

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.	HES1.5-18-145TC	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION			PERFORMANCE DATA				
Frame Size	145TC		Rated Output	1.1 kW 1.5 HP			
Type	PJP		Number of Poles	4			
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	1.77 A	2.22 A	4.43 A
Insulation Class	F			Locked-rotor**	900 %	900 %	900 %
Temp. Rise at full load (by resistance method)			Efficiency				
	at 1.0 S.F	80 deg. C					
Motor Location	☐ Indoor ☐ Outdoor		50% Load 83.5 %				
Altitude	Less than 1,000 meter		75% Load 85.5 %				
Relative Humidity	Less than 80 %		100% Load 86.5 %				
Ambient Temp.	40 deg. C (Max.)		Power Factor(p.u)				
Duty Type	Continuous (S1)		50% Load 0.570				
Service Factor	1.15		75% Load 0.670				
Mounting	B35		100% Load 0.720				
Bearing	Type	Anti-Friction	Speed at Full Load 1750 r.p.m				
	DE/N-DE	6205ZZC3 / 6204ZZC3	Torque				
	Lubricant	Grease(Polyrex-EM)	Full Load 4.43 lb.ft				
External Thrust	Not applicable		Locked-rotor** 260 %				
Coupling Method	☒ Direct ☐ V-belt		Breakdown** 290 %				
Shaft Extension	Single		Moment of Inertia (J)				
Terminal	Main	Cast Iron	Load(Max.) 11.865 lb.ft2				
Box	Aux.	No	Motor 0.076 lb.ft2				
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)				
Application			56 dB(A)				
Area classification	Hazardous		Vibration 3.8 mm/sec (peak)				
Type of Ex-Protection	Class I&II, Division 2		Permissible number of				
Applicable Standard	NEMA MG1, CSA C390		consecutive starts Cold 3 times				
			Hot 2 times				
			Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		
ACCESSORIES			SUBMITTAL DRAWING				
			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B35	LM-T2145C4PLV23	65 lb.		
SPARE PARTS			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				
			- 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.

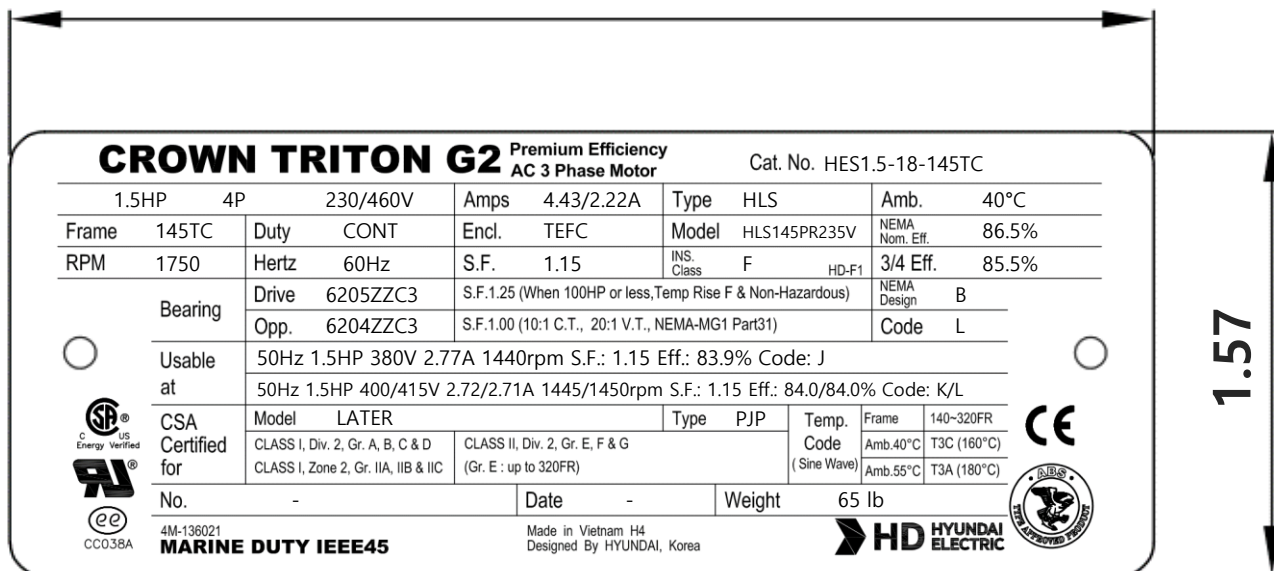
* In case of Inverter-Fed Motor, performance data is based on sine wave tests. It may be different from test data of Inverter combined motor.

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

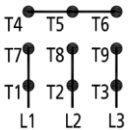
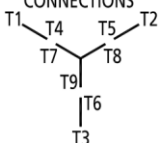
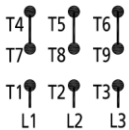
		2	3	4		
REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY

■ MAIN NAMEPLATE

3.94



■ WIRING DIAGRAM

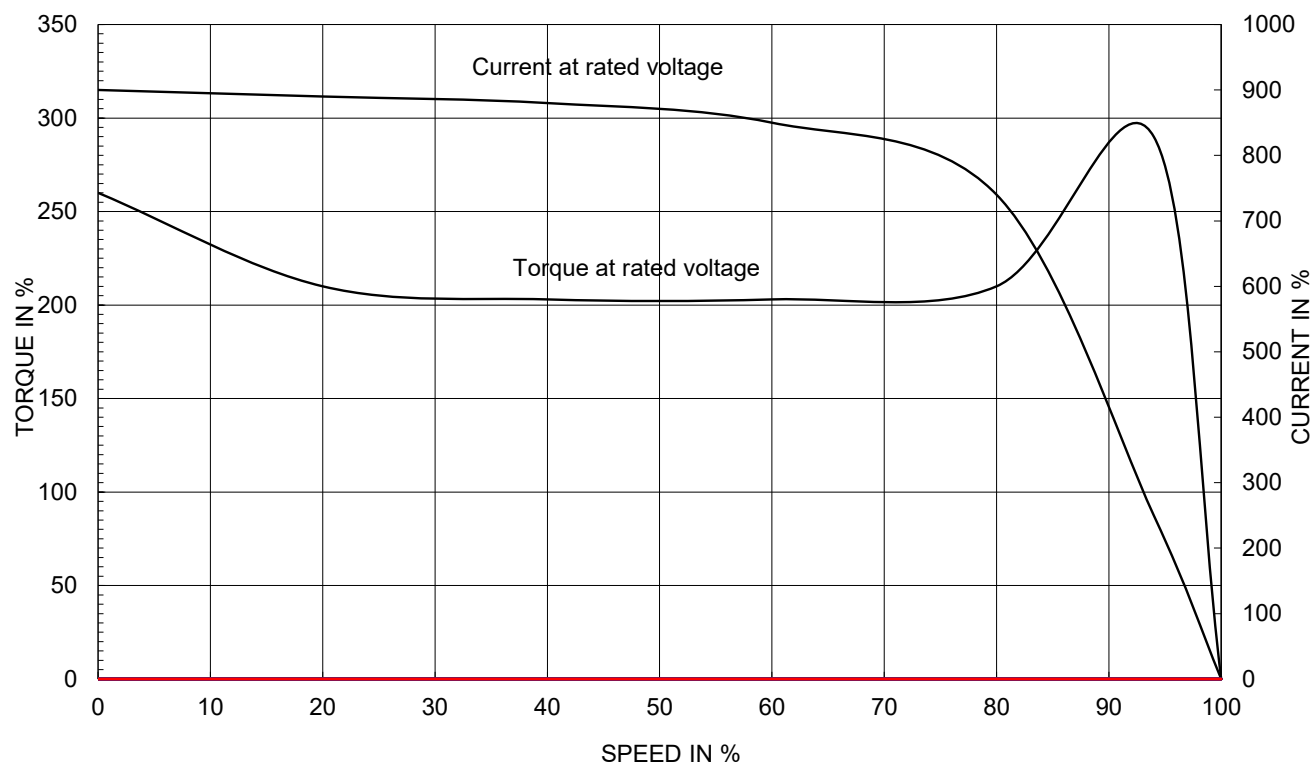
D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
 WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. LOW VOLTAGE  INTERNAL CONNECTIONS  HIGH VOLTAGE  KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-128845	N/A

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, 143-215)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE			A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	S.H.LEE	DATE	2024.06.07			
 HD HYUNDAI ELECTRIC				TITLE		
				NAMEPLATE DRAWING		
				REF. NO	4M-136021 / 4M-128845	Sheet No. of
				DWG NO	NP-HES1.5-18-145TC	Revision No. 0

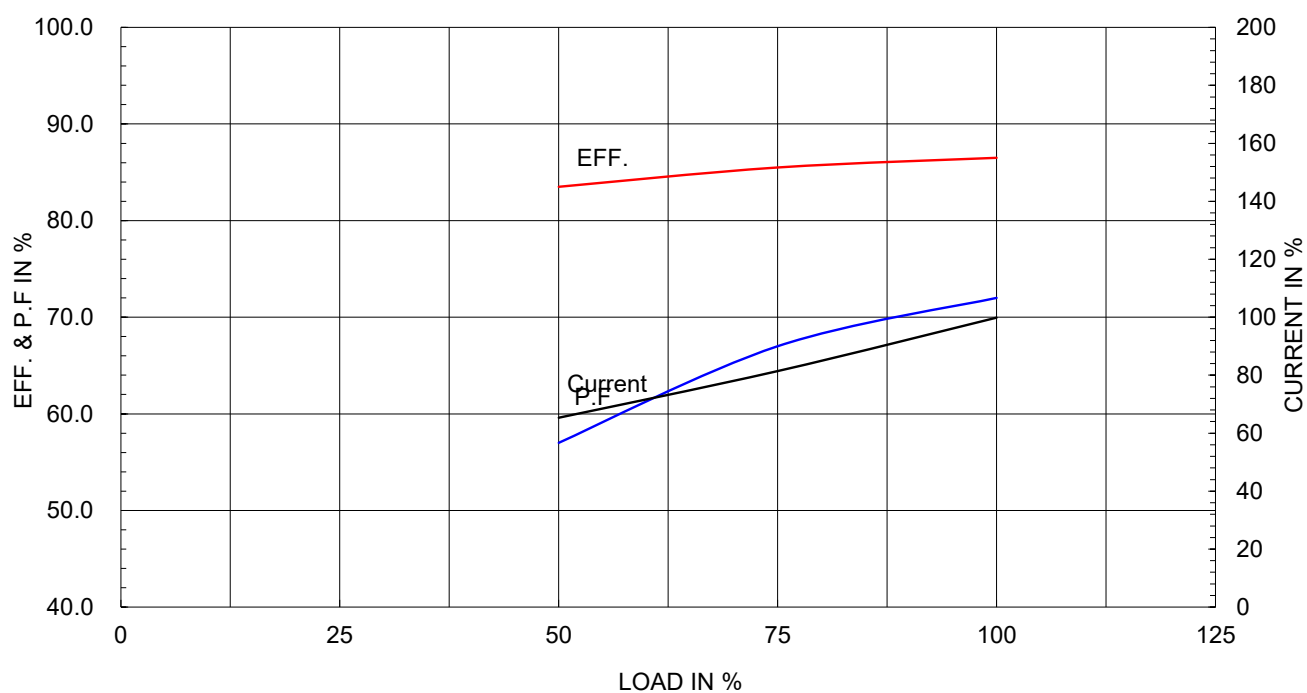
Type :	PJP	
Full Load Torque :	4.43	lb.ft
Load moment of Inertia (J) :	11.865	lb.ft2
Motor moment of Inertia (J) :	0.076	lb.ft2

1.1kW	1.5HP	4 P	60 Hz
Speed at Full Load :			1750 RPM
Rated Voltage	575V	460V	230V
Full Load Current	1.77A	2.22A	4.43A

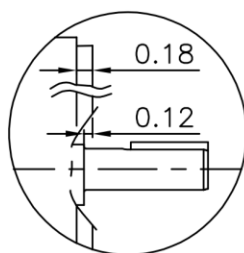
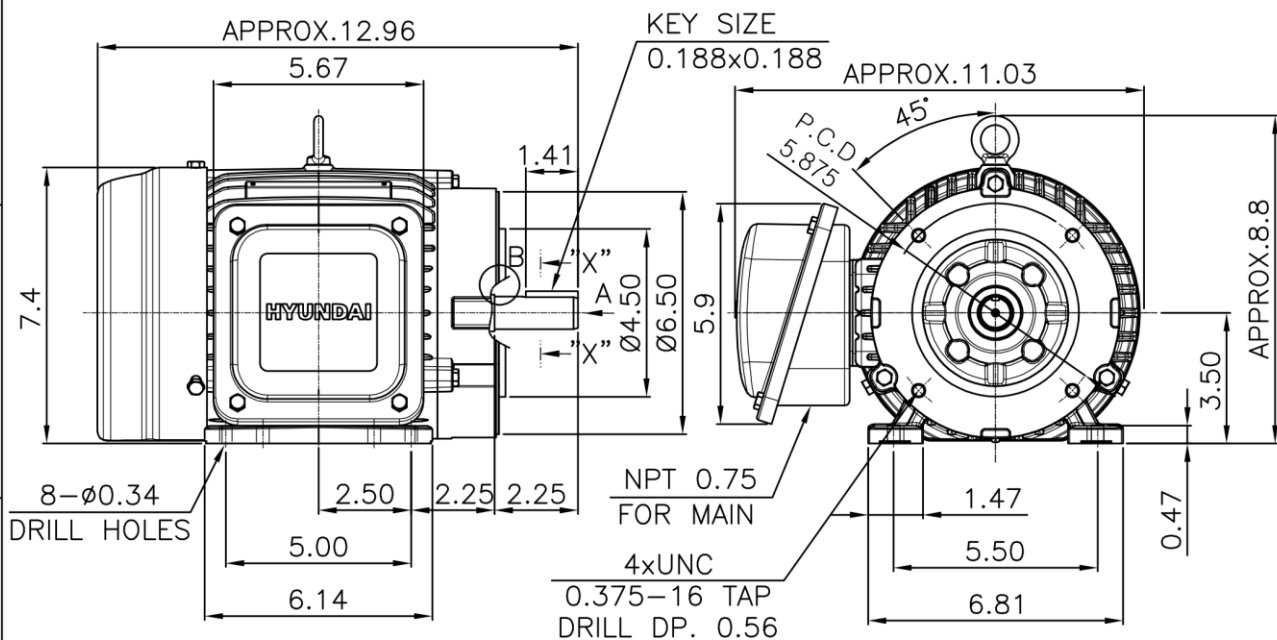
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1			2		3		4		
▽	50S	REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S								
▽▽▽	3.2S								
▽▽▽▽	0.4S								

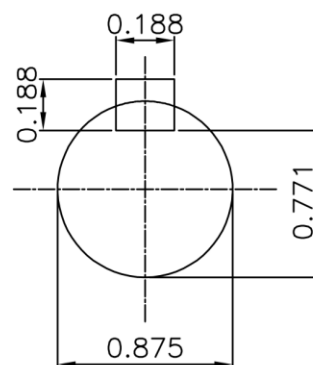


DETAIL - B

NOTE

[TOLERANCE]

- | |
|---|
| 1. CENTER HEIGHT : +0.00inch - 0.03inch |
| 2. SHAFT DIAMETER : +0.000inch - 0.0005inch |
| 3. KEYWAY DEPTH : +0.000inch - 0.015inch |



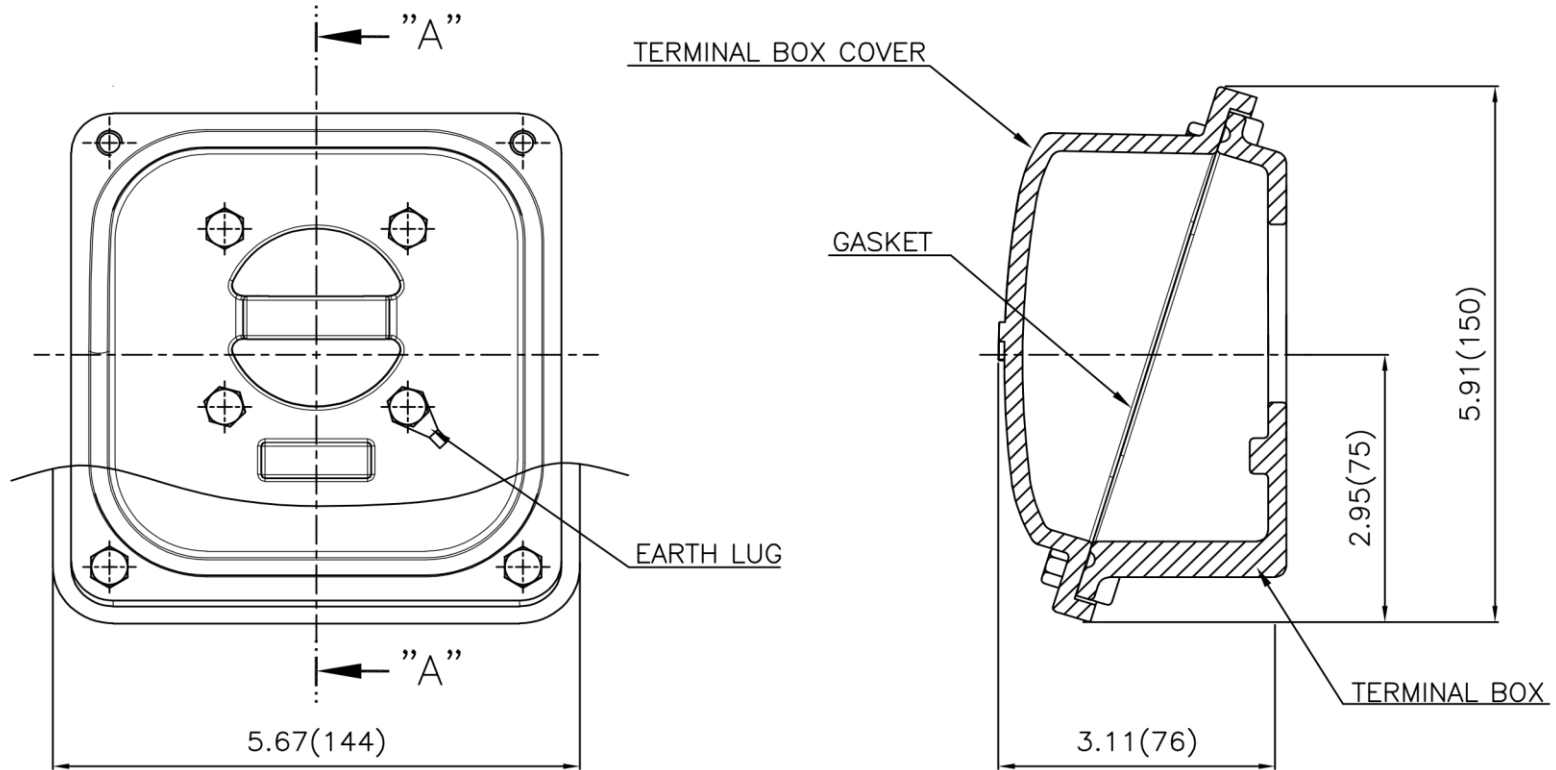
SECTION "X-X"

SCALE 5/6

APPD BY	S.Y.KIM	UNIT	inch	SUBJECT	NEMA 145TC	DWG SIZE
CHKD BY	R.G.KIM	SCALE	1/5			A4 (1:5)
CHKD BY		PROJEC'N	3rd Angle	TITLE	OUTLINE	
DSND BY	주유림	DATE	2021-04-29			
 HD HYUNDAI ELECTRIC				REF. NO	.	Sheet No. of
				DWG NO	LM-T2145C4PLV23	Revision No. 0

Cls. I&II, Div. 2

IEEE 841



SEC. "A"-"A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY
1						
2						
3						
4						

일반가공공차		일반재공공차	
1-4	±0.1	6-30	±0.5
4-18	±0.2	30-120	±0.8
18-63	±0.3	120-315	±1.2
63-250	±0.5	315-1000	±2.0
250-	±0.8	1000-	±3.0

Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK	NO.
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 140-180 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/1.5	TITLE	TERMINAL BOX ASS'Y	A3 (1:1.5)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No. of	
DSND BY	네슬피	DATE	2023-10-19	DWG NO	3M-248456	Revision No. 0	

