

Customer :

Project Name :

Project No. :

Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

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AC INDUCTION MOTOR DATA SHEET

Catalog No.	HES1-12-143/5JP		Item No.			Rev. No.	[]	
Project Name			Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA				
Frame Size	145JP		Rated Output	0.75 kW		1 HP		
Type	PJP		Number of Poles	6				
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	1.45 A	1.81 A	3.62 A	
Insulation Class	F			Locked-rotor**	800 %	800 %	800 %	
Temp. Rise at full load (by resistance method)			Efficiency					
at 1.0 S.F			80 deg. C					
Motor Location	☐ Indoor ☐ Outdoor		50% Load		79.5 %			
Altitude	Less than 1,000 meter		75% Load		81.5 %			
Relative Humidity	Less than 80 %		100% Load		82.5 %			
Ambient Temp.	40 deg. C (Max.)		Power Factor(p.u)					
Duty Type	Continuous (S1)		50% Load		0.480			
Service Factor	1.15		75% Load		0.580			
Mounting	B35		100% Load		0.630			
Bearing	Type	Anti-Friction	Speed at Full Load		1155 r.p.m			
	DE/N-DE	6206ZZC3 / 6204ZZC3	Torque					
	Lubricant	Grease(Polyrex-EM)	Full Load		4.57 lb.ft			
External Thrust	Not applicable		Locked-rotor**		180 %			
Coupling Method	☒ Direct ☐ V-belt		Breakdown**		275 %			
Shaft Extension	Single		Moment of Inertia (J)					
Terminal	Main	Cast Iron	Load(Max.)		21.753 lb.ft2			
Box	Aux.	No	Motor		0.083 lb.ft2			
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)					
Application			55 dB(A)					
Area classification	Hazardous		Vibration		3.8 mm/s (peak)			
Type of Ex-Protection	Class I&II, Division 2		Permissible number of consecutive starts		Cold	3 times		
Applicable Standard	NEMA MG1, CSA C390		Hot		2 times			
			Paint	Munsell No.	4.0PB5.4/5.5(VL-451)			
ACCESSORIES			SUBMITTAL DRAWING					
			Outline Dimension Drawing		Motor Weight(Approx.)			
			B35	LM-T2145C4JLV25	65 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					
			-. 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	
			2025-09-19	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

3.94

1HP		6P		230/460V		Amps 3.62/1.81A		Type HLS		Amb. 40°C	
Frame 145JP		Duty CONT		Encl. TEFC		Model HLS145PR335V		NEMA Nom. Eff. 82.5%			
RPM 1155		Hertz 60Hz		S.F. 1.15		INS. Class F		HD-F1		3/4 Eff. 81.5%	
Bearing		Drive 6206ZZC3		S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)						NEMA Design B	
Usable at		Opp. 6204ZZC3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)						Code L	
CSA Certified for		Model -		Type PJP		Temp. Code		Frame 140-320FR			
		CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2, Gr. E, F & G		(Gr. E : up to 320FR)		(Sine Wave)		Amb.40°C T3C (160°C)	
		CLASS I, Zone 2, Gr. IIA, IIB & IIC								Amb.55°C T3A (180°C)	
No. -		Date -		Weight 65 lb							
4M-137664		MARINE DUTY IEEE45		Made in Vietnam H4		Designed By HYUNDAI, Korea		HD HYUNDAI ELECTRIC			

WIRING DIAGRAM

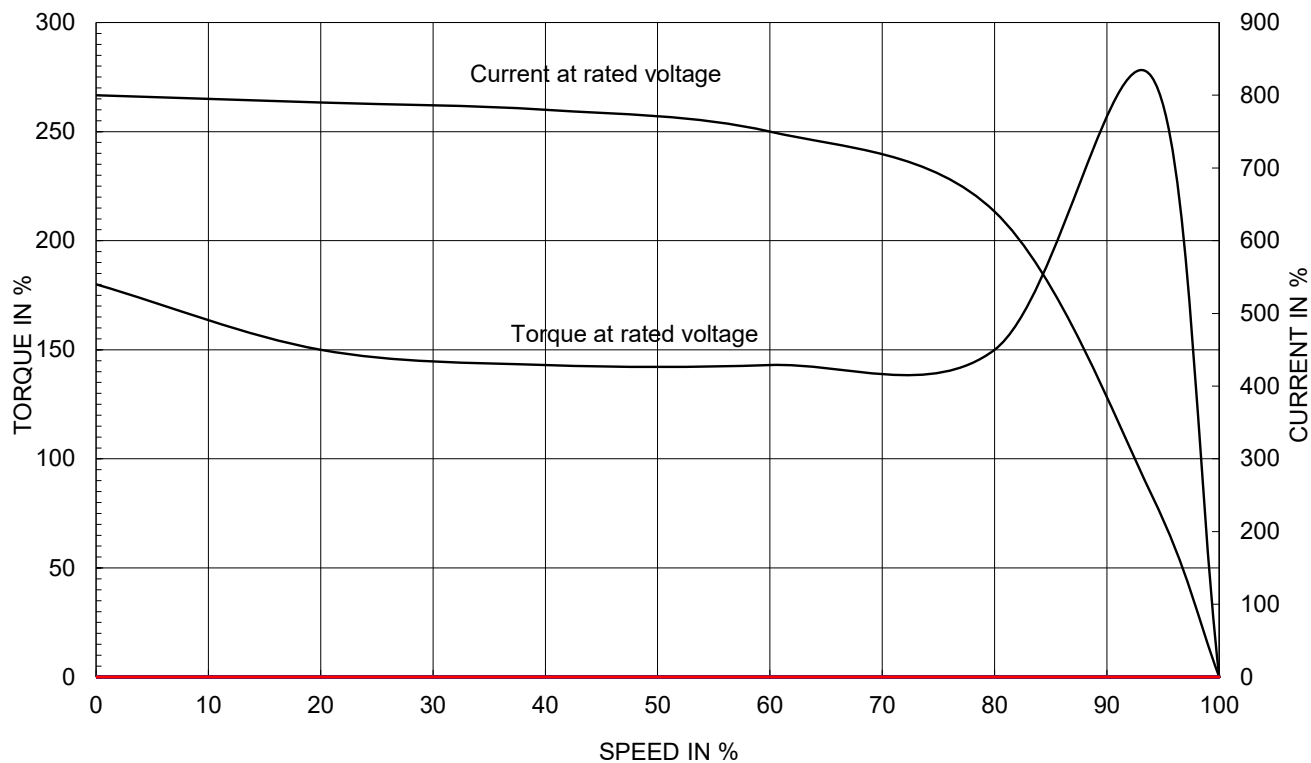
D.O.L (INVERTER & SOFT STARTER)  WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. LOW VOLTAGE T4 T5 T6 T7 T8 T9 T1 T2 T3 L1 L2 L3 INTERNAL CONNECTIONS T1 T4 T5 T2 T7 T8 T9 T6 T3 HIGH VOLTAGE T4 T5 T6 T7 T8 T9 T1 T2 T3 L1 L2 L3 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	WYE-DELTA (Y-D) N/A
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APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HES, JM/JP, 143-215)		DWG SIZE	
CHKD BY	I.K.KIM	SCALE	NONE	TITLE				A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	NAMEPLATE DRAWING				
DSND BY	S.H.LEE	DATE	2024.06.07					
				REF. NO	4M-137664 / 4M-128845		Sheet No. of	
				DWG NO	NP-HES1-12-143/5JP		Revision No. 0	

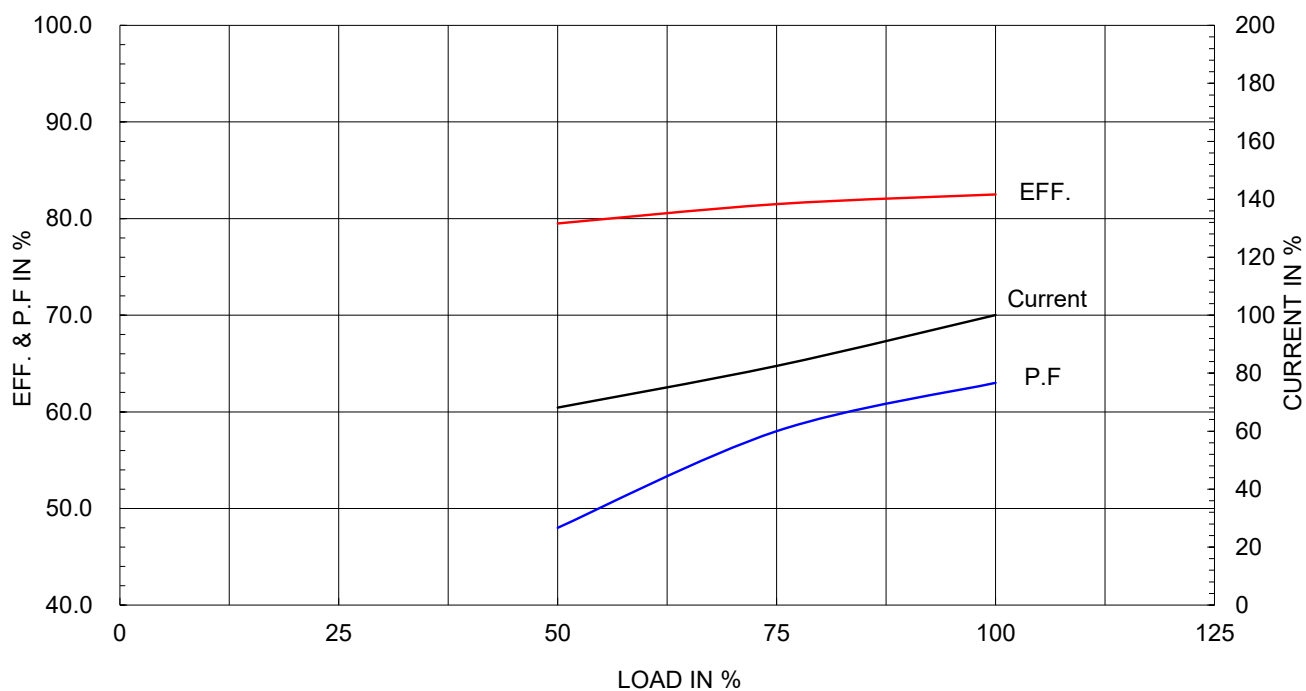
Type :	PJP	
Full Load Torque :	4.57	lb.ft
Load moment of Inertia (J) :	21.753	lb.ft2
Motor moment of Inertia (J) :	0.083	lb.ft2

0.75kW	1HP	6 P	60 Hz
Speed at Full Load :			1155 RPM
Rated Voltage	575V	460V	230V
Full Load Current	1.45A	1.81A	3.62A

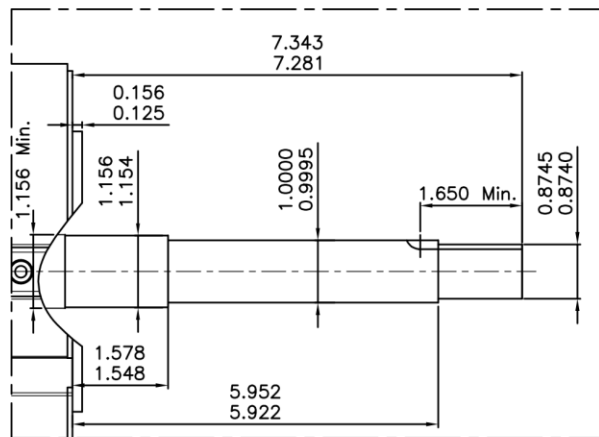
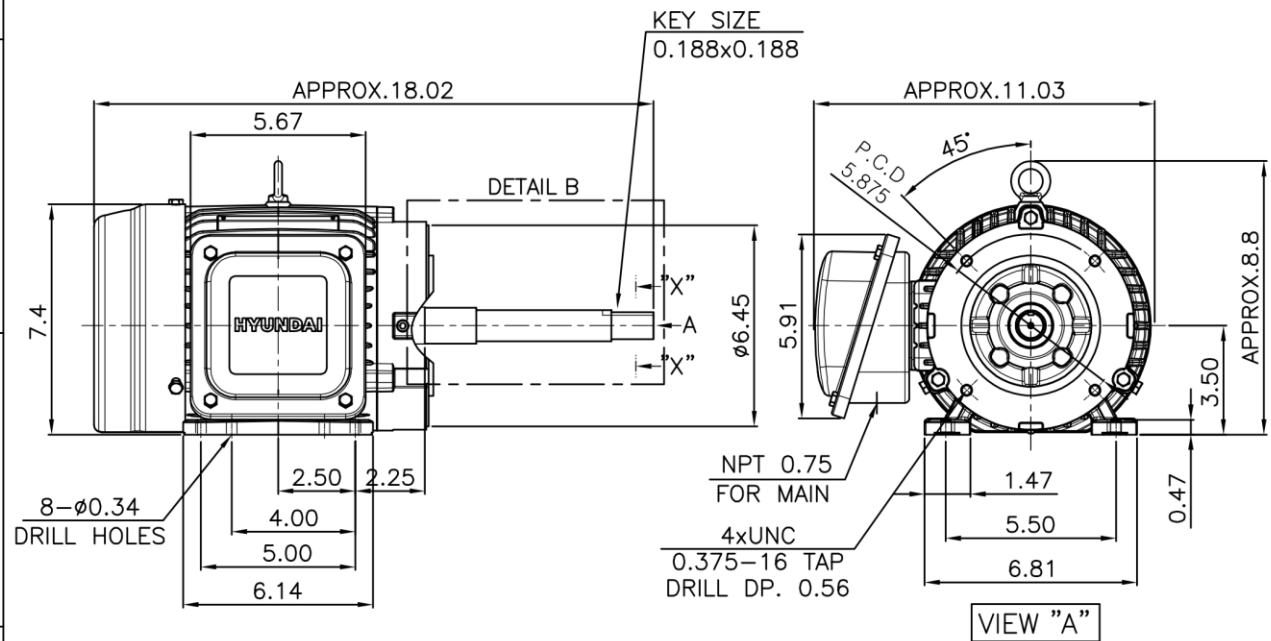
SPEED VS TORQUE & CURRENT CURVE



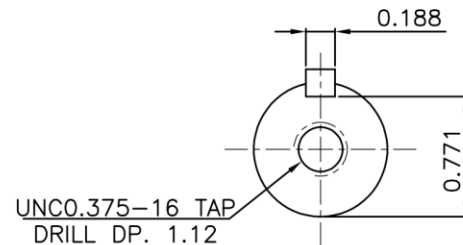
OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4	
REV	DATE	CONTENTS	REVD BY	CHKD BY



DETAIL - B

SECTION "X-X"
SCALE 5/6

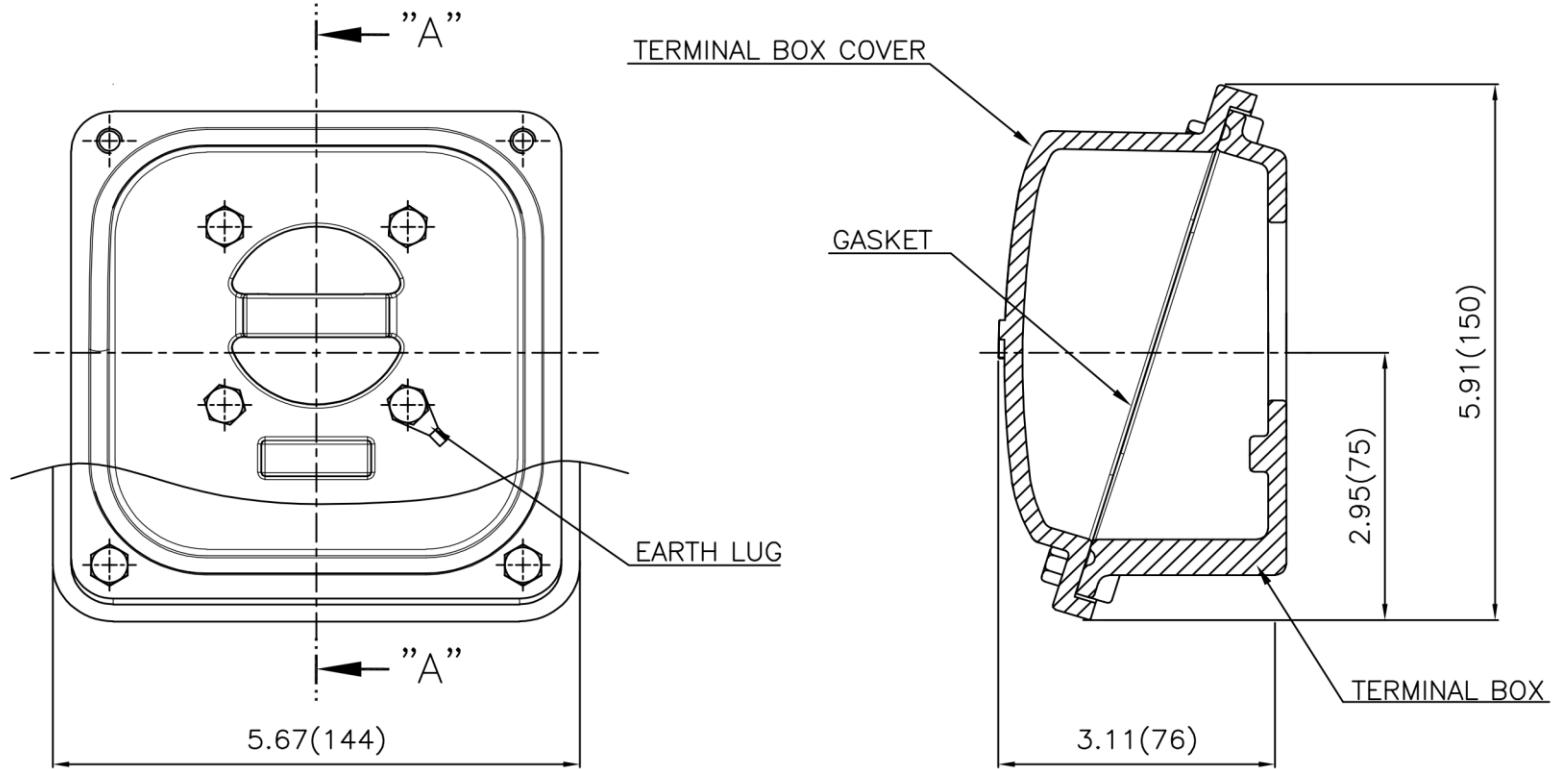
NOTE

[TOLERANCE]

- CENTER HEIGHT : +0.00inch - 0.03inch
- SHAFT DIAMETER : +0.000inch - 0.0005inch
- KEYWAY DEPTH : +0.000inch - 0.015inch

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	NEMA 143/5TC (JP) (Dual hole)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	1/6	TITLE	OUTLINE	A4 (1/6)
CHKD BY		PROJEC'N	3rd Angle			
DSND BY	S.H.LEE	DATE	2025-01-17	REF. NO		Sheet No. of
				DWG NO	LM-T2145C4 JLV25	Revision No. 1

Cls. I&II, Div. 2 IEEE 841



▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY
1						

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

