PRODUCT INFORMATION PACKET

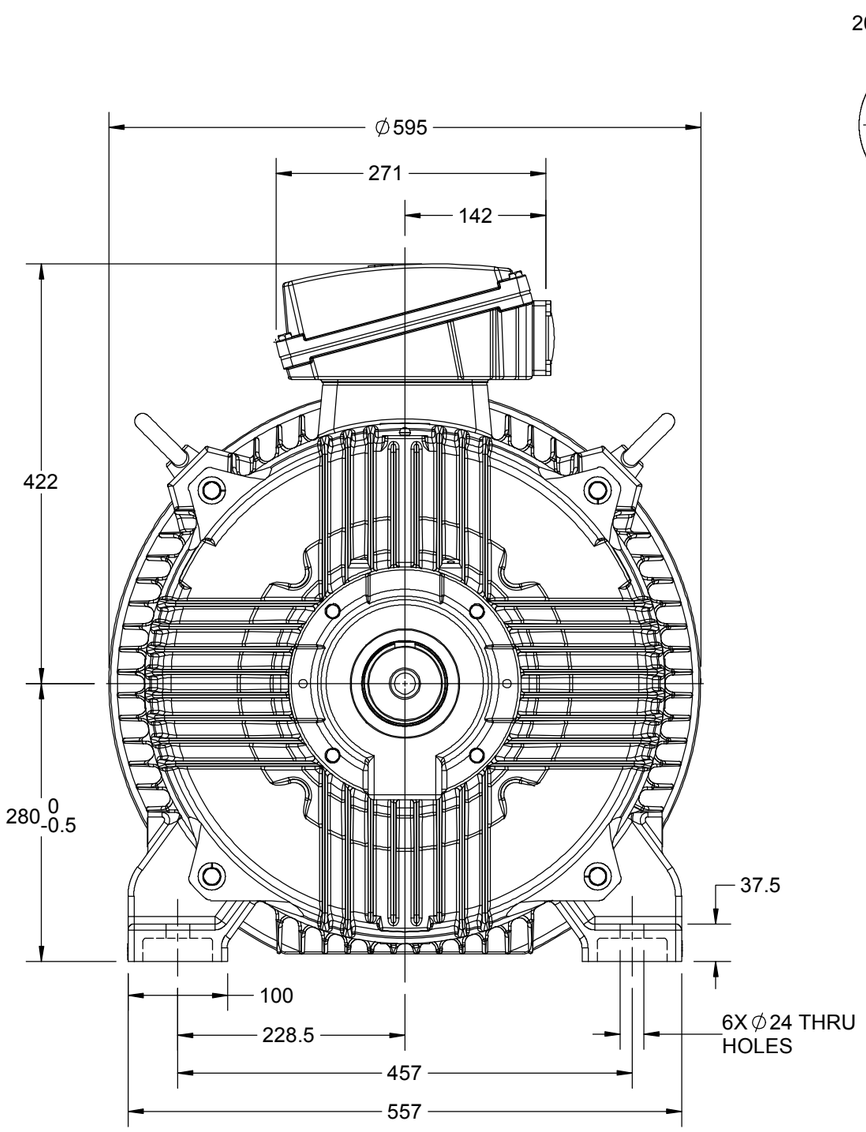
Model No: QCA0454A1111GAA001
Catalog No: QCA0454A1111GAA001
TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 400 V, 750 RPM, 280M Frame, TEFC

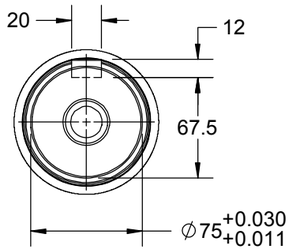
Nameplate Specifications

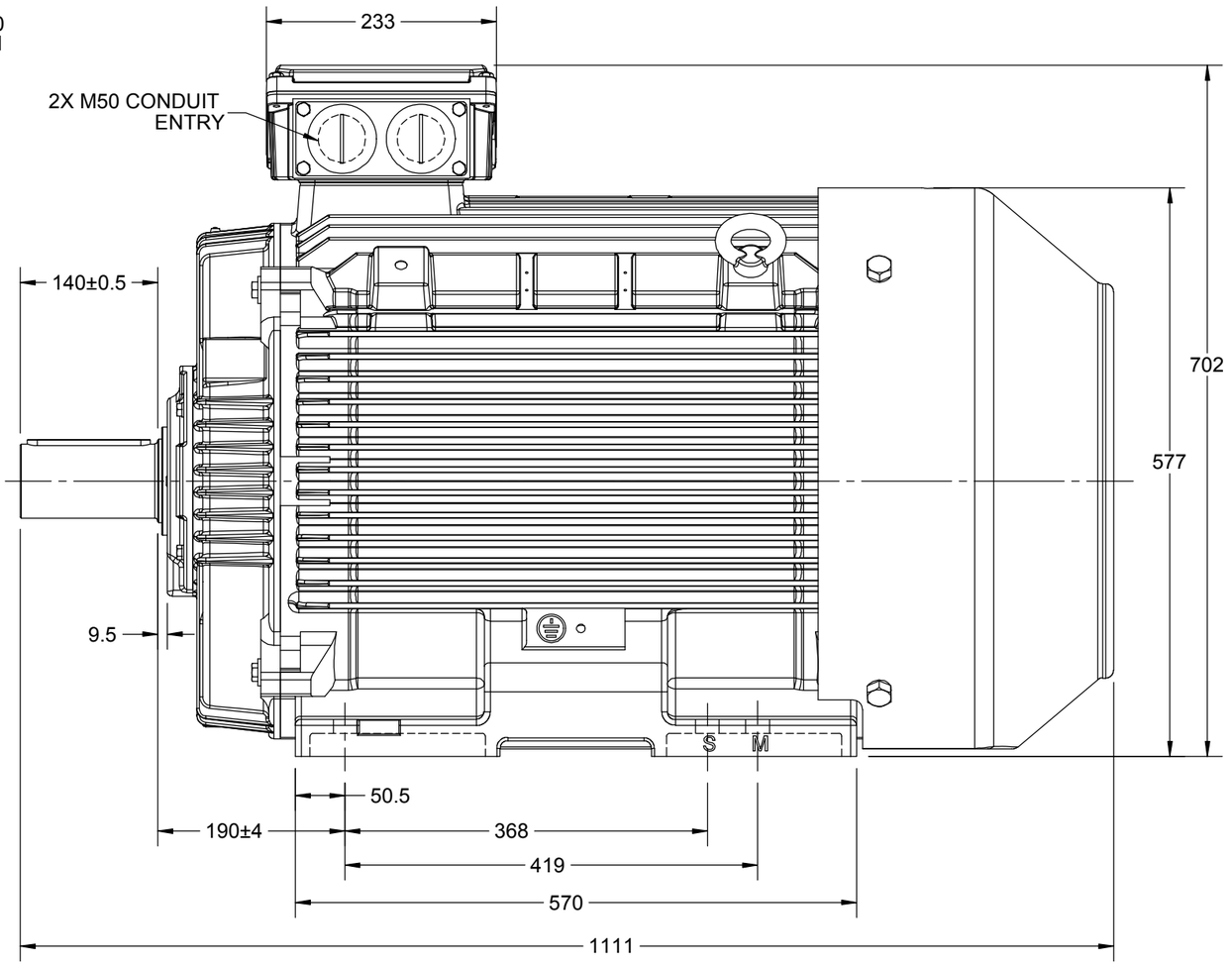
Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	400 V
Current	91.6 A	Speed	741 rpm
Service Factor	1	Phase	3
Efficiency	93.4 %	Power Factor	0.76
Duty	S1	Insulation Class	F
Frame	280M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE4

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1111 mm	Frame Length	600 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Outline Drawing	0228000589	Connection Drawing	8442000085



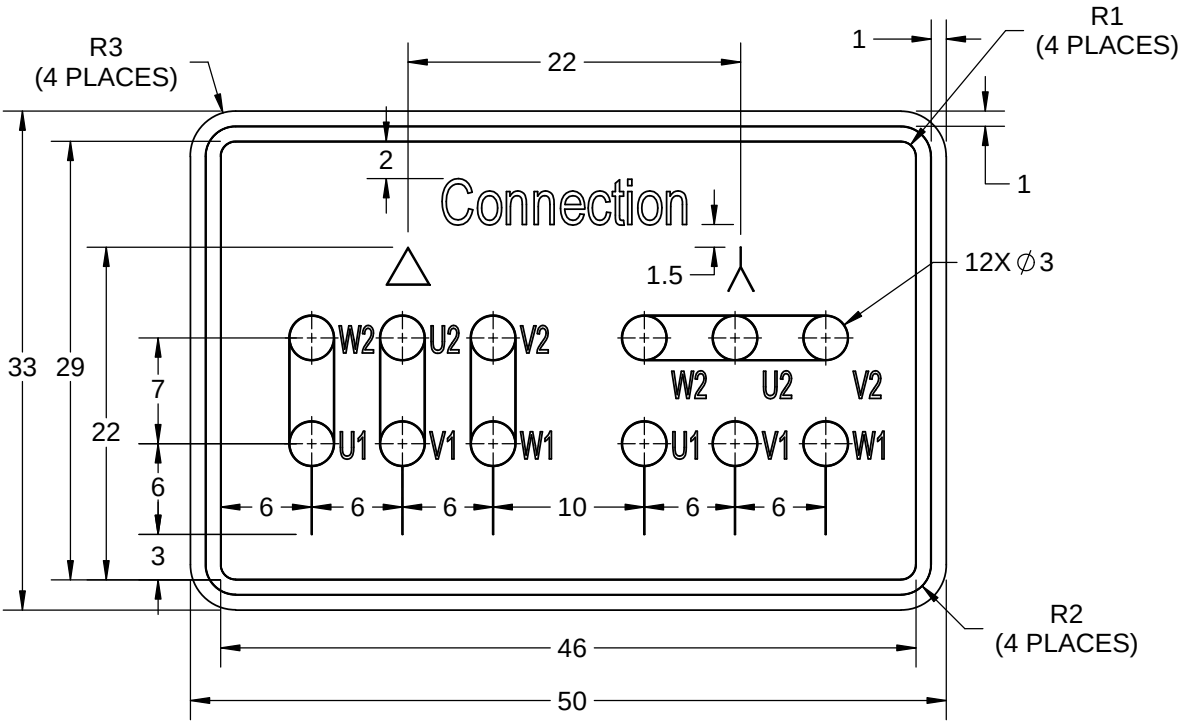




DRAWING REVISION E	REVISION BY LK	DATE 17/04/2019		DRAWN BY JOY	marathon™ Motors
ECO ECO-0165600	APPROVED BY SR	DATE 17/04/2019		DATE 18/07/2014	
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE				APPROVED BY SBD	DESCRIPTION OUTLINE 280M-4P-B3 MTG. MOTOR TYPE: TCA/QCA
				DATE 18/07/2014	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0228000589 / 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. QCA0454A1111GAA001

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I_A/I_N	T_A/T_N	T_K/T_N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
400	Δ	50	45	60	91.5	741	576.89	IE4	-	93.4	93.4	92.2	0.76	0.71	0.59	5.4	1.9	2.2

Motor type	QCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM B3	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	280M		Motor weight - approx.	718	kg
Duty	S1		Gross weight - approx.	753	kg
Voltage variation *	± 10%		Motor inertia	3.1030	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 +40	°C	Type of coupling	Direct	
Temperature rise (by resistance)	80 [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	PTC 150°C	
Rotor type	Aluminum Die cast		Accessory - 2	-	
Bearing type	Anti-friction ball		Accessory - 3	-	
DE / NDE bearing	6317 C3 / 6317 C3		Terminal box position	TOP	
Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 95mm²/2 x M50 x 1.5	
Type of grease	CHEVRON SRI-2 or Equivalent		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 combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC 60034-30-1	-	-	AS/NZ 1359:5:2004	-	IEC:60034-30-1

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marathon® Motors

TerraMAX®

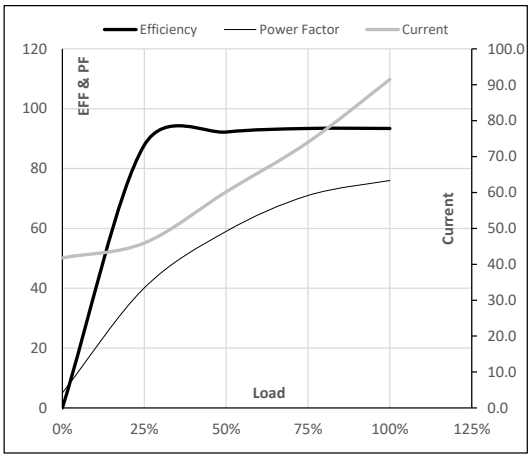
Model No. QCA0454A1111GAA001

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	45	60	91.5	741	58.83	576.89	IE4	40	S1	1000	3.1030	718

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	41.8	45.9	60.2	74.0	91.5	
Torque	Nm	0.0	142.9	286.6	431.2	576.9	
Speed	r/min	750	748	746	744	741	
Efficiency	%	0.0	87.8	92.2	93.4	93.4	
Power Factor	%	5.0	40.1	59.0	71.0	76.0	

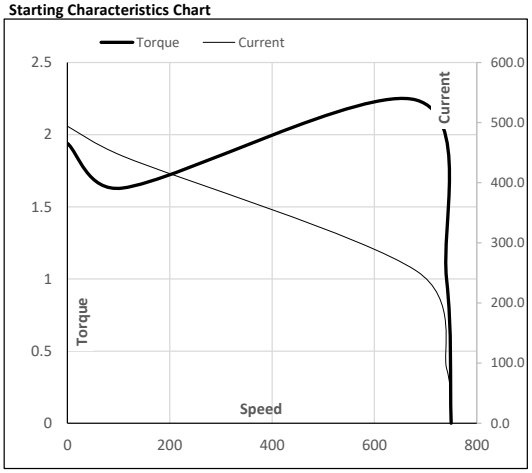
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	107	682	741	750
Current	A	494.1	444.7	253.6	91.5	41.8
Torque	pu	1.9	1.6	2.2	1	0

Starting Characteristics Chart



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

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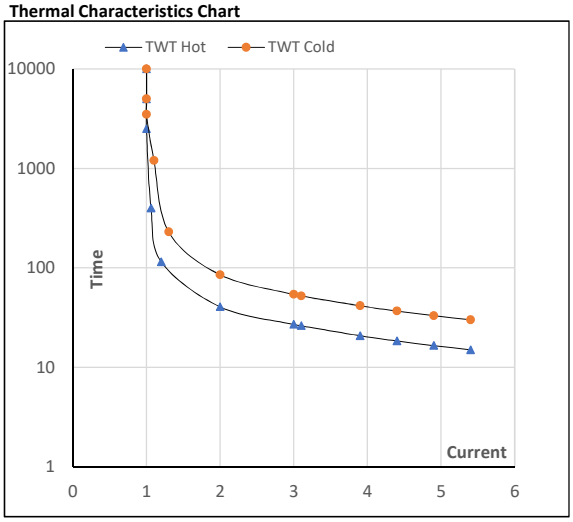
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	45	60	91.5	741	58.83	576.89	IE4	40	S1	1000	3.1030	718

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	41	27	20	17	16	15
TWT Cold	s	10000	85	54	41	35	32	30
Current	pu	1	2	3	4	4.5	5	5.4

Thermal Characteristics Chart



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