

Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES40-36-324TSCRD	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets
GENERAL SPECIFICATION			PERFORMANCE DATA		
Frame Size	324TSC	Rated Output	30 kW 40 HP		
Type	PJP	Number of Poles	2		
Enclosure(Protection)	Totally Enclosed / IP55	Rotor Type	Squirrel Cage		
Method of Cooling	IC411(FC)	Starting Method*	D.O.L		
Rated Frequency	60 Hz	Rated Voltage	575 V	460 V	230 V
Number of Phases	3	Current	Full Load	35.6 A	44.5 A 89.1 A
Insulation Class	F		Locked-rotor**	850 %	850 % 850 %
Temp. Rise at full load (by resistance method)		Efficiency			
at 1.0 S.F	80 deg. C	50% Load 89.4 %			
Motor Location	☐ Indoor ☐ Outdoor	75% Load 91.4 %			
Altitude	Less than 1,000 meter	100% Load 92.4 %			
Relative Humidity	Less than 80 %	Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)	50% Load 0.765			
Duty Type	Continuous (S1)	75% Load 0.865			
Service Factor	1.15	100% Load 0.915			
Mounting	B5	Speed at Full Load	3560 r.p.m		
Bearing	Type	Anti-Friction	Torque		
	DE/N-DE	6212ZC3 / 6212ZC3	Full Load 59.37 lb.ft		
	Lubricant	Grease(Polyrex-EM)	Locked-rotor** 150 %		
External Thrust	Not applicable		Breakdown** 230 %		
Coupling Method	☒ Direct ☐ V-belt	Moment of Inertia (J)			
Shaft Extension	Single	Load(Max.) 38.727 lb.ft2			
Terminal	Main	Cast Iron	Motor 3.987 lb.ft2		
Box	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)		
	Location	Refer to Outline Drawing	82 dB(A)		
Application		Vibration 3.8 mm/sec (peak)			
Area classification	Hazardous	Permissible number of			
Type of Ex-Protection	Class I&II, Division 2	Cold 3 times			
Applicable Standard	NEMA MG1, CSA C390	consecutive starts Hot 2 times			
		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)	
ACCESSORIES		SUBMITTAL DRAWING			
		Outline Dimension Drawing \ Motor Weight(Approx.)			
		B5	LM-T2324C5CLV23	560 lb.	
		REMARK			
		1. Premium efficiency according to NEMA MG1			
		2. Inverter Duty @ 1.0 Service Factor & F Temperature rise			
		- 10:1 VT (20:1 VT at 50% load)			
		- 10:1 CT (1 hour duty, 4:1 continuous)			
		- CHP up to 1.5 times base speed, NEMA MG1 Part31			
		3. CSA Certification			
		- Class I, Division 2, Group A, B, C & D			
		- Class II, Division 2 Group E, F & G (Group E : up to 320Fr.)			
		4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.			
		5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous.			
		6. Temp. code : T3C(160°C) at sine wave			
		Date	DSND	CHKD	CHKD APPD
		2025-07-22	S.H. LEE	I.K. KIM	R.G. KIM S.W. KIM

[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.

Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.

Inspection and performance test shall be done according to maker standard, if not mentioned.

* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

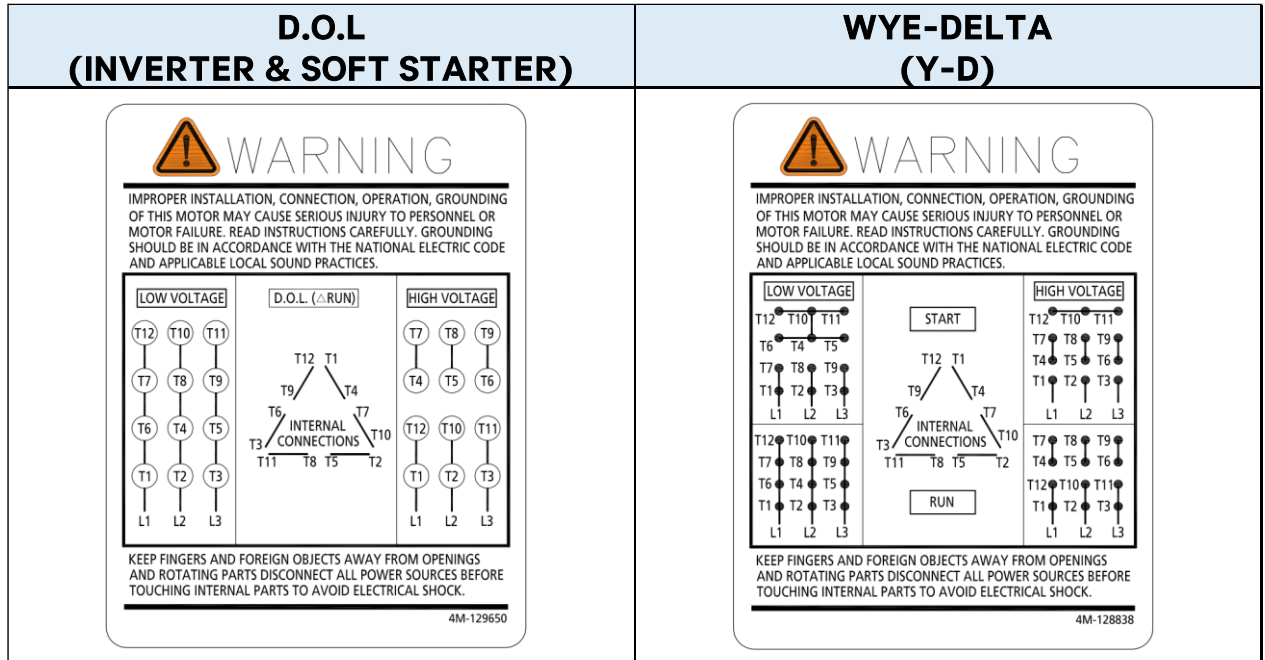
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

40HP		2P	230/460V	Cat. No.	HES40-36-324TSCRD				
Model		HLS324PR135V		INS. Class	F	HD-F1	Amps	89.1/44.5A	
Type	HLS	Duty	CONT	Code	J	Amb.	40°C	Hertz	60Hz
Frame	324TSC	Encl.	TEFC	S.F.	1.15	RPM	3560	NEMA Nom. Eff.	92.4%
Bearing	Drive	6212ZC3		S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)			3/4 Eff.	91.4%	
	Opp.	6212ZC3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			NEMA Design	B Torque	
Usable at	50Hz 40HP 380V 59.5A 2955rpm S.F.: 1.0 Eff.: 91.7% Code: H								
	50Hz 40HP 400/415V 56.8/55.0A 2960/2965rpm S.F.: 1.0 Eff.: 91.7/91.7% Code: J/K								
CSA Certified for	Model	LATER	Type	PJP	Temp. Code	Frame	140~320FR	360~400FR	440FR
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2 Gr. E, F & G (Gr. E: Up to 320FR)		Amb. 40°C	T3C (160°C)	T3B (165°C)	T3A (180°C)	T3 (200°C)
No.	-			Date	-			Weight	560 lb
4M-136024 MARINE DUTY IEEE45				Made in Vietnam H4 Designed By HYUNDAI, Korea			HD HYUNDAI ELECTRIC		

WIRING DIAGRAM

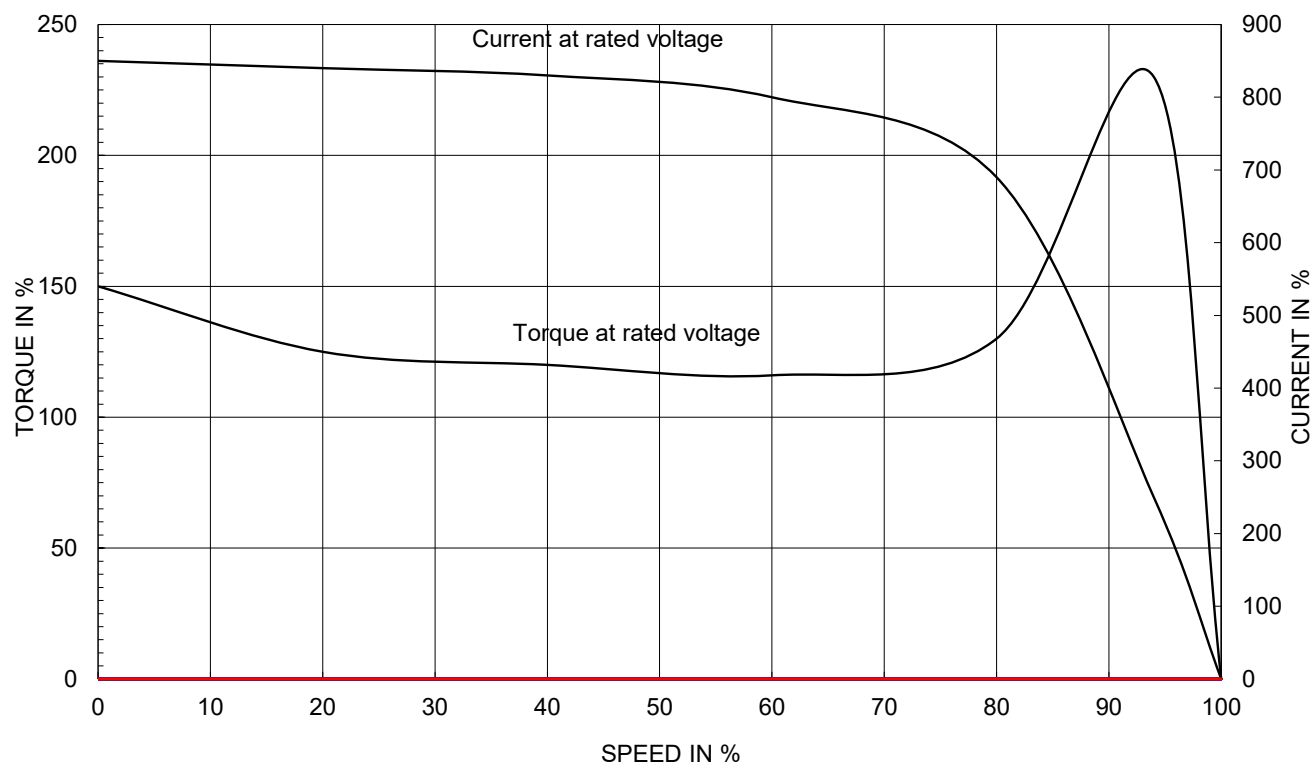


APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, 254-326)	DWG SIZE	A4 (1:1)		
CHKD BY	I.K.KIM	SCALE	NONE	TITLE	NAMEPLATE DRAWING	REF. NO	4M-136024 / 4M-129650		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle					Sheet No.	of
DSND BY	S.H.LEE	DATE	2024.06.07						
HD HYUNDAI ELECTRIC				Revision No.	0				

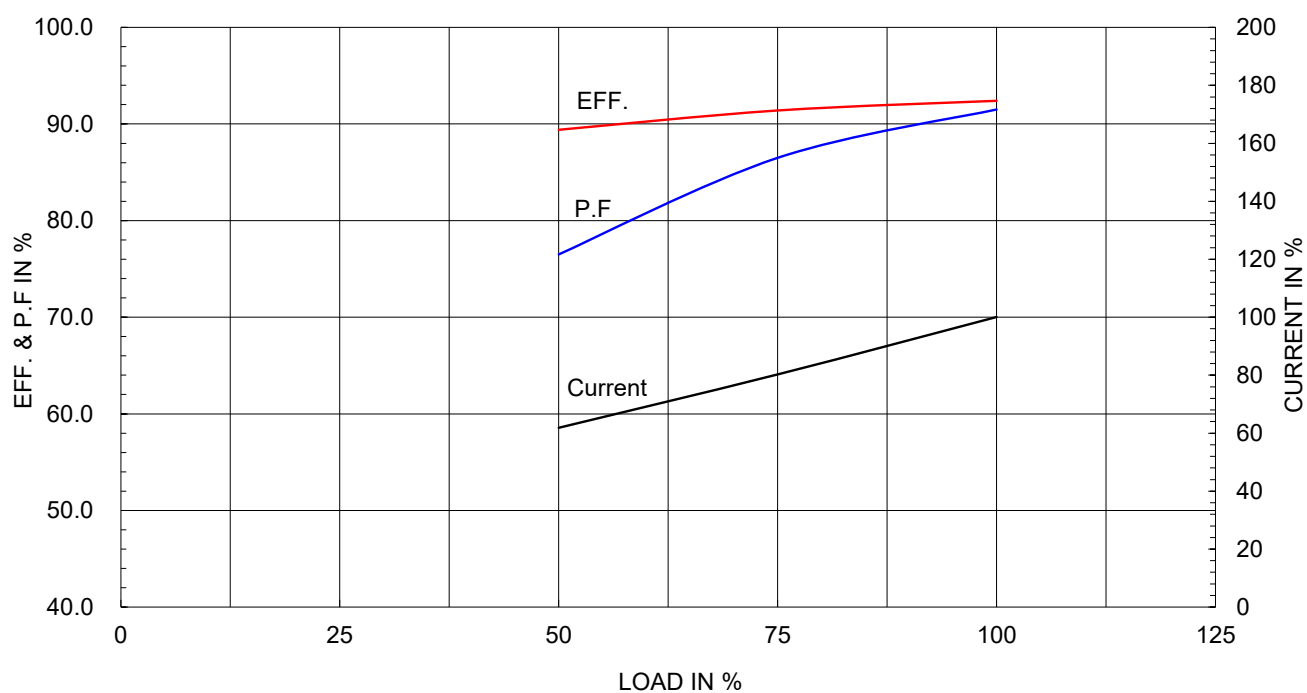
Type :	PJP	
Full Load Torque :	59.37	lb.ft
Load moment of Inertia (J) :	38.727	lb.ft2
Motor moment of Inertia (J) :	3.987	lb.ft2

30kW	40HP	2 P	60 Hz
Speed at Full Load :		3560 RPM	
Rated Voltage	575V	460V	230V
Full Load Current	35.6A	44.5A	89.1A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		

G

F

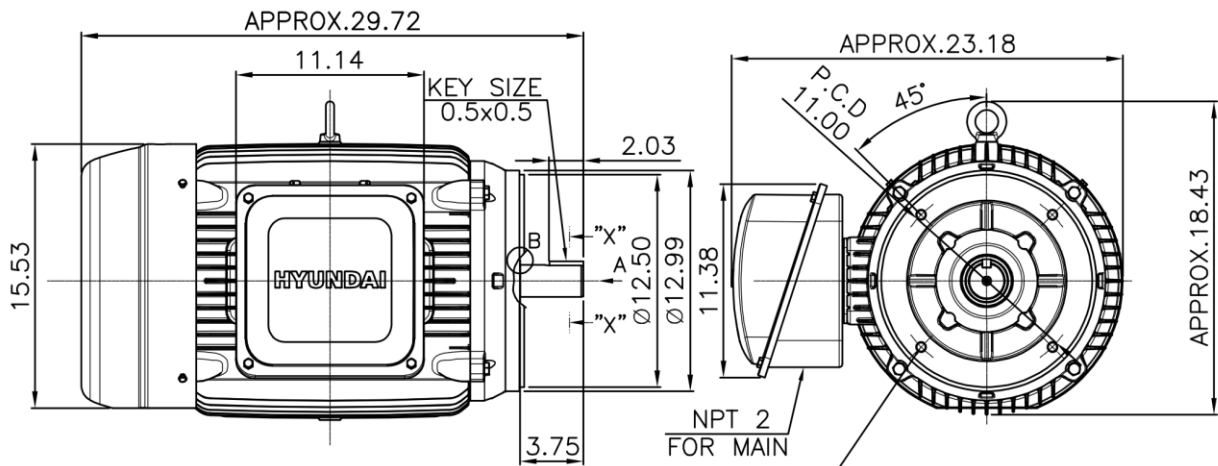
E

D

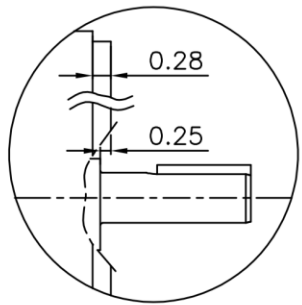
C

B

A



VIEW "A"

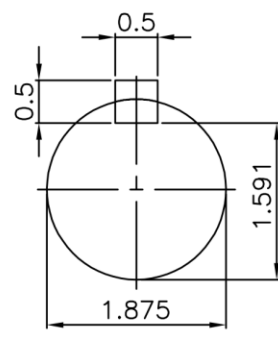


DETAIL - B

NOTE

[TOLERANCE]

1. CENTER HEIGHT : +0.00inch - 0.03inch
2. SHAFT DIAMETER : +0.000inch - 0.001inch
3. KEYWAY DEPTH : +0.000inch - 0.015inch

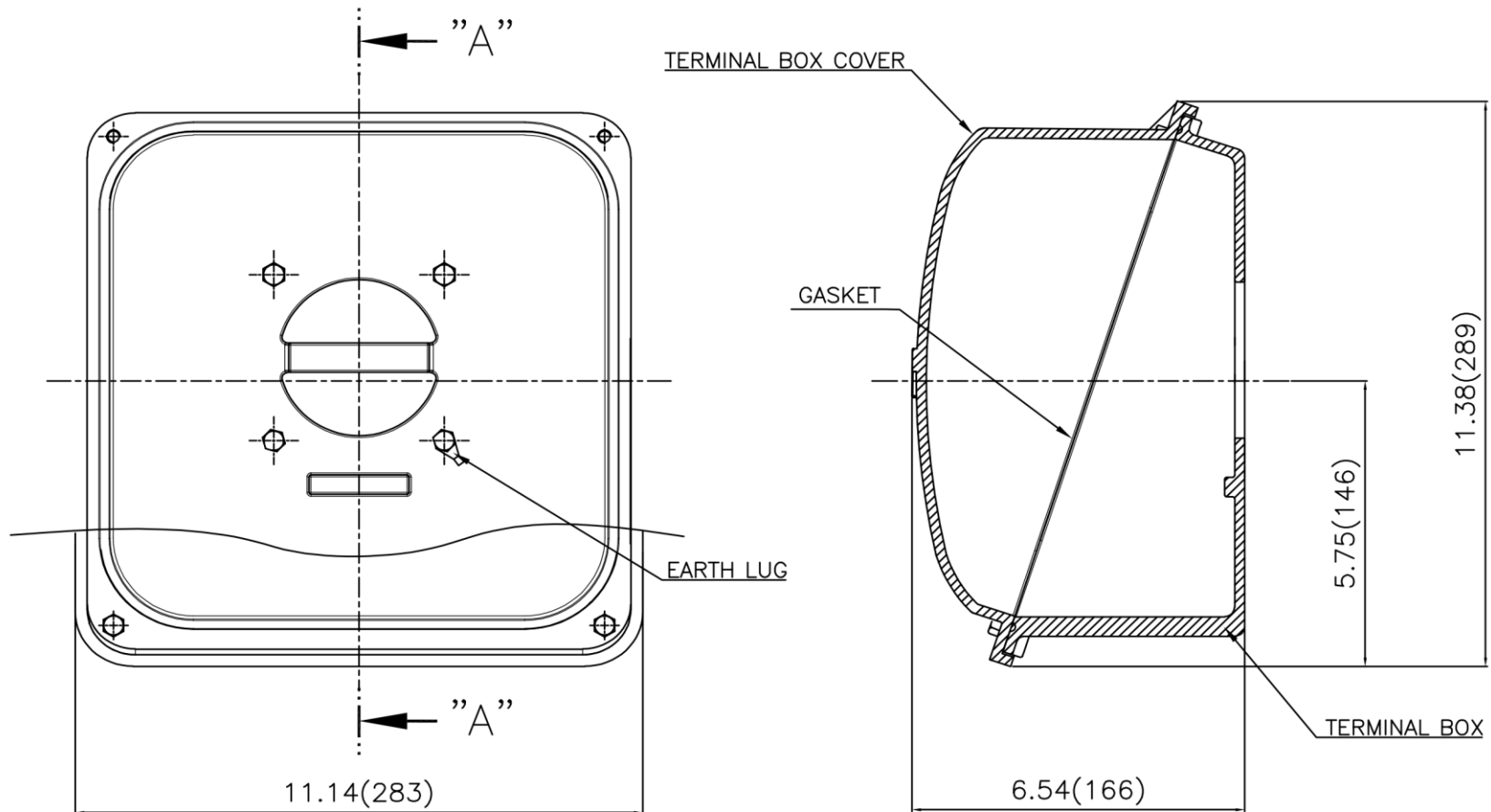


SECTION "X-X"
SCALE 5/11

APPD BY	S.Y.KIM	UNIT	inch	SUBJECT	NEMA 324TSC	DWG SIZE
CHKD BY	R.G.KIM	SCALE	1/11			A4 (1:11)
CHKD BY		PROJEC'N	3rd Angle	TITLE	OUTLINE	
DSND BY	전지현	DATE	2021-04-28	REF. NO	.	Sheet No. of
				DWG NO	LM-T2324C5CLV23	Revision No. 0

Cls. I&II, Div. 2

IEEE 841



▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
1						
2						
3						
4						
5						

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 320 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/2.5	TITLE	TERMINAL BOX ASS'Y	A3 (1:2.5)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬의	DATE	2023-10-19	DWG NO	3M-248459	Revision No.	0