

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.	IEEE125-18-444T	Item No.	Rev. No. []
Project Name		Project No.	Quantity sets

GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	444T	Rated Output	95 kW		125 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	113.6 A	142.0 A	284.1 A	
Insulation Class	F		Locked-rotor**	700 %	700 %	700 %	
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		0.730			
Duty Type	Continuous (S1)	75% Load		0.830			
Service Factor	1.15	100% Load		0.880			
Mounting	B3	Speed at Full Load		1785 r.p.m			
Bearing	Type	Anti-Friction		Torque			
	DE/N-DE	NU318 / 6316C3		Full Load		374.9 lb.ft	
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**		140 %	
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.)		1,507.479 lb.ft2			
Terminal Box	Main	Cast Iron		Motor		52.510 lb.ft2	
	Aux.	No		Sound Pressure Level (No-load & mean value at 1m from motor)			
Location	Refer to Outline Drawing		85 dB(A)				
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.)	
B3	LM-I1444B3PL001	1530 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.

Date	DSND	CHKD	CHKD	APPD
2024-07-13	S.H. Lee	I.K. Kim	R.G. Kim	S.W. Kim

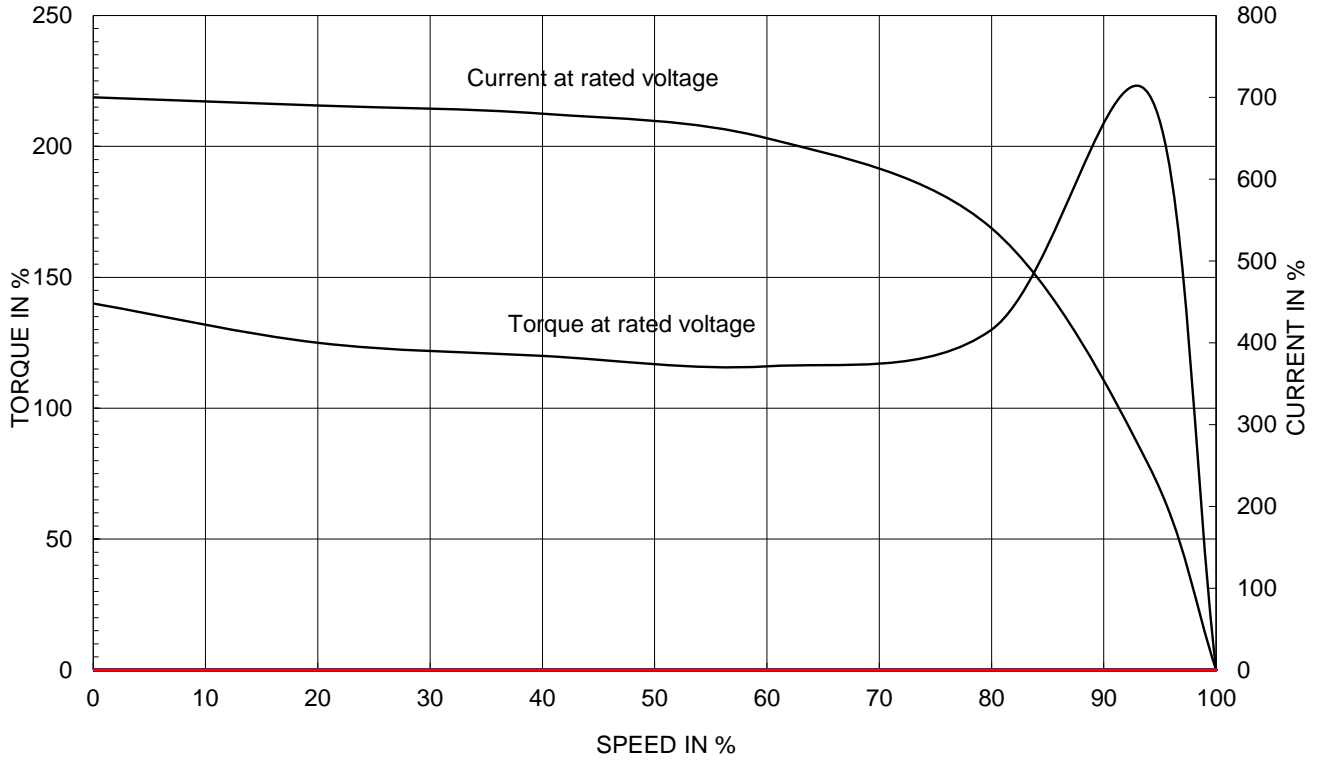
[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.
 Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
 Inspection and performance test shall be done according to maker standard, if not mentioned.
 * In case 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																																																																																																																									
<p>4.72</p> <div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">CROWN TRITON Premium Efficiency AC 3 Phase Motor</p> <div style="display: flex; justify-content: space-around; align-items: center;">      </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>125HP</td> <td>4P</td> <td>460V</td> <td>Cat. No.</td> <td colspan="6">IEEE125-18-444T</td> </tr> <tr> <td>Model</td> <td colspan="2">HLS444SR04</td> <td>INS. Class</td> <td>F</td> <td>HD-F1</td> <td>Amps</td> <td colspan="3">142</td> </tr> <tr> <td>Type</td> <td>HLS</td> <td>Duty</td> <td>CONT</td> <td>Code</td> <td>H</td> <td>Amb.</td> <td>40°C</td> <td>Hertz</td> <td>60Hz</td> </tr> <tr> <td>Frame</td> <td>444T</td> <td>Encl.</td> <td>TEFC</td> <td>S.F.</td> <td>1.15</td> <td>RPM</td> <td>1785</td> <td>NEMA Nom. Eff.</td> <td>95.4%</td> </tr> <tr> <td rowspan="2">Bearing</td> <td>Drive</td> <td colspan="2">NU318</td> <td colspan="3">S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)</td> <td>3/4 Eff.</td> <td colspan="2">94.4%</td> </tr> <tr> <td>Opp.</td> <td colspan="2">6316C3</td> <td colspan="3"> </td> <td>NEMA Design</td> <td colspan="2">B</td> </tr> <tr> <td rowspan="2">Usable at</td> <td colspan="9">50Hz 125HP 380V 168.6A 1480rpm S.F.: 1.0 Eff.: 94.7% Code: E</td> </tr> <tr> <td colspan="9">50Hz 125HP 400/415V 160.9/156.6A 1482/1484rpm S.F.: 1.0 Eff.: 95/95.2% Code: F/G</td> </tr> <tr> <td rowspan="3">CSA Certified for</td> <td>Model</td> <td colspan="2">LATER</td> <td>Type</td> <td colspan="2">PJP</td> <td>Temp. Code</td> <td>Frame</td> <td>140~320FR</td> <td>360~400FR</td> <td>440FR</td> </tr> <tr> <td rowspan="2"> </td> <td colspan="2">CLASS I, Div. 2, Gr. A, B, C & D</td> <td colspan="2">CLASS II, Div. 2, Gr. E, F & G (Gr. E : Up to 320FR)</td> <td rowspan="2">(sine wave)</td> <td>Amb. 40°C</td> <td>T3C (160°C)</td> <td>T3B (165°C)</td> <td colspan="2">T3A (180°C)</td> </tr> <tr> <td colspan="2">CLASS I, Zone 2, Gr. IIA, IIB, & IIC</td> <td colspan="2"> </td> <td>Amb. 55°C</td> <td>T3A (180°C)</td> <td>T3A (180°C)</td> <td colspan="2">T3 (200°C)</td> </tr> <tr> <td>No.</td> <td colspan="2">-</td> <td>Date</td> <td colspan="2">-</td> <td>Weight</td> <td colspan="4">1530 lb</td> </tr> </table> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 10px;"> <div> <p>IEEE Std 841-2021 MARINE DUTY IEEE45</p> <p>4M-135701 Made in Korea H1</p> </div> <div style="text-align: right;">  </div> </div> </div>										125HP	4P	460V	Cat. No.	IEEE125-18-444T						Model	HLS444SR04		INS. Class	F	HD-F1	Amps	142			Type	HLS	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz	Frame	444T	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	95.4%	Bearing	Drive	NU318		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	94.4%		Opp.	6316C3					NEMA Design	B		Usable at	50Hz 125HP 380V 168.6A 1480rpm S.F.: 1.0 Eff.: 94.7% Code: E									50Hz 125HP 400/415V 160.9/156.6A 1482/1484rpm S.F.: 1.0 Eff.: 95/95.2% Code: F/G									CSA Certified for	Model	LATER		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)		(sine wave)	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	1530 lb			
125HP	4P	460V	Cat. No.	IEEE125-18-444T																																																																																																																														
Model	HLS444SR04		INS. Class	F	HD-F1	Amps	142																																																																																																																											
Type	HLS	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz																																																																																																																									
Frame	444T	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	95.4%																																																																																																																									
Bearing	Drive	NU318		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	94.4%																																																																																																																										
	Opp.	6316C3					NEMA Design	B																																																																																																																										
Usable at	50Hz 125HP 380V 168.6A 1480rpm S.F.: 1.0 Eff.: 94.7% Code: E																																																																																																																																	
	50Hz 125HP 400/415V 160.9/156.6A 1482/1484rpm S.F.: 1.0 Eff.: 95/95.2% Code: F/G																																																																																																																																	
CSA Certified for	Model	LATER		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)		(sine wave)	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	1530 lb																																																																																																																											
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		TITLE	NAMEPLATE DRAWING																																																																																																																										
CHKD BY		R.G.KIM		PROJEC'N	3rd Angle																																																																																																																													
DSND BY		S.H.LEE		DATE	2024.06.07																																																																																																																													
							REF. NO	4M-135701		Sheet No. of																																																																																																																								
							DWG NO	NP-IEEE125-18-444T		Revision No. 0																																																																																																																								
1		2		3		4																																																																																																																												

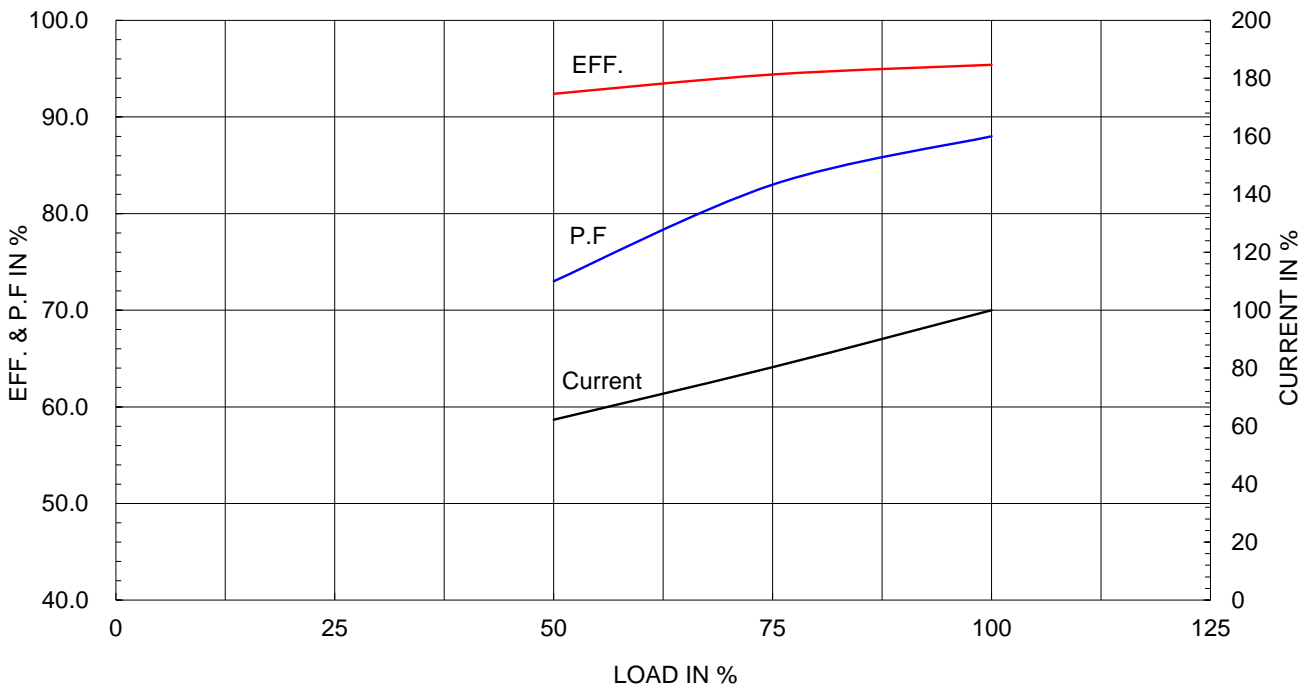
Type :	PJP	
Full Load Torque :	374.9	lb.ft
Load moment of Inertia (J) :	1507.479	lb.ft2
Motor moment of Inertia (J) :	52.510	lb.ft2

95kW	125HP	4 P	60 Hz
Speed at Full Load :			1785 RPM
Rated Voltage	575V	460V	230V
Full Load Current	113.6A	142.0A	284.1A

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

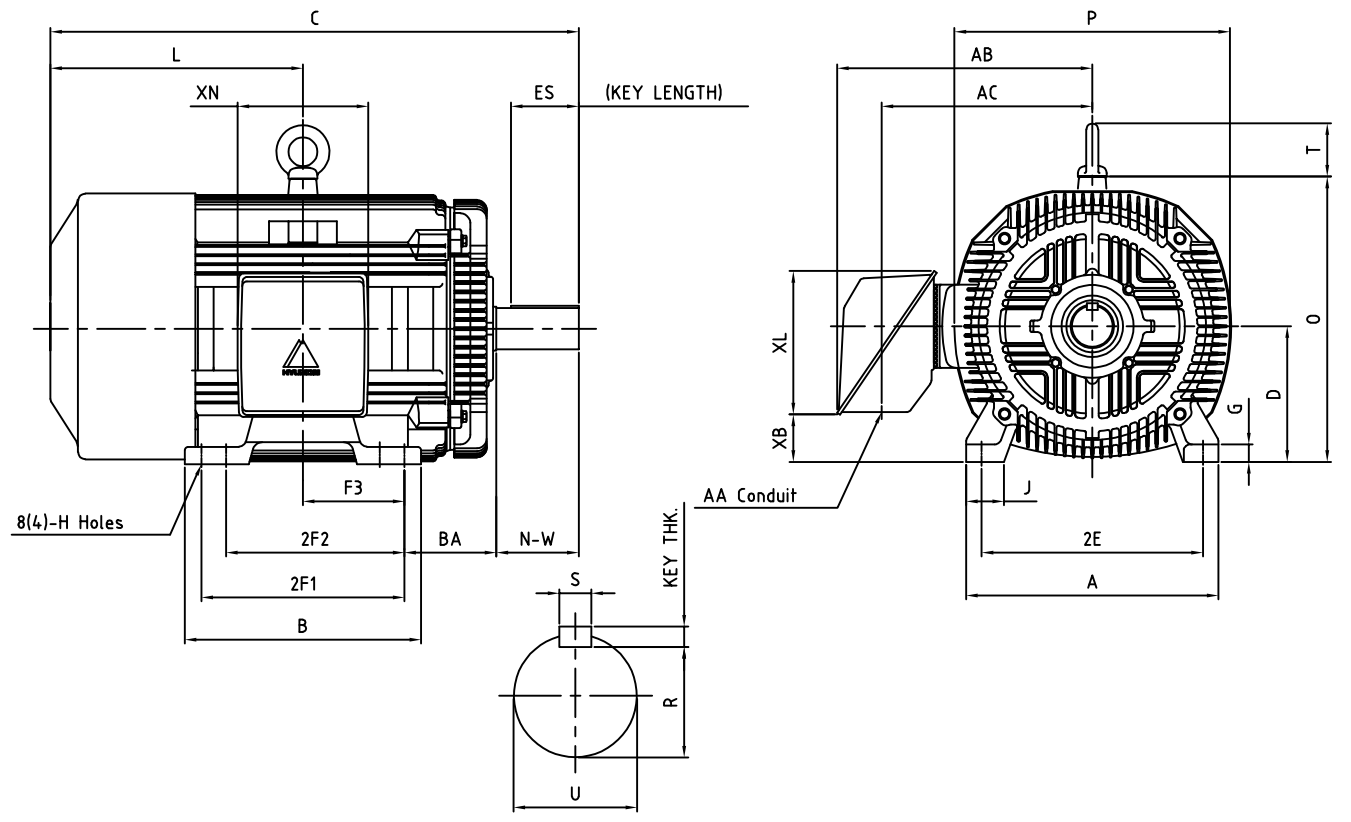


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

1	2	3	4
▽	50S	REV	DATE
▽▽	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	19.21	18.00	(16.50)	14.50	8.248	1.42	3.07	0.81	3.00	21.26	18.03	3.83	11.65	10.63	1530

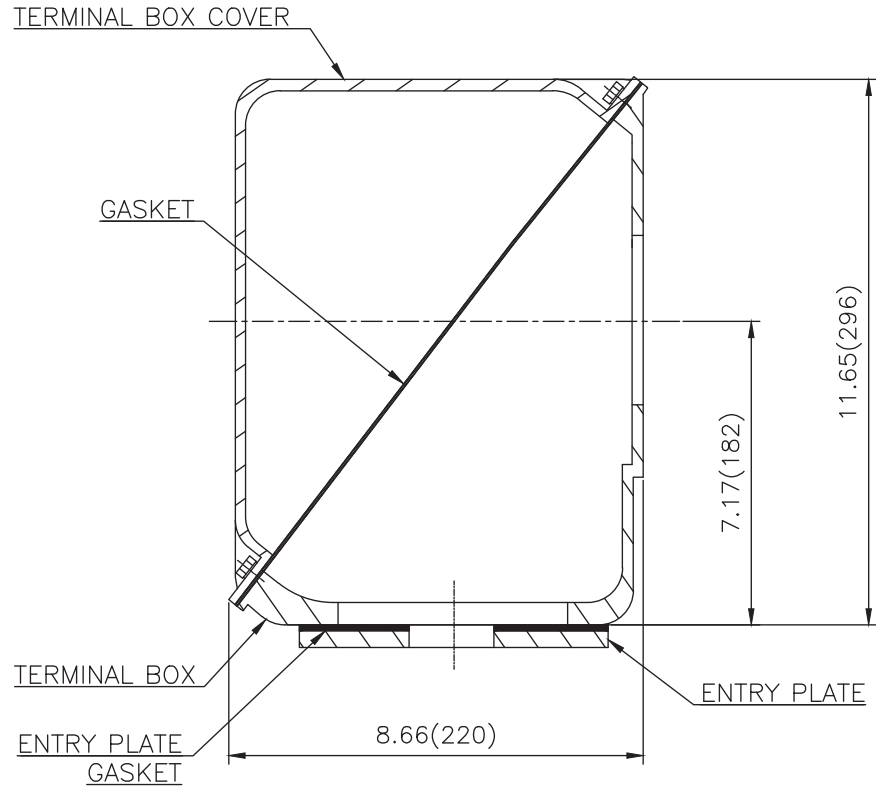
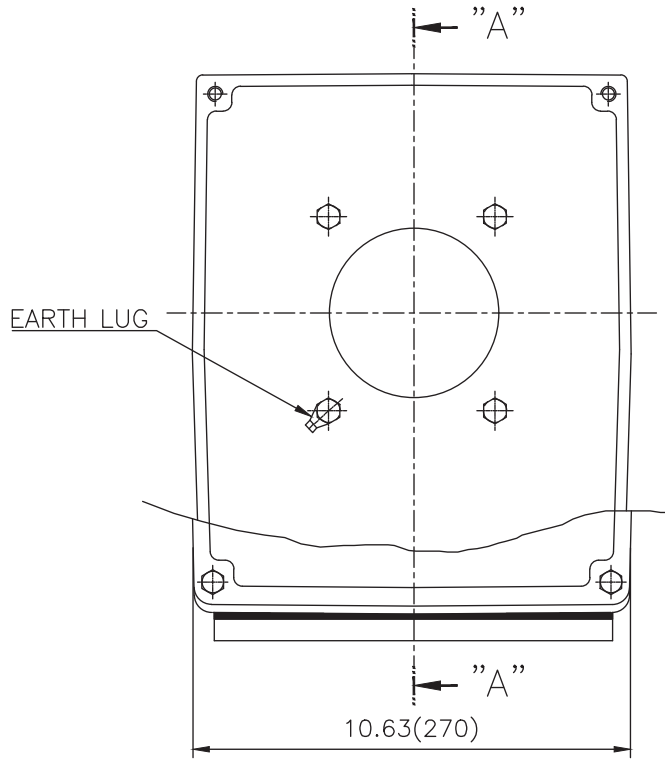
O V E R A L L							S H A F T					KEY	BEARING	
BA	C	D	L	O	P	T	U	N-W	KEYWAY			THK.	DRIVE END	OPP. DRIVE END
									R	ES	S			
7.50	46.45	11.00	22.22	23.19	22.40	4.33	3.375	8.50	2.880	6.93	0.875	0.875	6318C3	6316C3

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 444T	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	350A8117AA	Sheet No.	of
				DWG NO	LM-11444B3PL001	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

