

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.	IEEE75-12-405TCRD	Item No.	Rev. No.	[]
Project Name		Project No.	Quantity	sets

GENERAL SPECIFICATION		PERFORMANCE DATA			
Frame Size	405TC	Rated Output	55 kW 75 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	69.6 A	87.0 A 173.9 A
Insulation Class	F		Locked-rotor**	680 %	680 % 680 %
Temp. Rise at full load (by resistance method)		Efficiency			
at 1.0 S.F	80 deg. C	50% Load		91.5 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		93.5 %	
Altitude	Less than 1,000 meter	100% Load		94.5 %	
Relative Humidity	Less than 80 %	Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)	50% Load		0.690	
Duty Type	Continuous (S1)	75% Load		0.790	
Service Factor	1.15	100% Load		0.840	
Mounting	B5	Speed at Full Load		1185 r.p.m	
Bearing	Type	Anti-Friction			
	DE/N-DE	6316C3 / 6313C3			
	Lubricant	Grease(Polyrex-EM)			
External Thrust	Not applicable				
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt	Torque			
Shaft Extension	Single	Full Load		327.0 lb.ft	
Terminal Box	Main	Cast Iron			
	Aux.	No			
	Location	Refer to Outline Drawing			
Application		Locked-rotor**		140 %	
Area classification	Hazardous	Breakdown**		220 %	
Type of Ex-Protection	Class I&II, Division 2	Moment of Inertia (J)			
Applicable Standard	IEEE841, NEMA MG1, CSA C390	Load(Max.)		2,670.866 lb.ft2	
		Motor		55.310 lb.ft2	
		Sound Pressure Level (No-load & mean value at 1m from motor)			
		75 dB(A)			
		Vibration			
		3.8 mm/sec (peak)			
		Permissible number of consecutive starts		Cold 3 times	
				Hot 2 times	
		Paint	Munsell No.	7.5BG6/1.5	

ACCESSORIES

SUBMITTAL DRAWING		
Outline Dimension Drawing	Motor Weight(Approx.)	
B5	LM-I1405C5PL001	1210 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.				
Date	DSND	CHKD	CHKD	APPD
2024-07-13	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.

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

4.72

75HP	6P	460V	Cat. No.	IEEE75-12-405TCRD				
Model	HLS405PR06		INS. Class	F	HD-F1	Amps	87	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	
Frame	405TC	Encl.	TEFC	S.F.	1.15	RPM	1185	
Bearing	Drive	6316C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	93.5%	
	Opp.	6313C3				NEMA Design	B	
Usable at	50Hz 75HP 380V 105.9A 981rpm S.F.: 1.0 Eff.: 93.3% Code: E							
	50Hz 75HP 400/415V 101/97.9A 983/984rpm S.F.: 1.0 Eff.: 93.6/93.8% Code: F/G							
CSA Certified for	Model	LATER		Type	PJP			
	CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC	CLASS II, Div. 2, Gr. E, F & G (Gr. E : Up to 320FR)		Temp. Code (sine wave)	Frame	140~320FR	360~400FR	440FR
		Amb. 40°C	T3C (160°C)		T3B (165°C)	T3A (180°C)		
Amb. 55°C	T3A (180°C)	T3A (180°C)	T3 (200°C)					
No.	-		Date	-		Weight	1210 lb	

IEEE Std 841-2021

4M-135701

MARINE DUTY IEEE45

Made in Korea H1

2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 IEEE841 (HL)	DWG SIZE
CHKD BY	I.K.KIM	SCALE	NONE			A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE NAMEPLATE DRAWING		
DSND BY	S.H.LEE	DATE	2024.06.07			

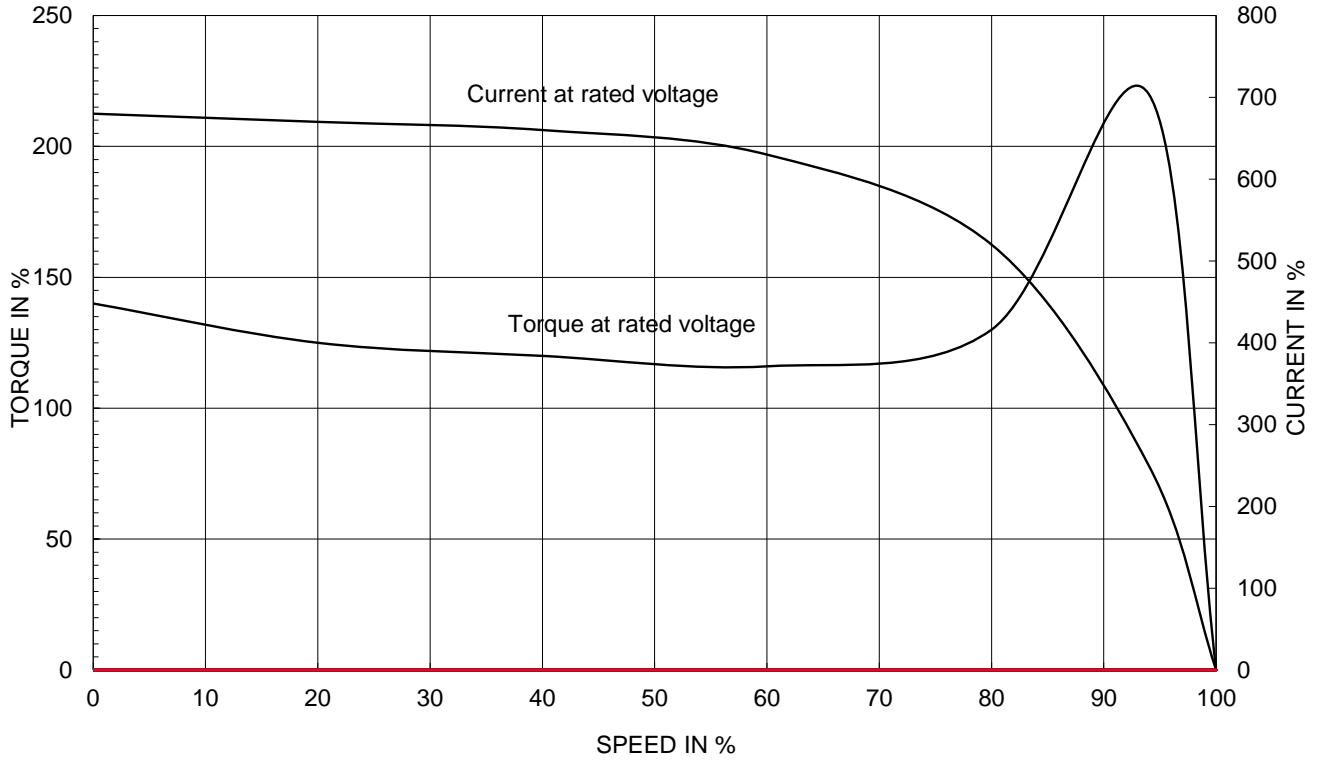


REF. NO	4M-135701	Sheet No.	of
DWG NO	NP-IEEE75-12-405TCRD	Revision No.	0

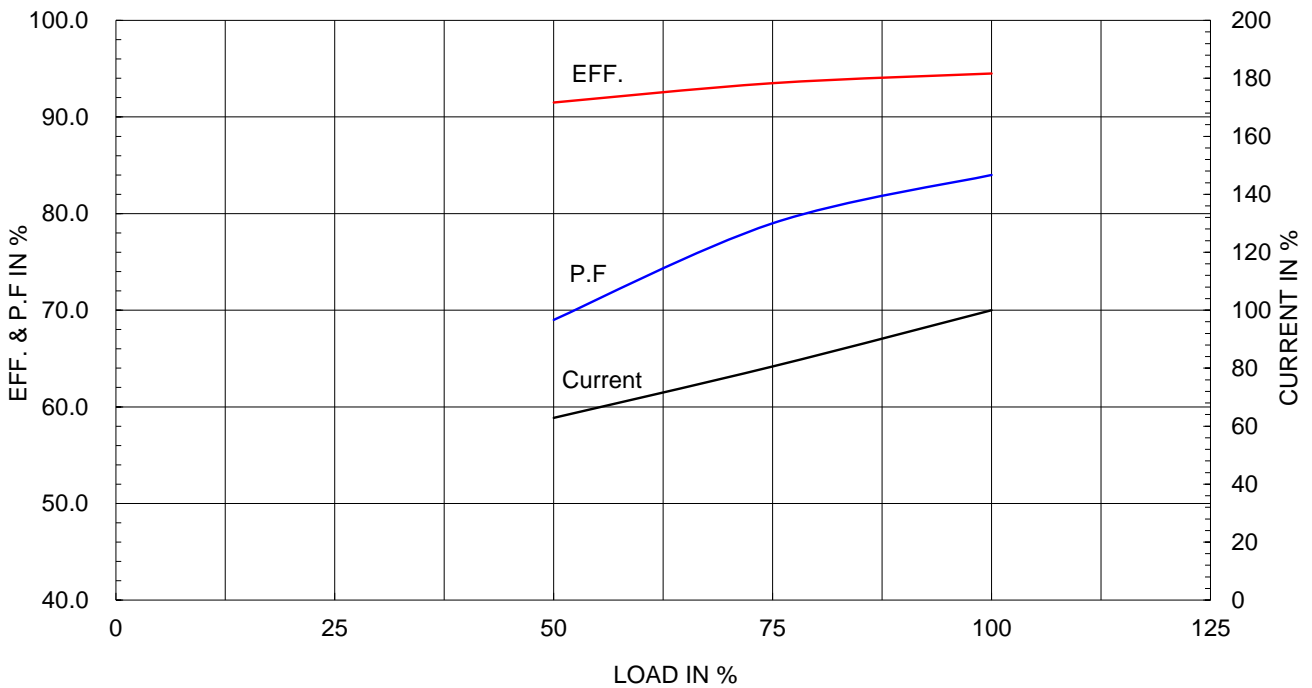
Type :	PJP	
Full Load Torque :	327.0	lb.ft
Load moment of Inertia (J) :	2670.866	lb.ft2
Motor moment of Inertia (J) :	55.310	lb.ft2

55kW	75HP	6 P	60 Hz
Speed at Full Load :			1185 RPM
Rated Voltage	575V	460V	230V
Full Load Current	69.6A	87.0A	173.9A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

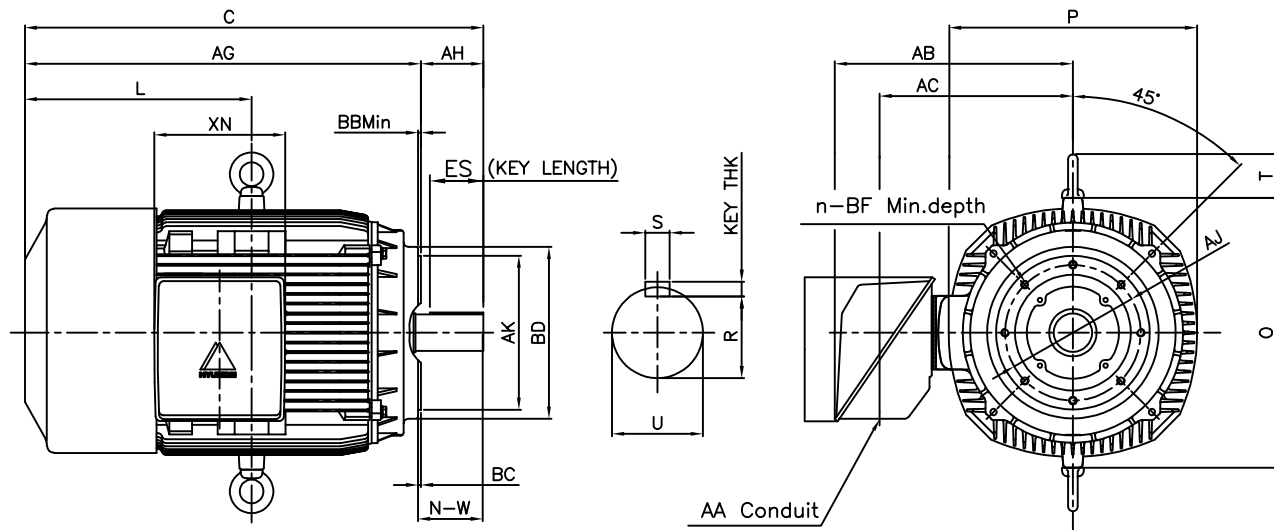


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

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▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							

IEEE841



DIMENSIONS

Unit : inch

C - F A C E									CONDUIT BOX					APPROX. WGT.(LB)
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH	AA	AB	AC	XL	XN	
11.00	12.50	0.25	0.25	13.94	5/8-11	0.94	8	7.00	3.00	20.28	14.85	11.65	10.63	1210

O V E R A L L						S H A F T					KEY	BEARING	
C	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
								R	ES	S			
41.01	20.57	22.20	19.69	3.55	34.01	2.875	7.25	2.450	5.65	0.750	0.750	6316C3	6313C3

NOTE

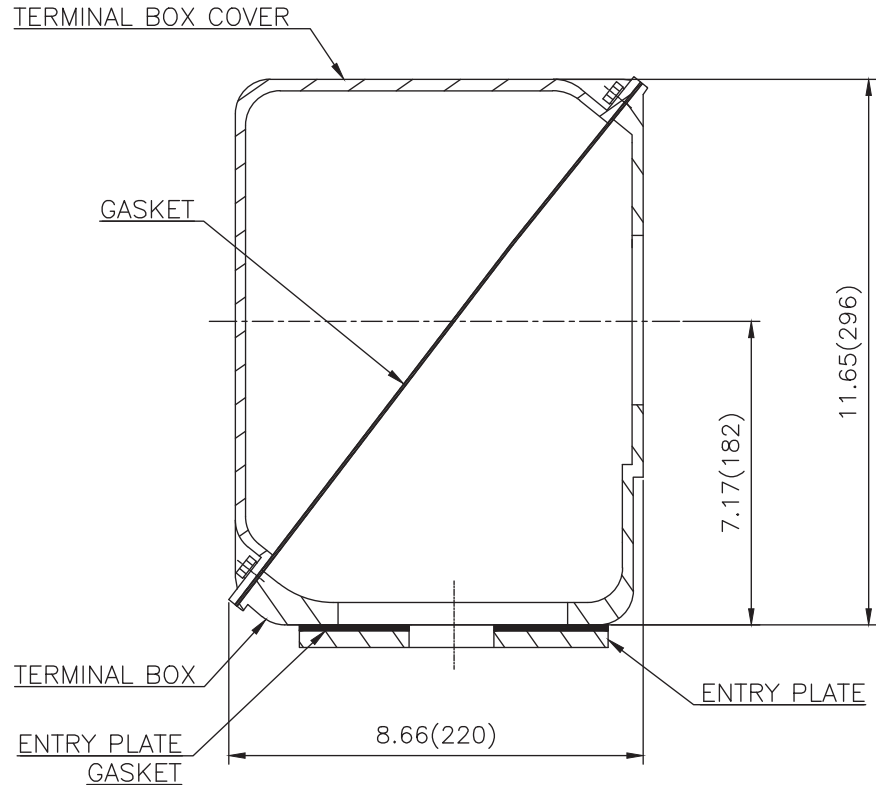
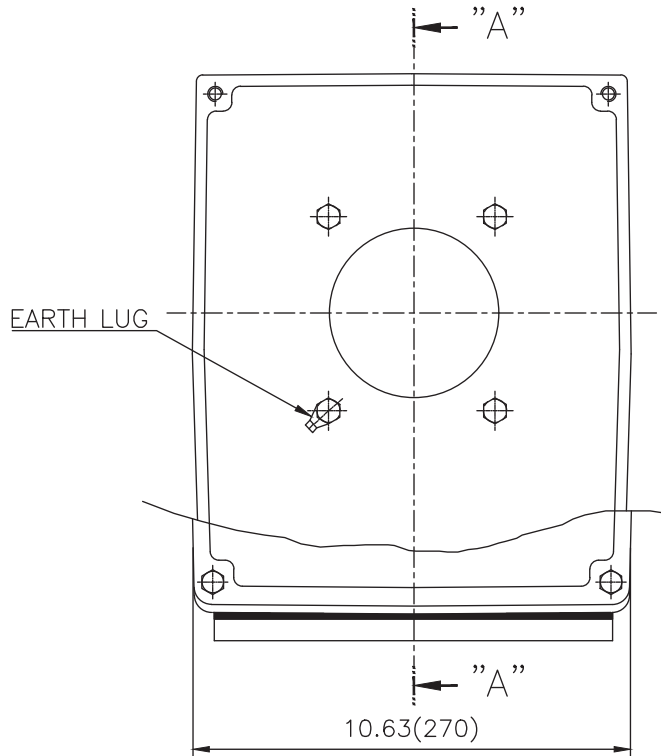
- 1.Dimension "U" tolerance : +0.000inch ~ -0.0005inch (143TC-215TC): +0.000inch ~ -0.001inch (254TC-449TC)
- 2.Dimension "R" tolerance : +0.000inch ~ - 0.015inch
- 3.Dimension "AK" tolerance : +0.000inch ~ -0.003inch (143TC-286TC): +0.000inch ~ -0.005inch (324TC-449TC)

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	NEMA 405TC	DWG SIZE	A4 (1:1)
CHKD BY	R.G.KIM	SCALE	NONE	TITLE	OUTLINE		
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)				
DSND BY	H.K.LEE	DATE	2021-04-30				



REF. NO	350A8516AA	Sheet No.	of
DWG NO	LM-11405C5PL001	Revision No.	0

**Cls. I&II, Div. 2
IEEE 841**



SEC. "A" - "A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

일반기준공차		일반재판공차	
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. 400-440 (CAST IRON)	DWG SIZE	A3 (1:1.2)
CHKD BY		SCALE	1/1.2	TITLE	MAIN TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	배승희	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

