PRODUCT INFORMATION PACKET

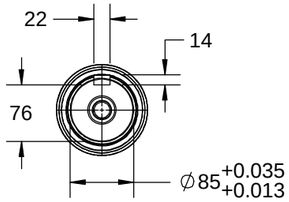
Model No: TCM2501A2113GAC011
Catalog No: TCM2501A2113GAC011
TerraMAX® IE3, Mining Duty Motors, 250 kW, 3Ph, 2 Pole, 400/690V, B3, 50Hz, 355M Frame, TEFC

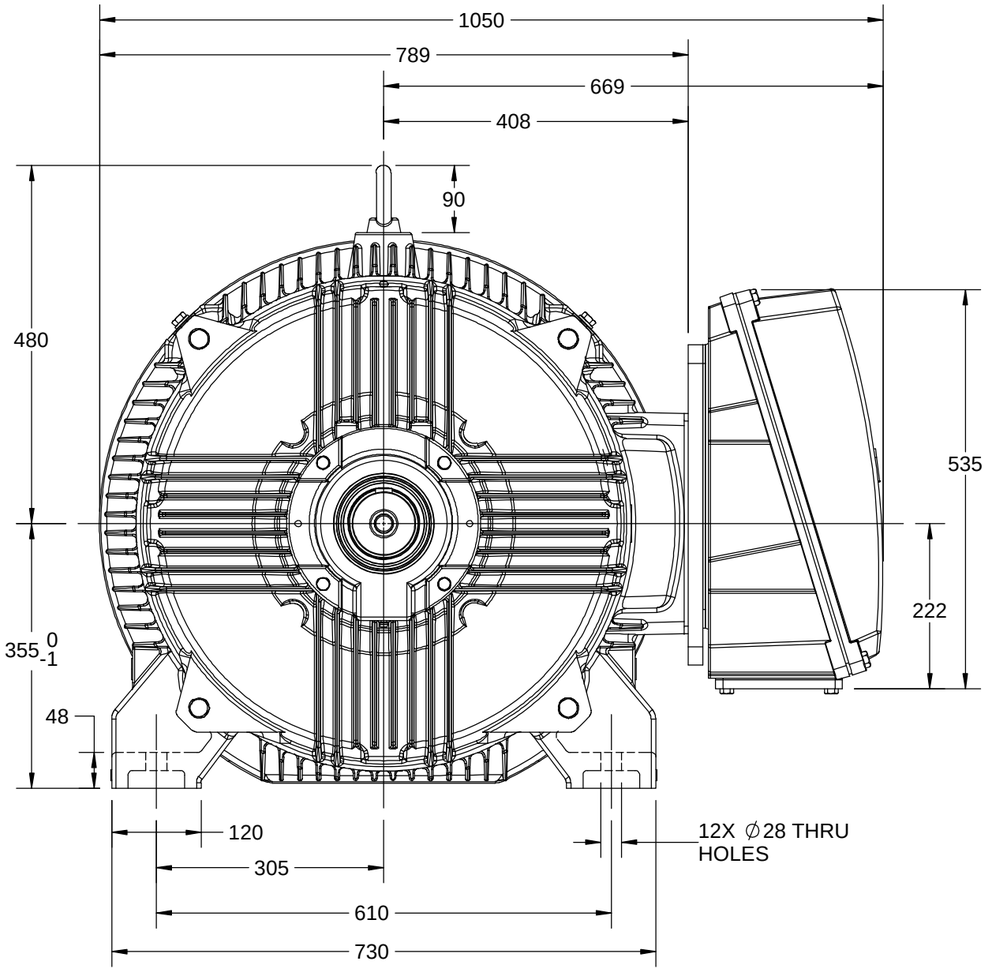
Nameplate Specifications

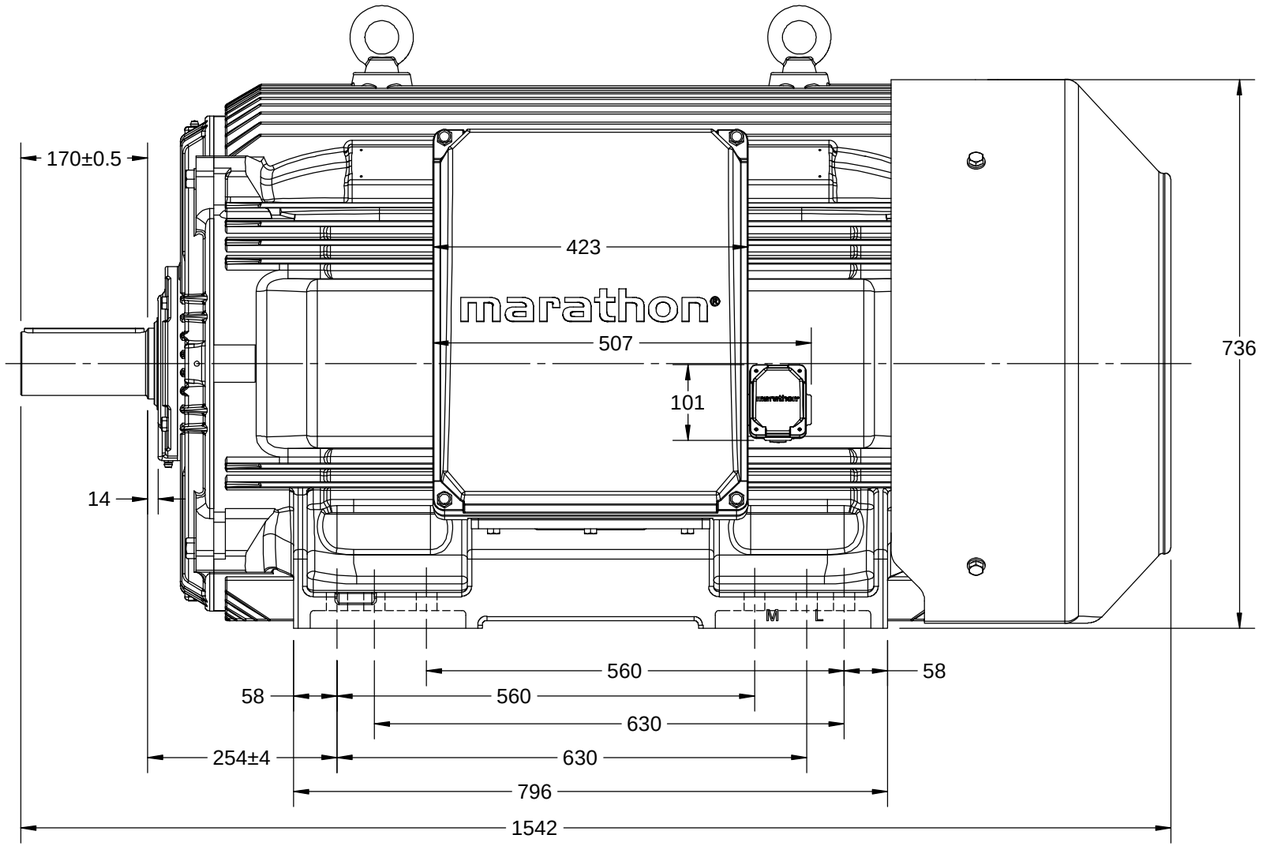
Output HP	335 Hp	Output KW	250.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	419.0 A	Speed	2983 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.9
Duty	S1	Insulation Class	H
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6319	Opp Drive End Bearing Size	6317
UL	NO	CSA	NO
CE	YES	IP Code	66
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	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	1542 mm	Frame Length	1010 mm
Shaft Diameter	85 mm	Shaft Extension	170 mm
Assembly/Box Mounting	RHS		
Outline Drawing	0235502343	Connection Drawing	8442180001

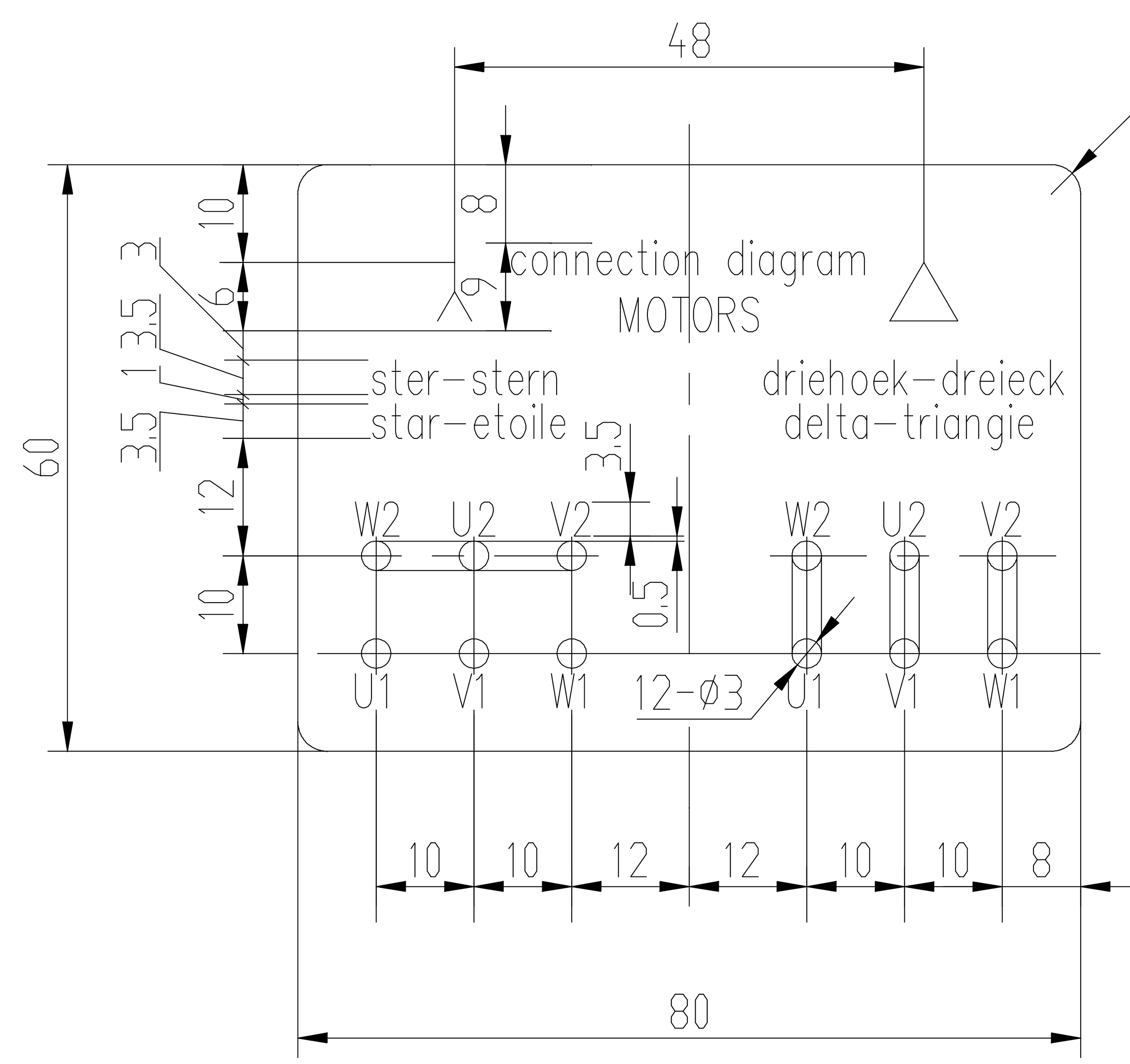






DRAWING REVISION B	REVISION BY LK	DATE 01/08/2018		DRAWN BY LK	marathon™ Motors
ECO ECO-0158551	APPROVED BY SBD	DATE 01/08/2018		DATE 24/01/2018	
ECO DESCRIPTION MODEL UPDATED WITH NEW STRUCTURE				APPROVED BY SBD	DESCRIPTION OUTLINE 355FR-B3 MTG. 2P MOTOR TYPE: TCM
				DATE 24/01/2018	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0235502343 / SHEET 1 OF 1

8442180001



技术要求

1、字母小号3.5，大号5，字母应整齐清晰，△、Y下面的字母分别关于△、Y对称；
2、底为黄色，文字线条为黑色；
3、压敏胶纸反面涂不干胶。

修改	
校对	
审核	
工艺	
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标准	
批准	

						8442180001
标记	处数	分区	更改文件号	签名	年月日	压敏胶纸
设计			标准化			阶段标记 / 重量 / 比例 1:1 / 接线指示 DM1-180
校核			审定			
审核						共 页 第 页
工艺			批准			无锡华达电机有限公司

marathon® Motors

TerraMAX®

Model No. TCM2501A2113GAC011

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	250	335	419.0	2983	799.72	IE3	-	95.8	95.8	94.2	0.9	0.87	0.81	6.9	2.0	3.3

Motor type	TCM	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	355M	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.15	
Insulation class	H	
Ambient temperature	-20 to +40	°C
Temperature rise (by resistance)	80 [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	
DE / NDE bearing	6319-C3 / 6317-C3	
Lubrication method	Regreasable	
Type of grease	CHEVRON SRI-2 or Equivalent	

Degree of protection	IP 66	
Mounting type	IM B3	
Cooling method	IC 411	
Motor weight - approx.	1737	kg
Gross weight - approx.	1782	kg
Motor inertia	4.0729	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.8	mm/s
Noise level (1meter distance from motor)	90	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
LR withstand time (hot/cold)	25/50	s
Direction of rotation	Bi-directional	
Standard rotation	Clockwise form DE	
Paint shade	RAL 2008	
Accessories		
Accessory - 1	PTC 150°C	
Accessory - 2	-	
Accessory - 3	-	
Terminal box position	RHS	
Maximum cable size/conduit size	1R x 3C x 300mm²/4 X M63 x 1.5	
Auxiliary terminal box	YES	

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 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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TerraMAX®

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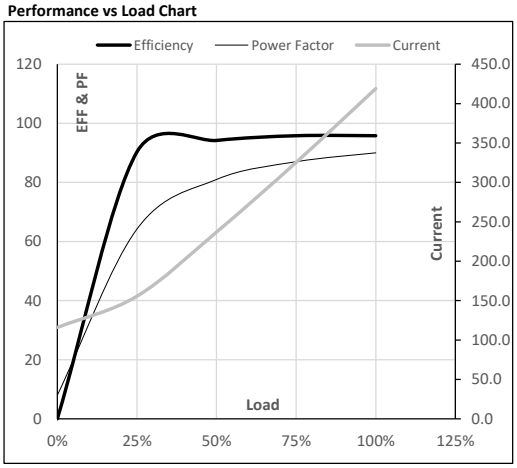
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	250	335.0	419.0	2983	81.55	799.72	IE3	40	S1	1000	4.0729	1737

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	116.0	155.5	237.0	325.4	419.0	
Torque	Nm	0.0	199.1	398.7	598.9	799.7	
Speed	r/min	3000	2996	2992	2987	2983	
Efficiency	%	0.0	90.3	94.2	95.8	95.8	
Power Factor	%	8.0	64.2	81.0	87.0	90.0	

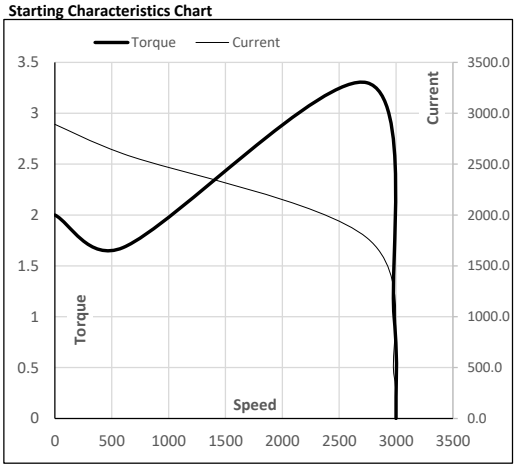
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2744	2983	3000
Current	A	2891.1	2602.0	1775.4	419.0	116.0
Torque	pu	2.0	1.7	3.3	1	0

Starting Characteristics Chart



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

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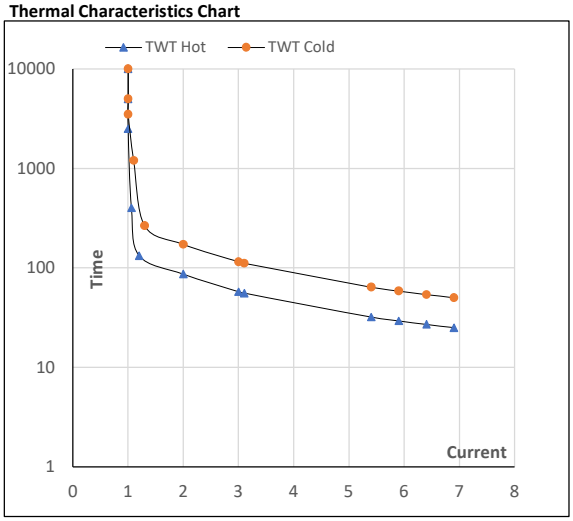
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	400	Δ	50	250	335	419.0	2983	81.55	799.72	IE3	40	S1	1000	4.0729	1737

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	86	58	50	43	29	25
TWT Cold	s	10000	173	115	102	74	58	50
Current	pu	1	2	3	4	5	6	6.9

Thermal Characteristics Chart



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