

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

IEEE841 TYPE

Catalog No.	IEEEV20-12-286TCRD	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA									
Frame Size		286TC		Rated Output		15 kW		20 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		21.3 A		26.7 A		53.3 A	
Insulation Class		F			Locked-rotor**		650 %		650 %		650 %	
Temp. Rise at full load (by resistance method)				Efficiency								
at 1.0 S.F		80 deg. C										
Motor Location		☐ Indoor ☐ Outdoor										
Altitude		Less than 1,000 meter										
Relative Humidity		Less than 80 %		Power Factor(p.u)								
Ambient Temp.		40 deg. C (Max.)										
Duty Type		Continuous (S1)										
Service Factor		1.15										
Mounting		B5		Speed at Full Load		1175 r.p.m						
Bearing	Type	Anti-Friction		Torque								
	DE/N-DE	6310ZC3 / 6310ZC3										
	Lubricant	Grease(Polyrex-EM)										
External Thrust		Not applicable		Breakdown**		230 %						
Coupling Method		☒ Direct ☐ V-belt		Moment of Inertia (J)								
Shaft Extension		Single										
Terminal Box	Main	Cast Iron										
	Aux.	No		Sound Pressure Level (No-load & mean value at 1m from motor)								
	Location	Refer to Outline Drawing										
Application				Vibration		2.03 mm/s (peak)						
Area classification		Hazardous		Permissible number of consecutive starts		Cold		3 times				
Type of Ex-Protection		Class I&II, Division 2				Hot		2 times				
Applicable Standard		IEEE841, NEMA MG1, CSA C390		Paint	Munsell No.		7.5BG6/1.5					

ACCESSORIES		SUBMITTAL DRAWING				
		Outline Dimension Drawing \ Motor Weight(Approx.)				
		B5		LM-I2286C5PLV23	420 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				
SPARE PARTS		- 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

4.72

20HP		6P	460V	Cat. No.	IEEEV20-12-286TCRD				
Model	HLS286PR338V			INS. Class	F	HD-F1	Amps	26.7A	
Type	HLS	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz
Frame	286TC	Encl.	TEFC	S.F.	1.15	RPM	1175	NEMA Nom. Eff.	91.7%
Bearing	Drive	6310ZC3			S.F.1.25 (When 100HP or less, Temp Rise F & Non-Hazardous)			3/4 Eff.	90.7%
	Opp.	6310ZC3			S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			NEMA Design	B Torque
Usable at	50Hz 20HP 380V 34.4A 970rpm S.F.: 1.0 Eff.: 90.2% Code: G								
	50Hz 20HP 400/415V 34.0/34.3A 975/975rpm S.F.: 1.0 Eff.: 90.2/90.2% Code: H/J								
CSA Certified for	Model	-	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)	
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC				Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)	
No.	-	Date	-	Weight	420 lb				
MARINE DUTY IEEE45 IEEE Std 841-2021				4M-138416	Made in Vietnam H4 Designed By HYUNDAI, Korea		HD HYUNDAI ELECTRIC		

2.36

WIRING DIAGRAM

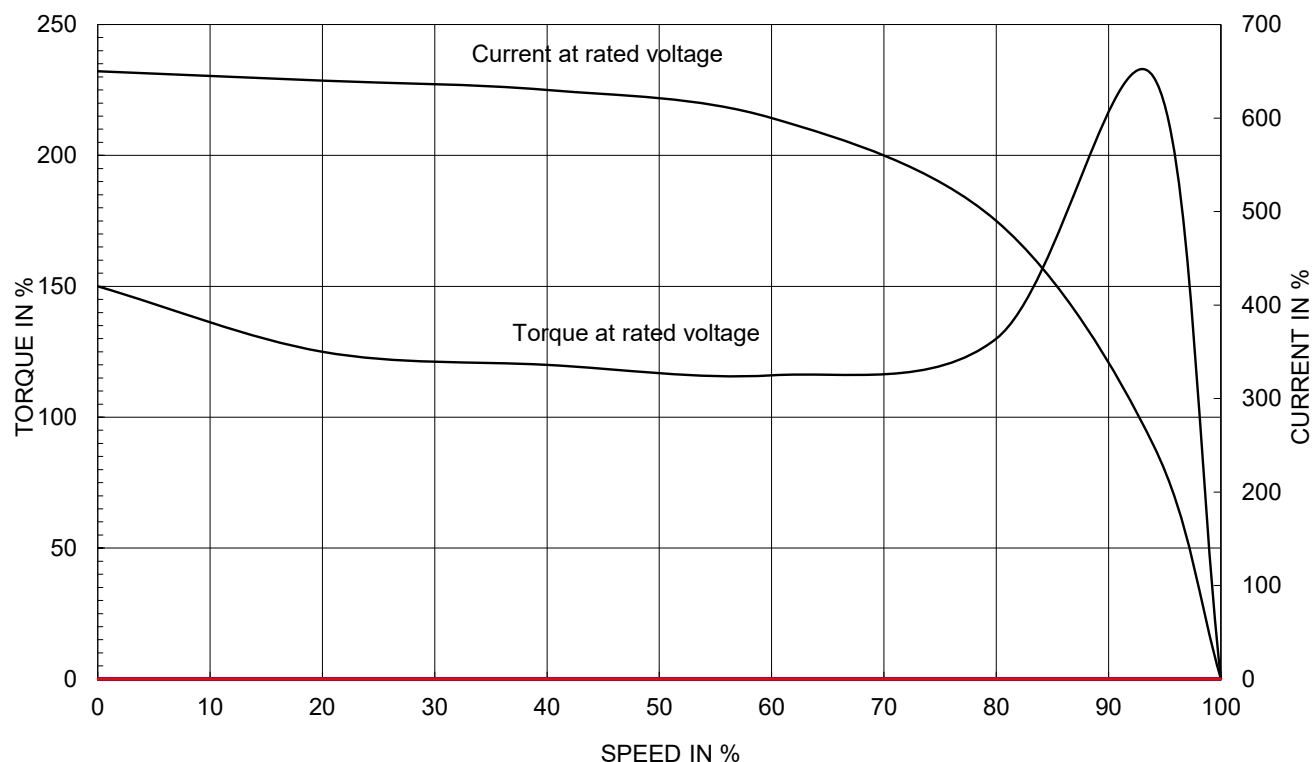
D.O.L (INVERTER & SOFT STARTER)  WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. T1 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-128796	WYE-DELTA (Y-D) N/A
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APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 IEEE841 (SSEN, 254-326)		DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE	A4 (1:1)			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE			
DSND BY	S.H.LEE	DATE	2024.06.07	NAMEPLATE DRAWING			
				REF. NO	4M-138416 / 4M-128796	Sheet No.	of
				DWG NO	NP-IEEEV20-12-286TCRD	Revision No.	0

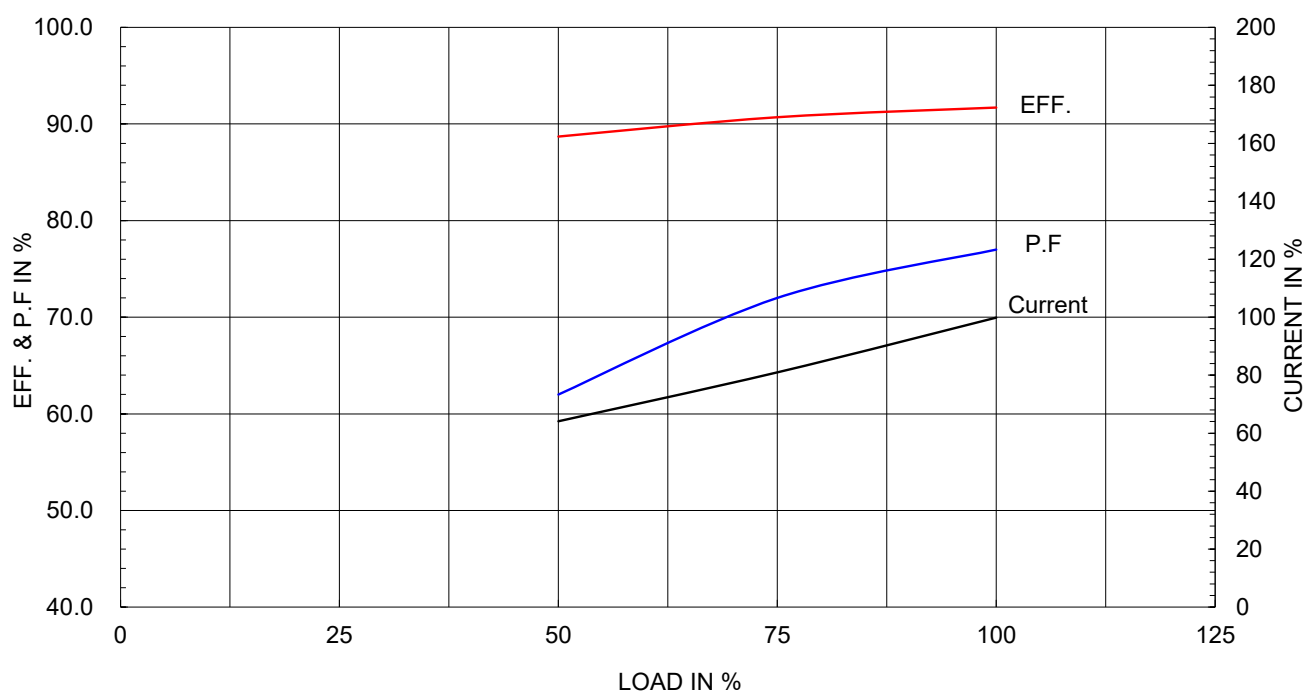
Type :	PJP	
Full Load Torque :	89.94	lb.ft
Load moment of Inertia (J) :	336.373	lb.ft2
Motor moment of Inertia (J) :	6.100	lb.ft2

15kW	20HP	6 P	60 Hz
Speed at Full Load :			1175 RPM
Rated Voltage	575V	460V	230V
Full Load Current	21.3A	26.7A	53.3A

SPEED VS TORQUE & CURRENT CURVE

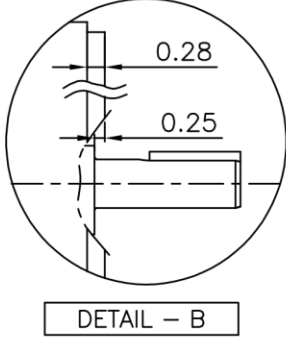
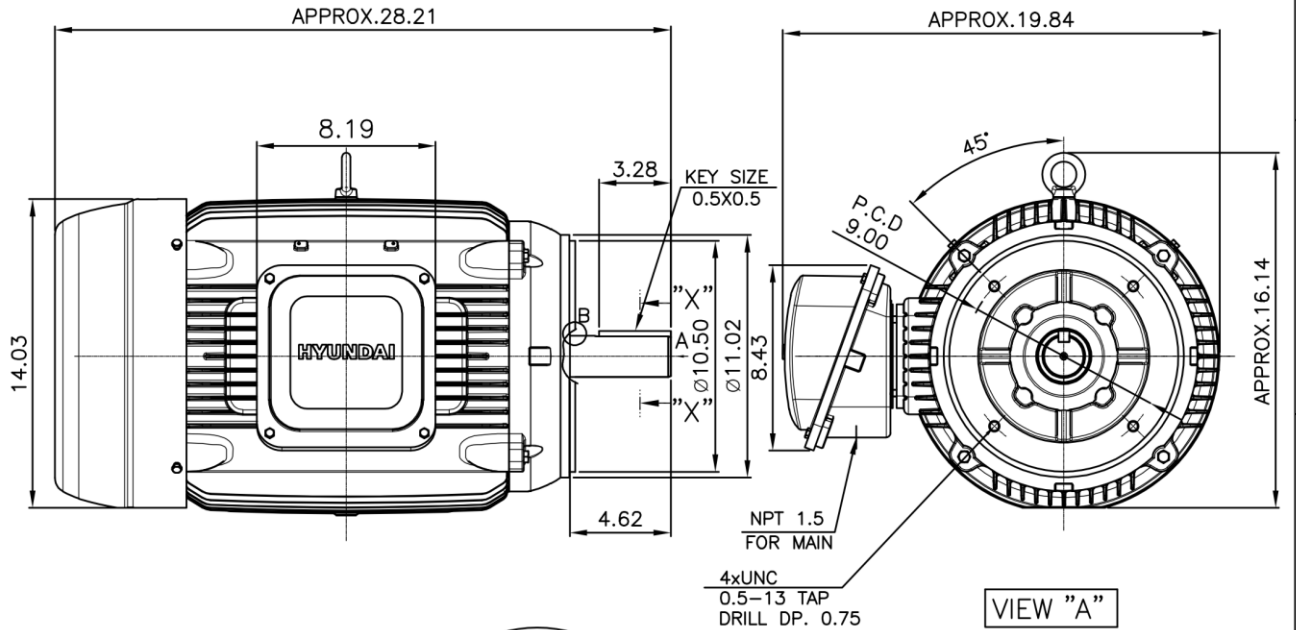


OUTPUT VS EFF., P.F & CURRENT CURVE



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

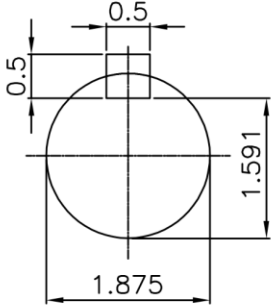
IEEE841



NOTE

[TOLERANCE]

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



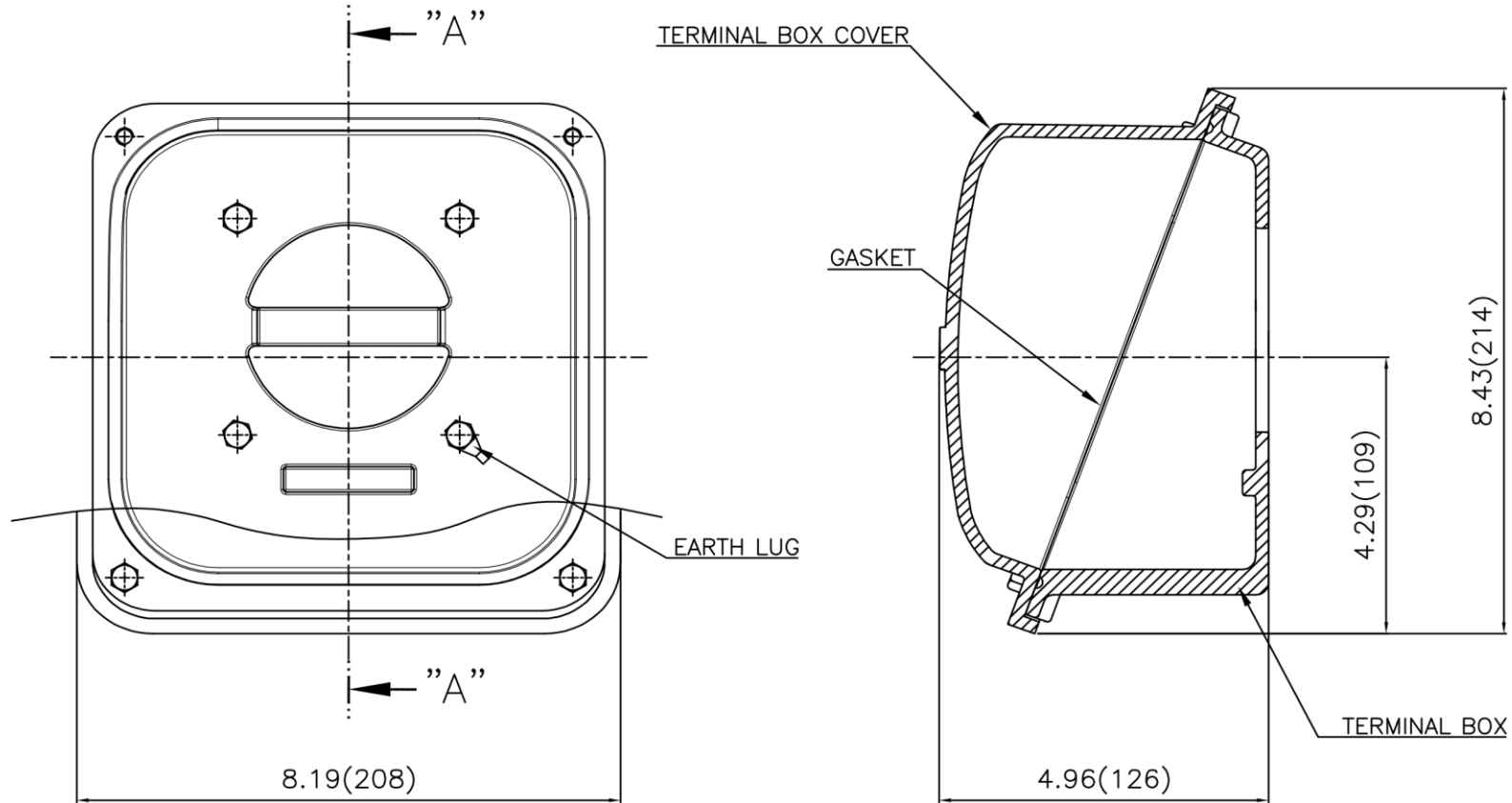
APPD BY	S.Y.KIM	UNIT	inch	SUBJECT	NEMA 286TC	DWG SIZE
CHKD BY	R.G.KIM	SCALE	1/8.5			A4 (1:8.5)
CHKD BY		PROJEC'N	3rd Angle	TITLE	OUTLINE	
DSND BY	주유림	DATE	2021-04-30			



REF. NO		Sheet No.	of
DWG NO	LM-I2286C5PLV23	Revision No.	0

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		일반계관공차	
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. 250-280 (CAST IRON)	DWG SIZE	
CHKD BY		SCALE	1/2	TITLE	TERMINAL BOX ASS'Y	A3 (1:2)	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No. of	
DSND BY	네슬의	DATE	2023-10-19	DWG NO	3M-248458	Revision No. 0	