4	68.0	80.0	85.0

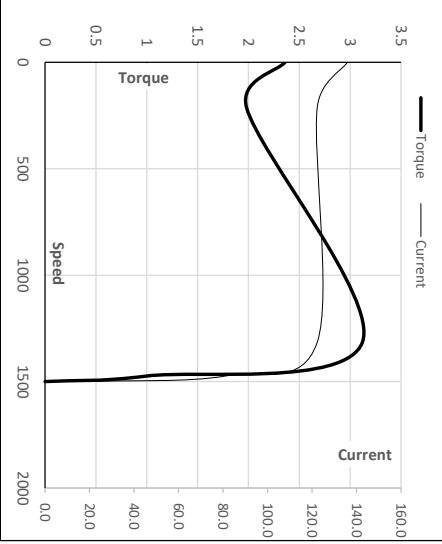
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	214	1316	1474	1500
Current	A	135.9	122.3	81.0	19.7	8.2
Torque	pu	2.4	2.0	3.1	1	0

Starting Characteristics Chart



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

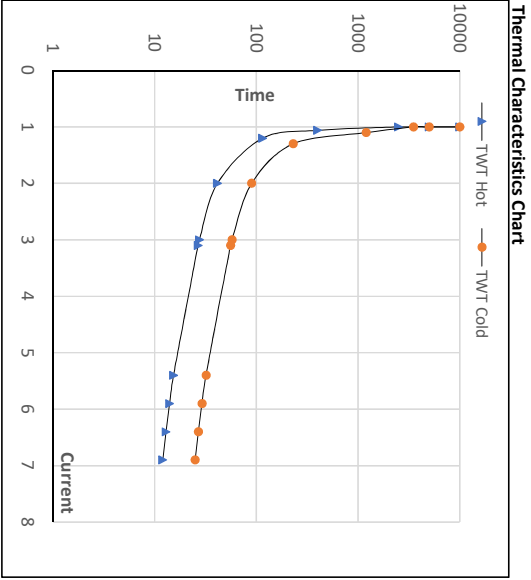
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Enclosure	U [V]	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	11	15	19.7	1474	7.39	72.48	IE3	50	S1	1000	0.1200	147

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s 10000	41	28	25	16	15	12
TWT Cold	s 10000	90	58	50	33	31	25
Current	pu 1	2	3	4	5	5.5	6.9



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

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