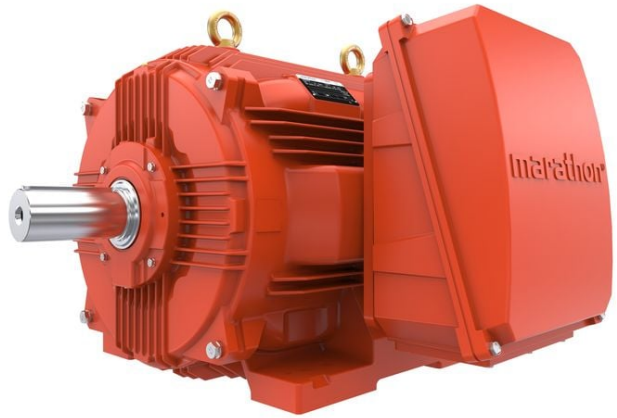
PRODUCT INFORMATION PACKET

Model No: TCM1322A2113GAC011
Catalog No: TCM1322A2113GAC011
TerraMAX® IE3, Mining Duty Motors, 132 kW, 3Ph, 4 Pole, 400/690V, B3, 50Hz, 315M Frame, TEFC

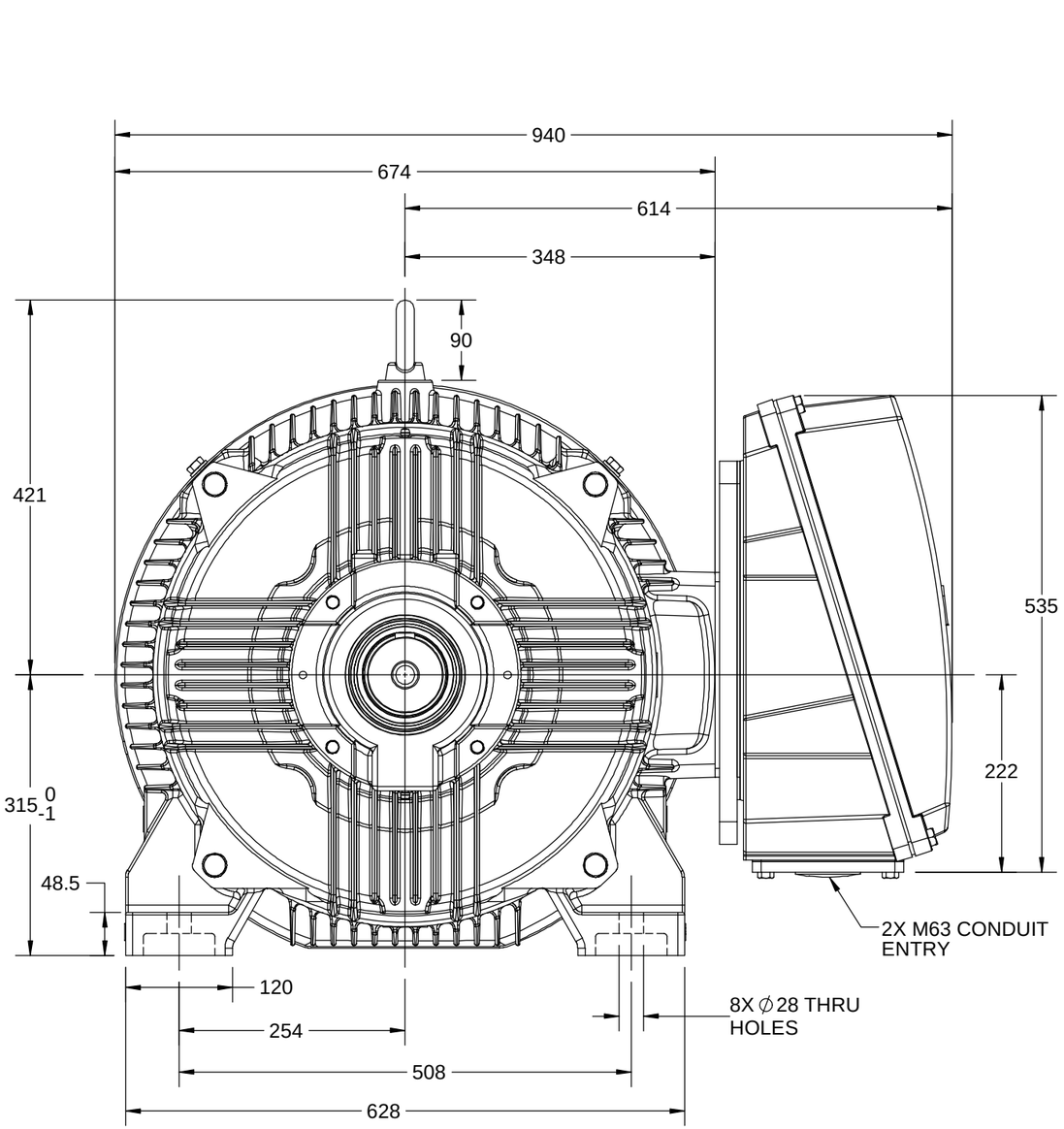


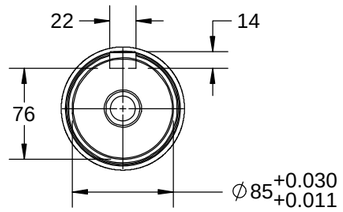
Nameplate Specifications

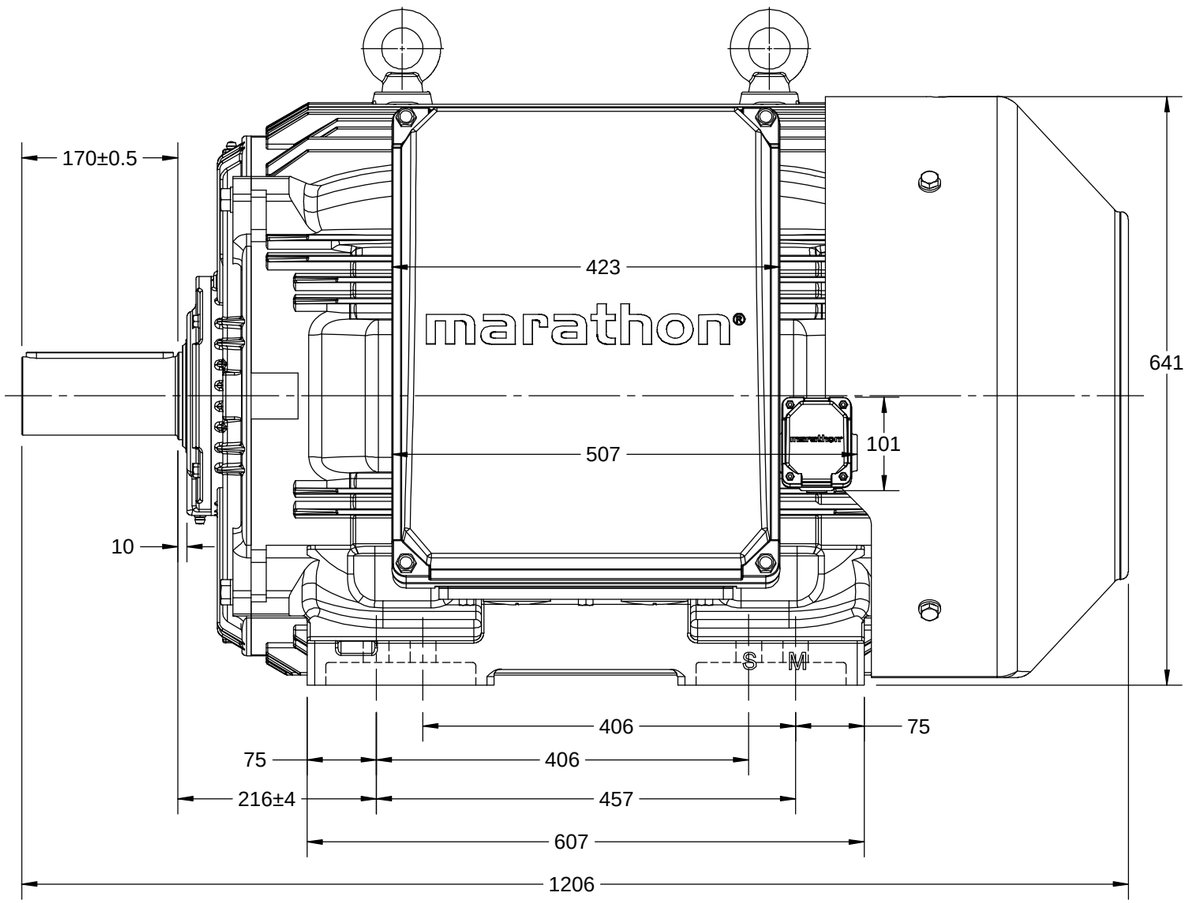
Output HP	175 Hp	Output KW	132.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	226.0 A	Speed	1488 rpm
Service Factor	1	Phase	3
Efficiency	95.6 %	Power Factor	0.88
Duty	S1	Insulation Class	H
Frame	315M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	NU319	Opp Drive End Bearing Size	6319
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	4	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	1206 mm	Frame Length	729 mm
Shaft Diameter	85 mm	Shaft Extension	170 mm
Assembly/Box Mounting	RHS		
Outline Drawing	0231501416	Connection Drawing	8442180001

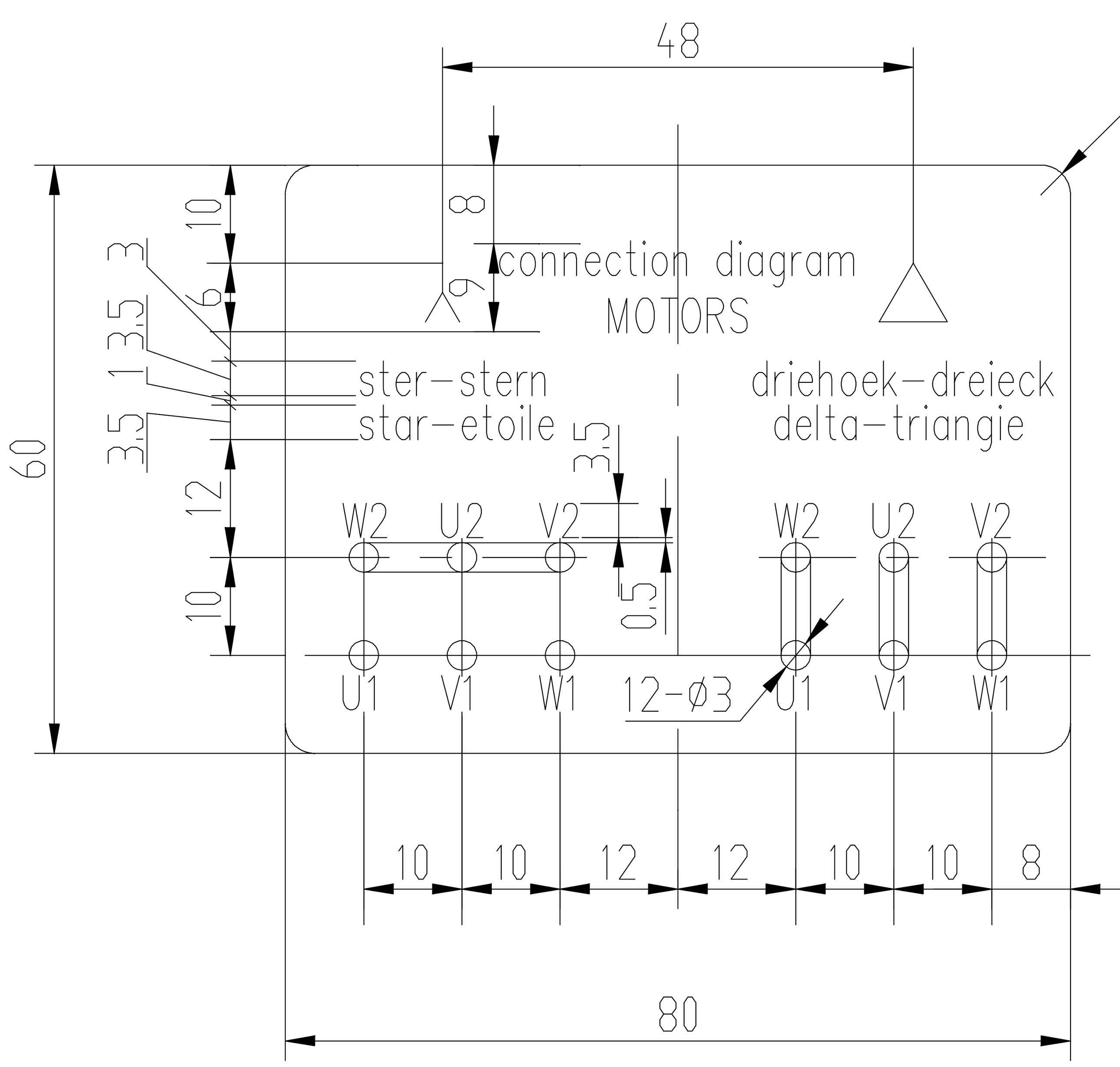






DRAWING REVISION B	REVISION BY LK	DATE 03/08/2018		DRAWN BY LK	marathon™ Motors
ECO ECO-0158551	APPROVED BY SBD	DATE 03/08/2018		DATE 22/01/2018	
ECO DESCRIPTION MODEL UPDATED WITH NEW STRUCTURE				APPROVED BY SBD	DESCRIPTION OUTLINE FR-315M-B3 MTG. 4-8P MOTOR TYPE: TCM
				DATE 22/01/2018	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0231501416 / 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	
标准	
修改	
校对	
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工艺	
标准	
修改	
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工艺	
标准	
设计	
校对	
审核	
工艺	
标准	
批准	

标记	处数	分区	更改文件号	签名	年月日
设计			标准化		
校核			审定		
审核					
工艺			批准		

8442180001			
压敏胶纸			
阶段标记	重量	比例	接线指示 DM1-180
		1:1	无锡华达电机有限公司
共 页 第 页			

marathon® Motors

TerraMAX®

Model No. TCM1322A2113GAC011

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
400	Δ	50	132	175	226.5	1488	837.64	IE3	-	95.6	95.6	95.2	0.88	0.85	0.77	6.8	2.1	3

Motor type	TCM	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	315M	
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	NU319 / 6319-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.	1028	kg
Gross weight - approx.	1073	kg
Motor inertia	3.7582	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.8	mm/s
Noise level (1meter distance from motor)	69	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 300mm²/2 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 Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	IEC:60034-30-1	-	-	AS/NZ 1359:5:2004	-	IEC:60034-30-1

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marathon® Motors

TerraMAX®

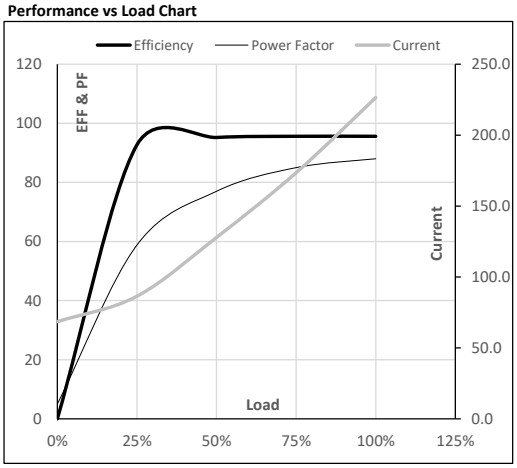
Model No. TCM1322A2113GAC011

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	132	175.0	226.5	1488	85.42	837.64	IE3	40	S1	1000	3.7582	1028

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	68.5	86.4	127.9	173.5	226.5	
Torque	Nm	0.0	208.1	417.0	626.9	837.6	
Speed	r/min	1500	1497	1494	1491	1488	
Efficiency	%	0.0	92.7	95.2	95.6	95.6	
Power Factor	%	5.0	58.8	77.0	85.0	88.0	

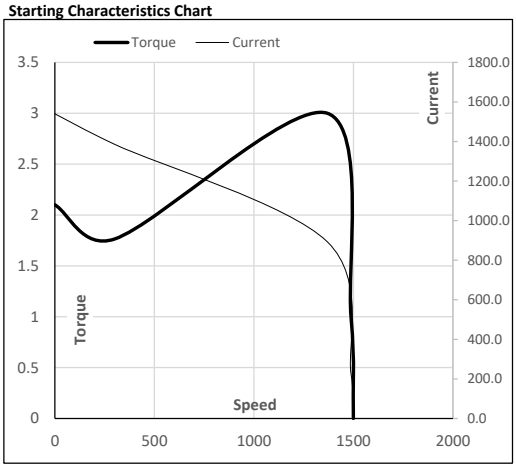
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1369	1488	1500
Current	A	1540.0	1386.0	893.1	226.5	68.5
Torque	pu	2.1	1.8	3.0	1	0

Starting Characteristics Chart



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

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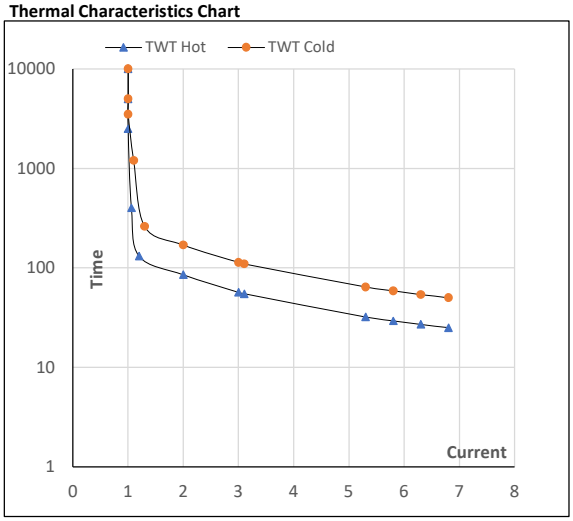
Model No. TCM1322A2113GAC011

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	132	175	226.5	1488	85.42	837.64	IE3	40	S1	1000	3.7582	1028

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	85	57	50	43	29	25
TWT Cold	s	10000	170	113	102	74	58	50
Current	pu	1	2	3	4	5	6	6.8

Thermal Characteristics Chart



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