

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.	IEEE250-36-449TSC	Item No.	Rev. No.	[      ]
Project Name		Project No.	Quantity	sets

GENERAL SPECIFICATION		PERFORMANCE DATA			
Frame Size	449TSC	Rated Output	190 kW      250 HP		
Type	PJP	Number of Poles	2		
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	221.3 A	276.6 A
Insulation Class	F		Locked-rotor**	700 %	700 %
Temp. Rise at full load (by resistance method)		Efficiency			
at 1.0 S.F	80 deg. C	50% Load		92.8 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor	75% Load		94.8 %	
Altitude	Less than 1,000 meter	100% Load		95.8 %	
Relative Humidity	Less than 80 %	Power Factor(p.u)			
Ambient Temp.	40 deg. C (Max.)	50% Load		0.750	
Duty Type	Continuous ( S1 )	75% Load		0.850	
Service Factor	1.15	100% Load		0.900	
Mounting	B35	Speed at Full Load	3570 r.p.m		
Bearing	Type	Anti-Friction	Torque		
	DE/N-DE	6314C3 / 6314C3	Full Load	374.9 lb.ft	
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**	120 %	
External Thrust	Not applicable	Breakdown**	220 %		
Coupling Method	<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt	Moment of Inertia (J)			
Shaft Extension	Single	Load(Max.)	463.931 lb.ft2		
Terminal	Main	Motor	58.330 lb.ft2		
Box	Aux.	Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	Refer to Outline Drawing			
Application		Vibration	3.8 mm/sec (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.)	
B35	LM-I1449C4CL003	2510 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.

SPARE PARTS

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

250HP	2P	460V	Cat. No.	IEEE250-36-449TSC				
Model	HLS449PR02		INS. Class	F	HD-F1	Amps	276.6	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	
Frame	449TSC	Encl.	TEFC	S.F.	1.15	RPM	3570	
Bearing	Drive	6314C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	94.8%	
	Opp.	6314C3				NEMA Design	B	
Usable at	50Hz 200HP 380V 264.9A 2970rpm S.F.: 1.0 Eff.: 95.6% Code: G							
	50Hz 200HP 400/415V 251.1/242A 2973/2975rpm S.F.: 1.0 Eff.: 95.7/95.8% Code: H/J							
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	2510 lb	

**IEEE Std 841-2021**

4M-135701

**MARINE DUTY IEEE45**

Made in Korea H1

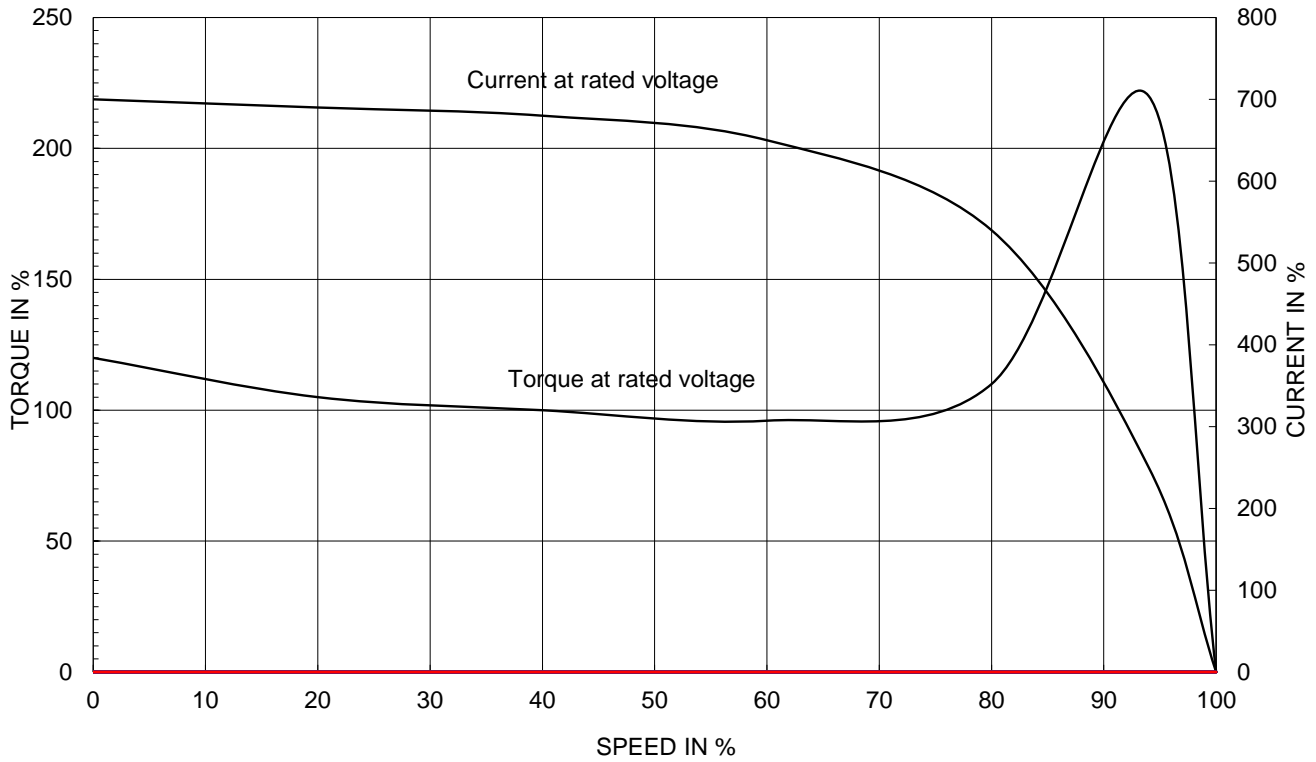
2.36

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 <b>NAMEPLATE DRAWING</b>			
DSND BY	S.H.LEE	DATE	2024.06.07				
				REF. NO	<b>4M-135701</b>	Sheet No. of	
				DWG NO	<b>NP-IEEE250-36-449TSC</b>	Revision No. <b>0</b>	

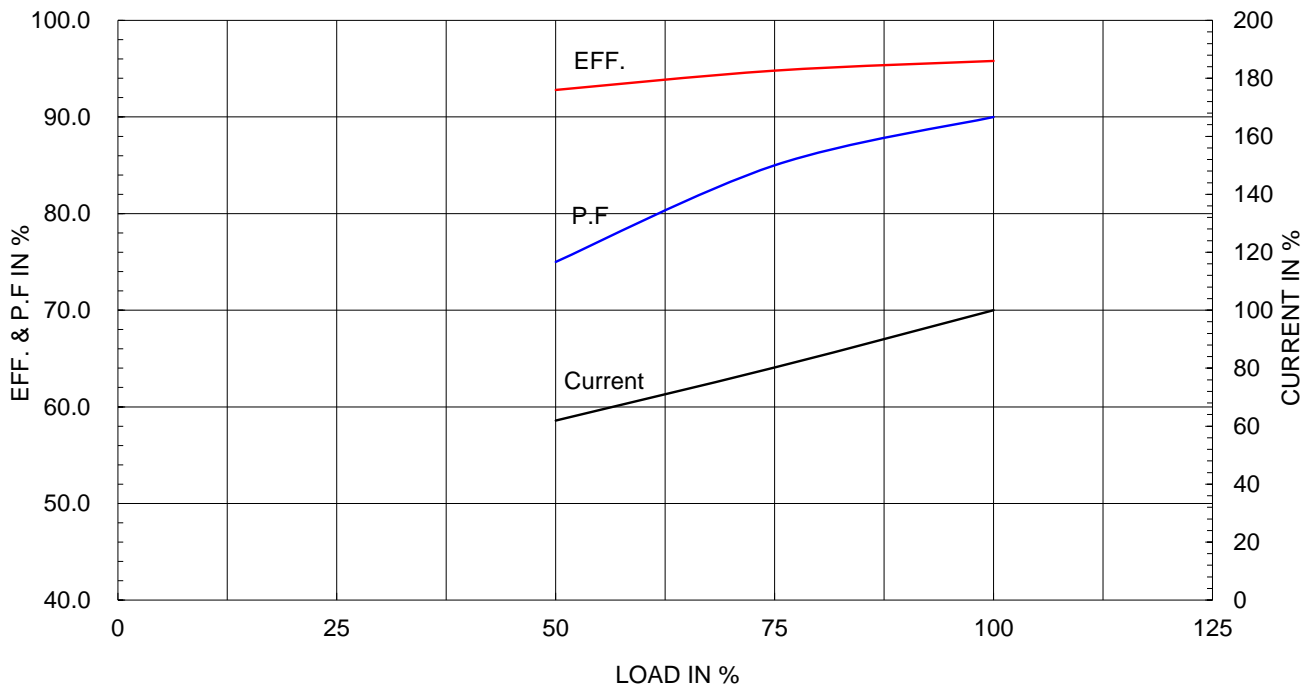
Type :	PJP
Full Load Torque :	374.9 lb.ft
Load moment of Inertia (J) :	463.931 lb.ft2
Motor moment of Inertia (J) :	58.330 lb.ft2

190kW 250HP	2 P	60 Hz
Speed at Full Load :		3570 RPM
Rated Voltage	575V	460V 230V
Full Load Current	221.3A	276.6A 553.2A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

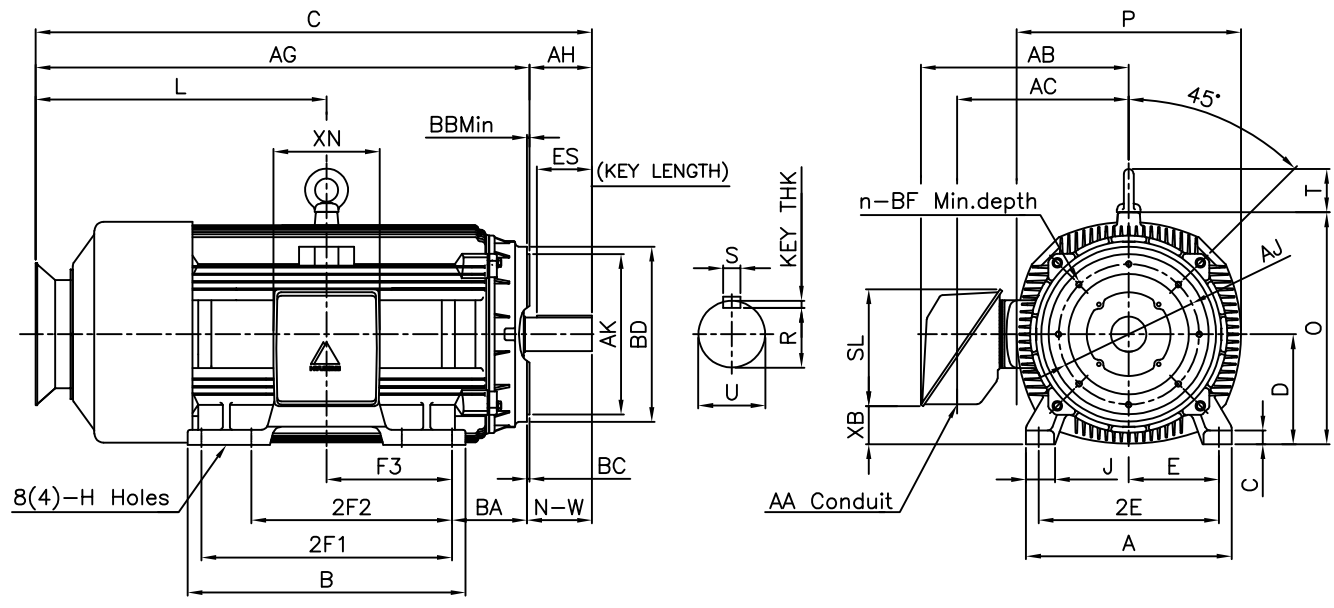


본 도면은 현대일렉트릭(주) 재산이므로  
허가없이 복사할 수 없음 (취급주의)

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1		2			3			4		
▽	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
20.51	27.72	18.00	25.00	(20.00)	12.500	1.42	3.07	0.81	3.00	23.78	18.03	3.14	16.30	13.78	2510

O V E R A L L									S H A F T				KEY	BEARING	
BA	C	D	L	O	P	T	AG	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
										R	ES	S			
7.50	55.77	11.00	30.98	23.19	22.44	4.33	45.33	2.375	4.75	2.021	3.03	0.625	0.625	6314C3	6314C3

C - F A C E								
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH
14.00	16.00	0.25	0.25	17.48	5/8-11	0.94	8	4.50

**NOTE**

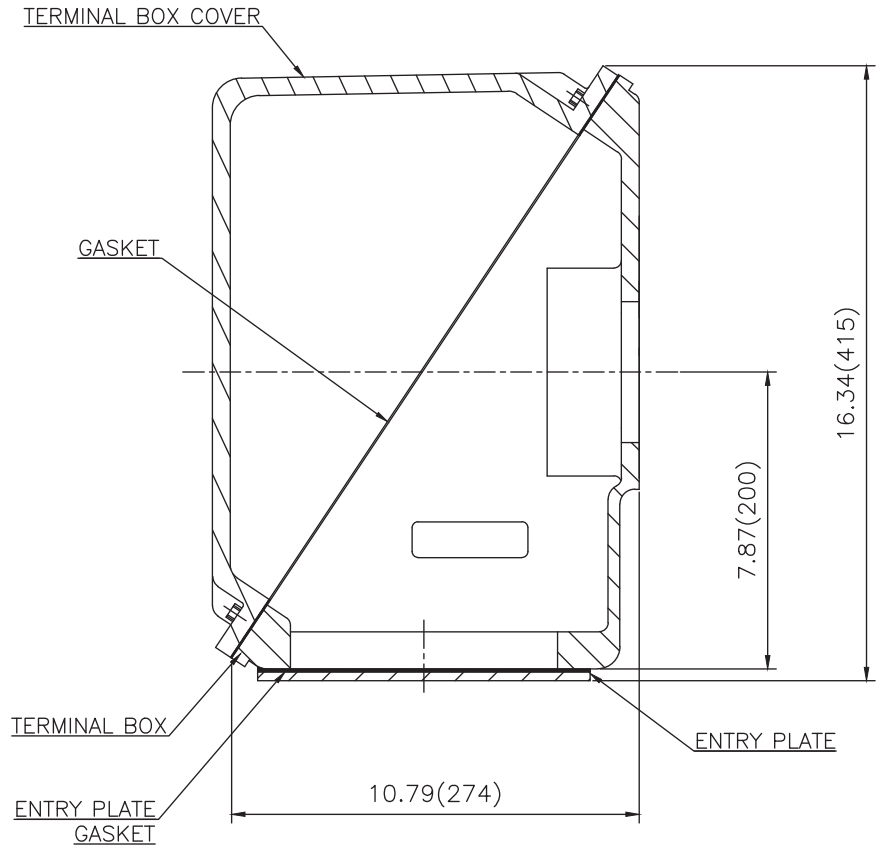
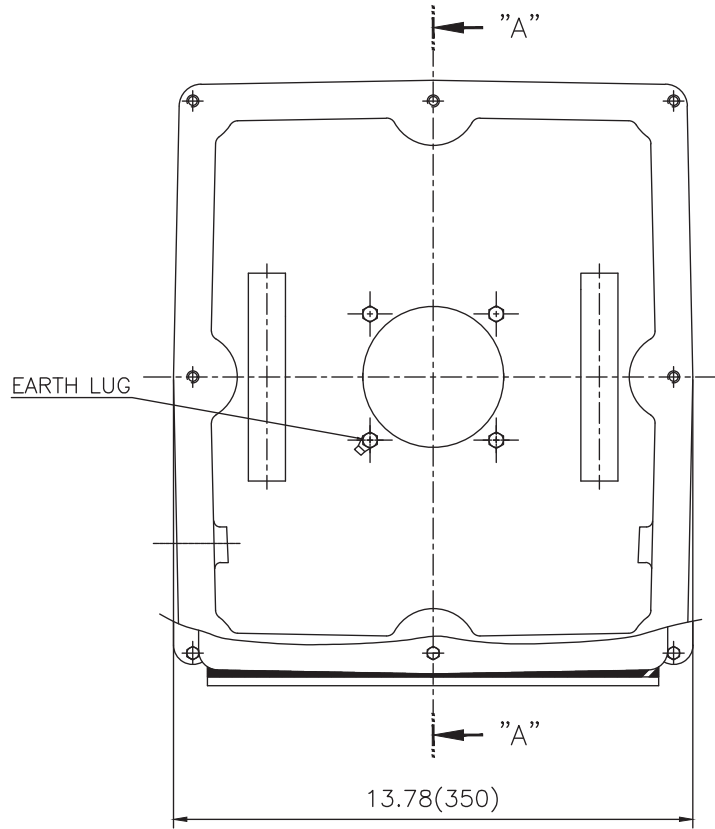
- 1.Dimension "D" tolerance : +0.00inch ~ -0.03inch (143TC-365TC) : +0.000inch ~ -0.06inch (404TC-449TC)
- 2.Dimension "U" tolerance : +0.000inch ~ -0.0005inch (143TC-215TC): +0.000inch ~ -0.001inch (254TC-449TC)
- 3.Dimension "R" tolerance : +0.000inch ~ - 0.015inch
- 4.Dimension "AK" tolerance : +0.000inch ~ -0.003inch (143TC-286TC): +0.000inch ~ -0.005inch (324TC-449TC)

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	NEMA 449TSC	DWG SIZE	A4 ( 1:1 )
CHKD BY	R.G.KIM	SCALE	NONE	TITLE	<b>OUTLINE</b>		
CHKD BY	Y.H.BAE	PROJEC'N	3각법(3rd Angle)				
DSND BY	H.K.LEE	DATE	2021-05-06				



REF. NO	350A8320BA	Sheet No.	of
DWG NO	LM-11449C4CL003	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

일반가공공차		일반기계공차	
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. L440 (CAST IRON)	DWG SIZE	A3 (1:3.5)
CHKD BY		SCALE	1/3.5	TITLE			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	MAIN TERMINAL BOX ASS'Y			
DSND BY	배승희	DATE	2023-10-19	REF. NO		Sheet No.	of
				DWG NO	3M-248452	Revision No.	0

