

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.	IEEE100-18-405T	Item No.	Rev. No. []
Project Name		Project No.	Quantity sets

GENERAL SPECIFICATION		PERFORMANCE DATA				
Frame Size	405T	Rated Output	75 kW 100 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	91.3 A	114.1 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	50% Load		92.4 %		
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		94.4 %		
Altitude	Less than 1,000 meter	100% Load		95.4 %		
Relative Humidity	Less than 80 %	Power Factor(p.u)				
Ambient Temp.	40 deg. C (Max.)	50% Load		0.715		
Duty Type	Continuous (S1)	75% Load		0.815		
Service Factor	1.15	100% Load		0.865		
Mounting	B3	Speed at Full Load		1780 r.p.m		
Bearing	Type	Anti-Friction				
	DE/N-DE	NU316 / 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		296.8 lb.ft		
Terminal Box	Main	Cast Iron				
	Aux.	No				
	Location	Refer to Outline Drawing				
Application		Moment of Inertia (J)				
Area classification	Hazardous	Load(Max.)		1,337.213 lb.ft2		
Type of Ex-Protection	Class I&II, Division 2	Motor		35.910 lb.ft2		
Applicable Standard	IEEE841, NEMA MG1, CSA C390	Sound Pressure Level (No-load & mean value at 1m from motor)				
ACCESSORIES		Vibration				82 dB(A)
		Permissible number of consecutive starts				Cold 3 times Hot 2 times
		Paint	Munsell No.	7.5BG6/1.5		
		SUBMITTAL DRAWING				
		Outline Dimension Drawing		Motor Weight(Approx.)		
	B3	LM-I1405B3PL001	1120 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

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CROWN TRITON
Premium Efficiency AC 3 Phase Motor

100HP	4P	460V	Cat. No.	IEEE100-18-405T			
Model	HLS405SR04		INS. Class	F	HD-F1	Amps	114.1
Type	HLS	Duty	CONT	Code	G	Amb.	40°C
Frame	405T	Encl.	TEFC	S.F.	1.15	RPM	1780
Bearing	Drive	NU316		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	94.4%
	Opp.	6313C3				NEMA Design	B
Usable at	50Hz 100HP 380V 137.5A 1475rpm S.F.: 1.0 Eff.: 94.5% Code: E						
	50Hz 100HP 400/415V 132.6/130.6A 1478/1479rpm S.F.: 1.0 Eff.: 94.8/94.9% Code: F/G						
CSA Certified for	Model	LATER		Type	PJP	Temp. Code	
	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2, Gr. E, F & G (Gr. E : Up to 320FR)		Frame	Amb. 40°C	140~320FR
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC				Frame	Amb. 55°C	360~400FR
No.	-		Date	-		Weight	1120 lb

IEEE Std 841-2021

4M-135701

MARINE DUTY IEEE45

Made in Korea H1

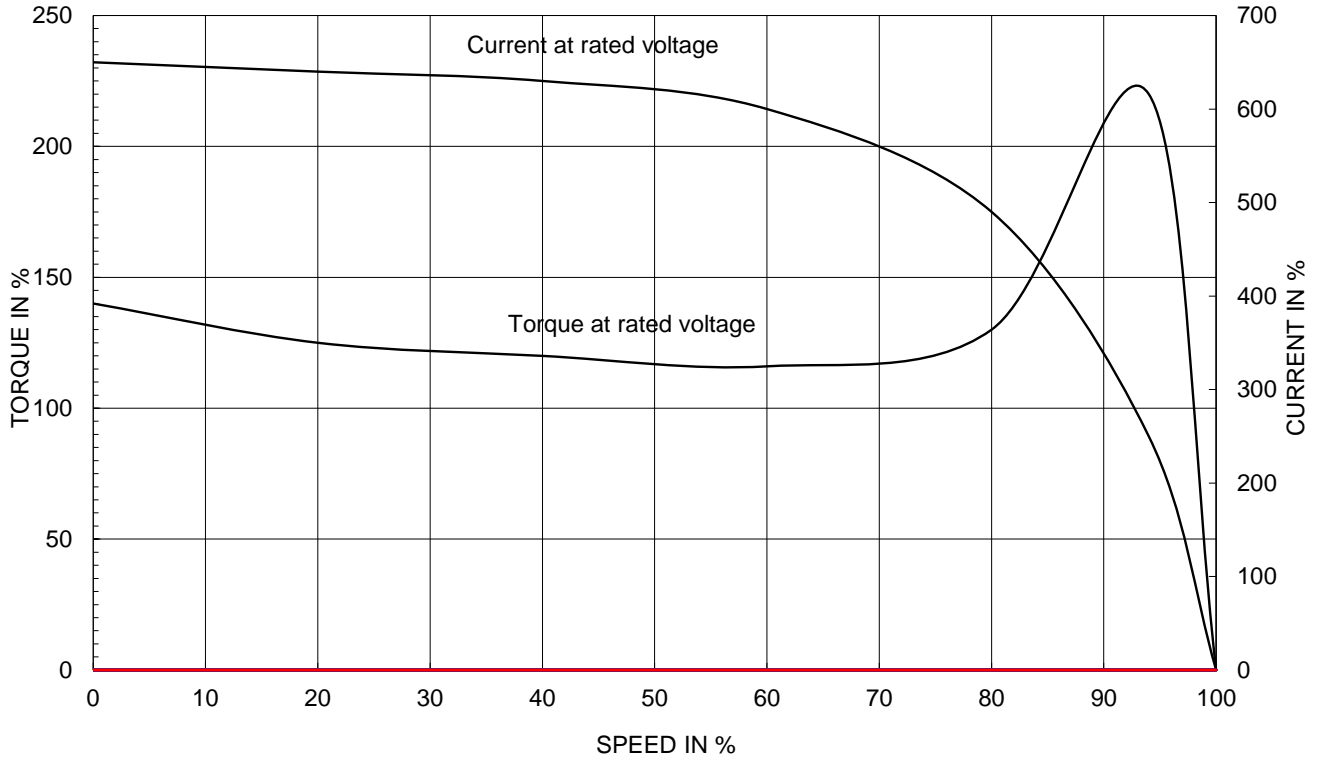
2.36

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 IEEE841 (HL)	DWG SIZE	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE				
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-IEEE100-18-405T	Revision No. 0	

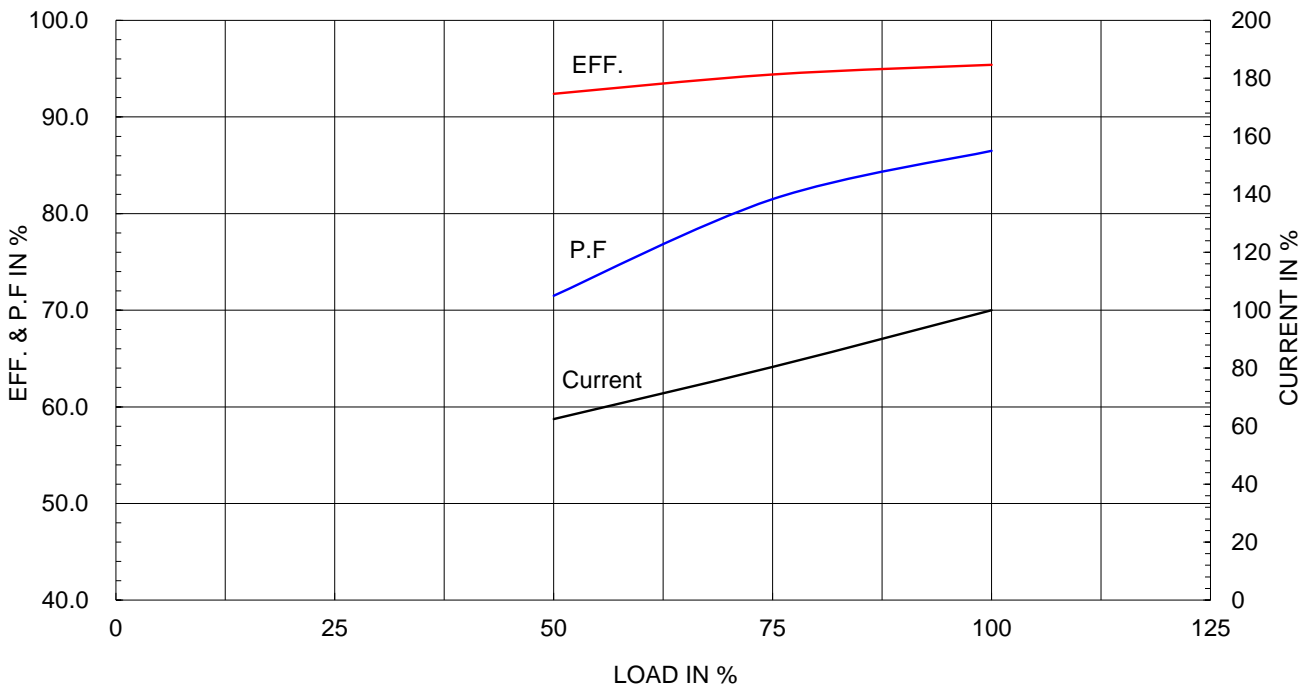
Type :	PJP	
Full Load Torque :	296.8	lb.ft
Load moment of Inertia (J) :	1337.213	lb.ft ²
Motor moment of Inertia (J) :	35.910	lb.ft ²

75kW	100HP	4 P	60 Hz
Speed at Full Load :			1780 RPM
Rated Voltage	575V	460V	230V
Full Load Current	91.3A	114.1A	228.1A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

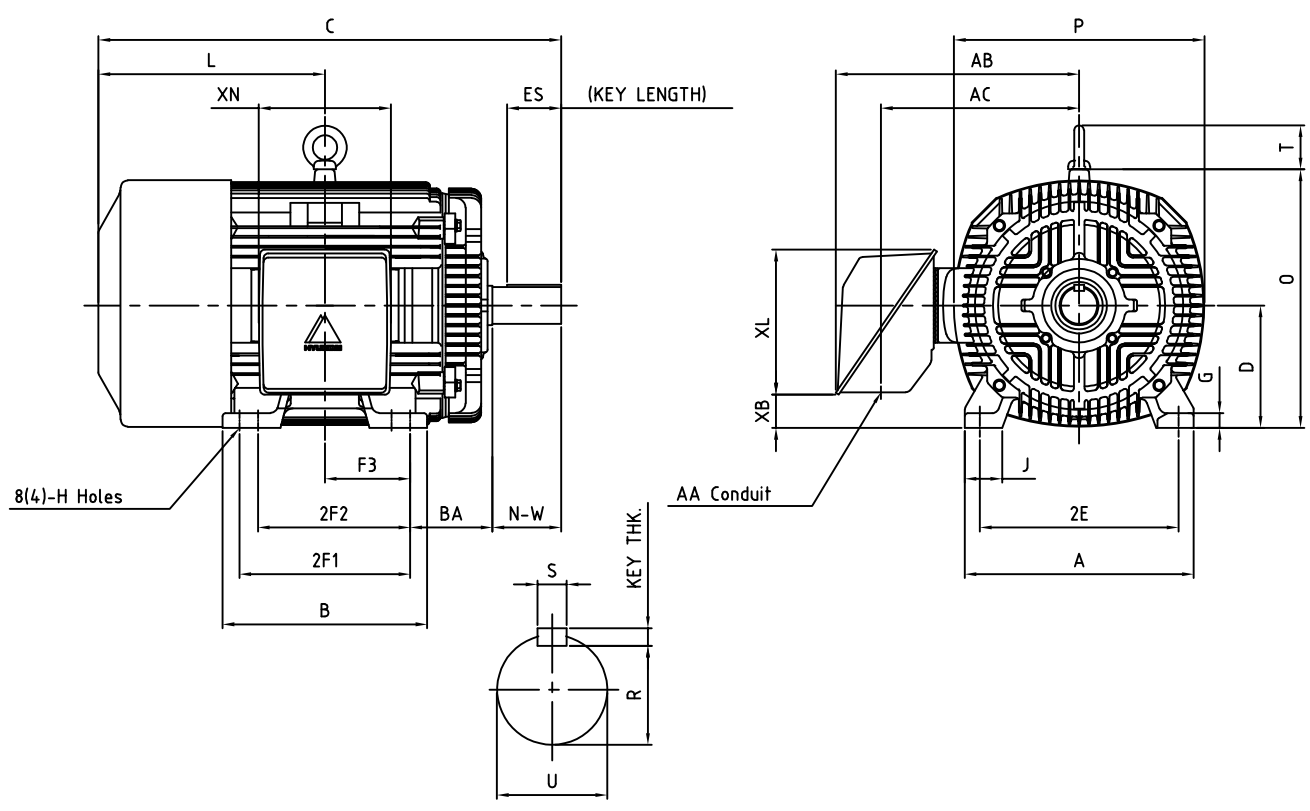


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (차입유역)

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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

M O U N T I N G									C O N D U I T B O X						APPROX. WGT.(LB)
A	B	2E	2F1	2F2	F3	G	J	H	AA	AB	AC	XB	XL	XN	
18.43	16.46	16.00	13.75	(12.25)	6.870	1.18	3.03	0.81	3.00	20.28	14.85	2.83	11.65	10.63	1120

O V E R A L L								S H A F T			KEY	BEARING		
BA	C	D	L	O	P	T	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
									R	ES	S			
6.62	41.01	10.00	20.57	20.79	20.16	3.55	2.875	7.25	2.450	5.65	0.750	0.750	6316C3	6313C3

NOTE

1. Dimension "D" tolerance : +0.00inch - 0.03inch (143T-365T) ; +0.000inch - 0.06inch (404T-449T)
2. Dimension "U" tolerance : +0.000inch - 0.005inch (143T-215T), +0.000inch - 0.001inch (254T-449T)
3. Dimension "R" tolerance : +0.000inch - 0.015inch

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	NEMA 405T	DWG SIZE	A4 (1:1)	
CHKD BY	R.G.KIM	SCALE	NONE					
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)	TITLE				OUTLINE
DSND BY	H.K.LEE	DATE	2021-04-30					



REF. NO	350A8116AA	Sheet No.	of
DWG NO	LM-I1405B3PL001	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

