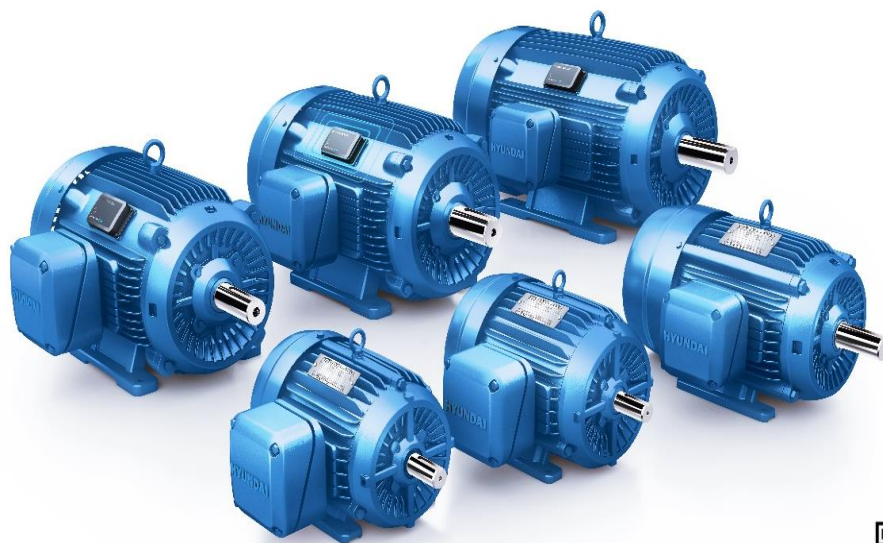


Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



0		For Bidding			
No.	DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HHI100-18-405TC		Item No.			Rev. No.	[]	
Project Name			Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA				
Frame Size	405TC		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	228.1 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	☐ Indoor ☐ 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	B35		Speed at Full Load		1780 r.p.m			
Bearing	Type	Anti-Friction	Torque					
	DE/N-DE	6316C3 / 6313C3	Full Load 296.84 lb.ft					
	Lubricant	Grease(Polyrex-EM)	Locked-rotor** 140 %					
External Thrust	Not applicable		Breakdown** 220 %					
Coupling Method	☒ Direct ☐ V-belt		Moment of Inertia (J)					
Shaft Extension	Single		Load(Max.) 1,337.213 lb.ft2					
Terminal	Main	Cast Iron	Motor 35.910 lb.ft2					
Box	Aux.	No	Sound Pressure Level (No-load & mean value at 1m from motor)					
	Location	Refer to Outline Drawing	82 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	NEMA MG1, CSA C390		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)			
ACCESSORIES			SUBMITTAL DRAWING					
			Outline Dimension Drawing \ Motor Weight(Approx.)					
			B35		LM-T1405C4PL001		1165 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 (1 hour duty, 4:1 continuous)					
			-. 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.					
			6. Temp. code : T3B(165°C) at sine wave					
Date		DSND	CHKD	CHKD	APPD			
2025-07-22		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.

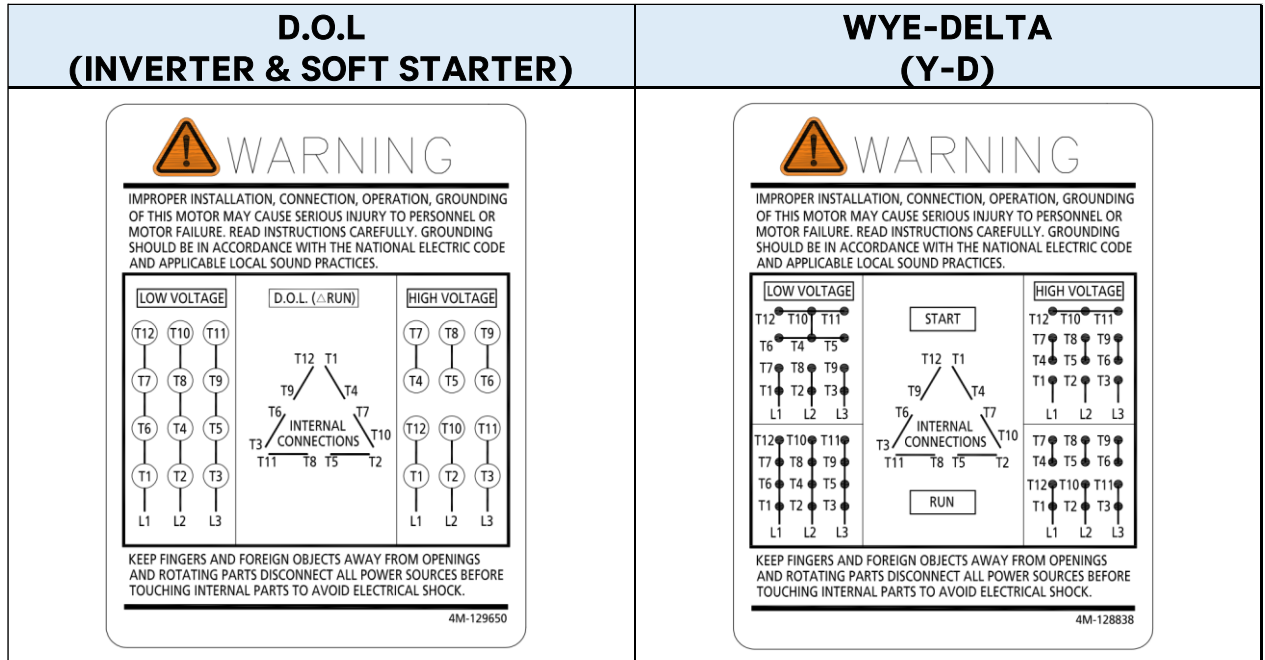
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

100HP		4P	230/460V	Cat. No.	HHI100-18-405TC				
Model	HLS405PR04U3			INS. Class	F	HD-F1	Amps	228.1/114.1A	
Type	HLS	Duty	CONT	Code	G	Amb.	40°C	Hertz	60Hz
Frame	405TC	Encl.	TEFC	S.F.	1.15	RPM	1780	NEMA Nom. Eff.	95.4%
Bearing	Drive	6316C3			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	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	1165 lb				
4M-135702				Made in Korea H1				HD HYUNDAI ELECTRIC	
MARINE DUTY IEEE45									

WIRING DIAGRAM



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HHI, 364-449)	DWG SIZE	A4 (1:1)
CHKD BY	I.K.KIM	SCALE	NONE	NAMEPLATE DRAWING			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle				
DSND BY	S.H.LEE	DATE	2024.06.07				
HD HYUNDAI ELECTRIC				REF. NO	4M-135702 / 4M-129650	Sheet No.	of
				DWG NO	NP-HHI100-18-405TC	Revision No.	0

Type : PJP

75kW 100HP 4 P 60 Hz

Full Load Torque : 296.84 lb.ft

Speed at Full Load : 1780 RPM

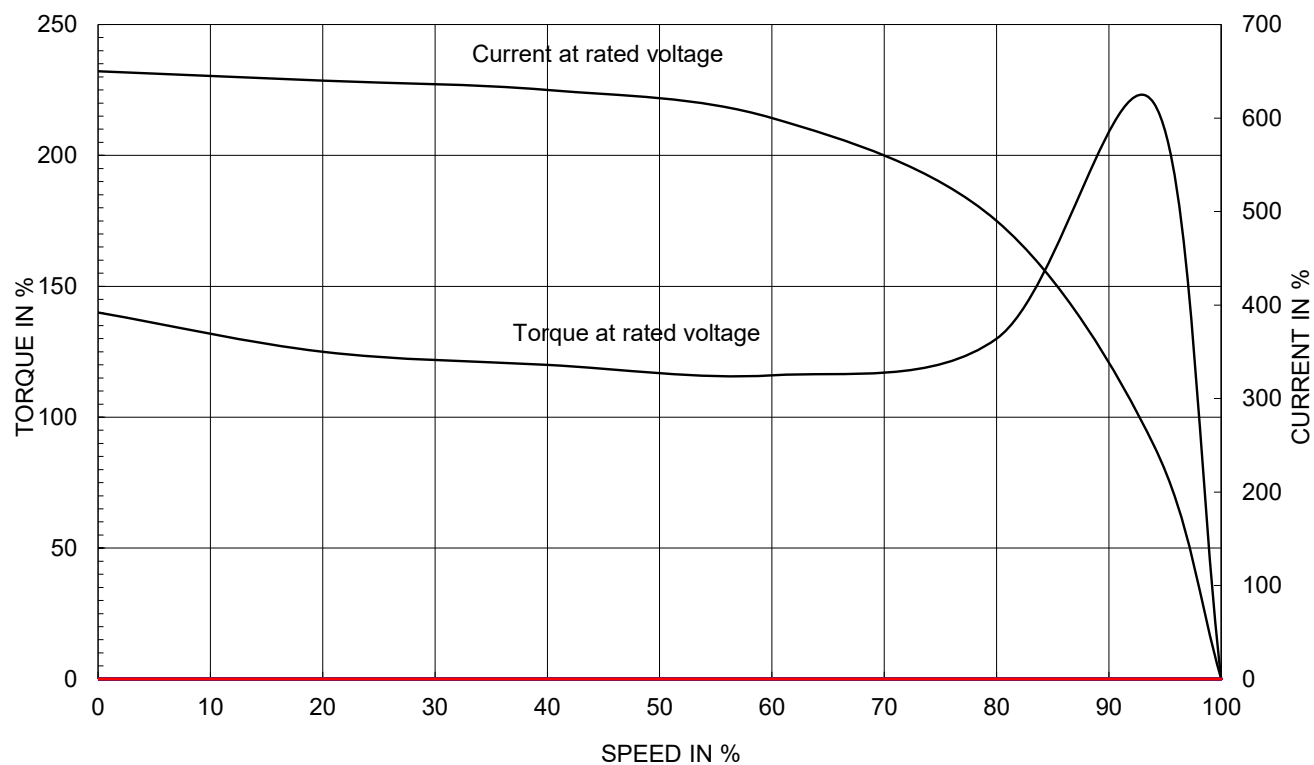
Load moment of Inertia (J) : 1337.213 lb.ft2

Rated Voltage	575V	460V	230V
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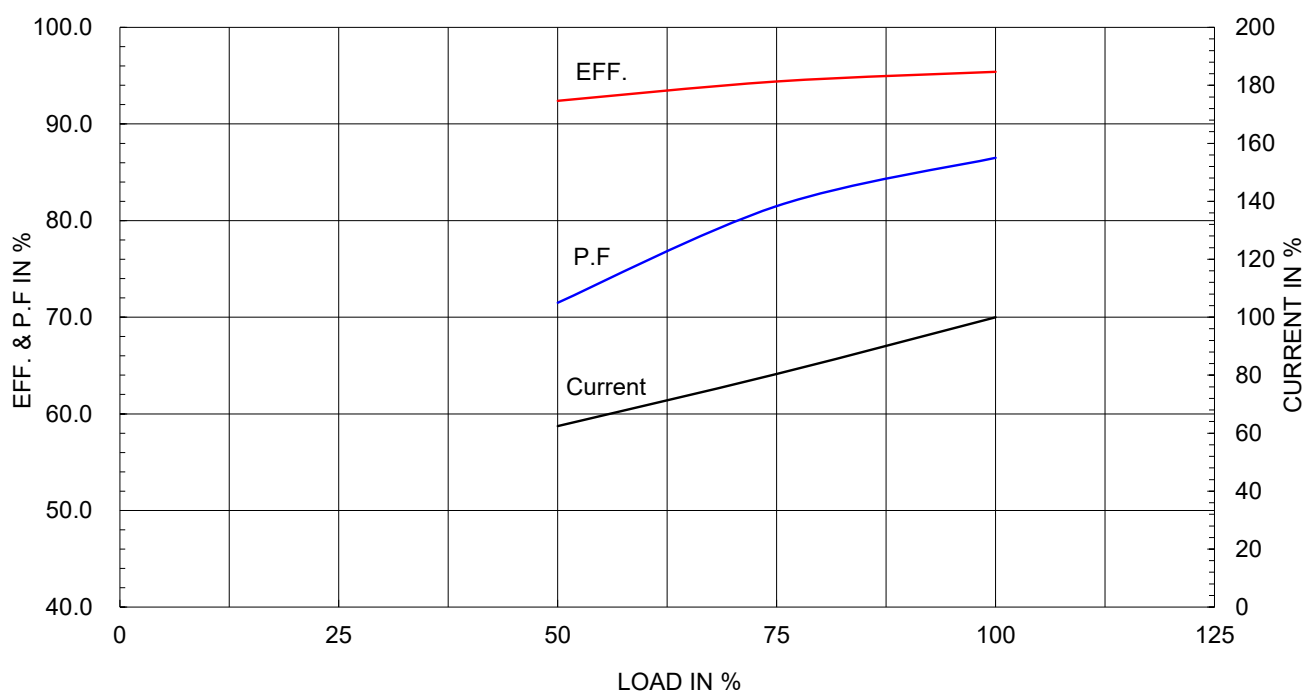
Motor moment of Inertia (J) : 35.910 lb.ft2

Full Load Current	91.3A	114.1A	228.1A
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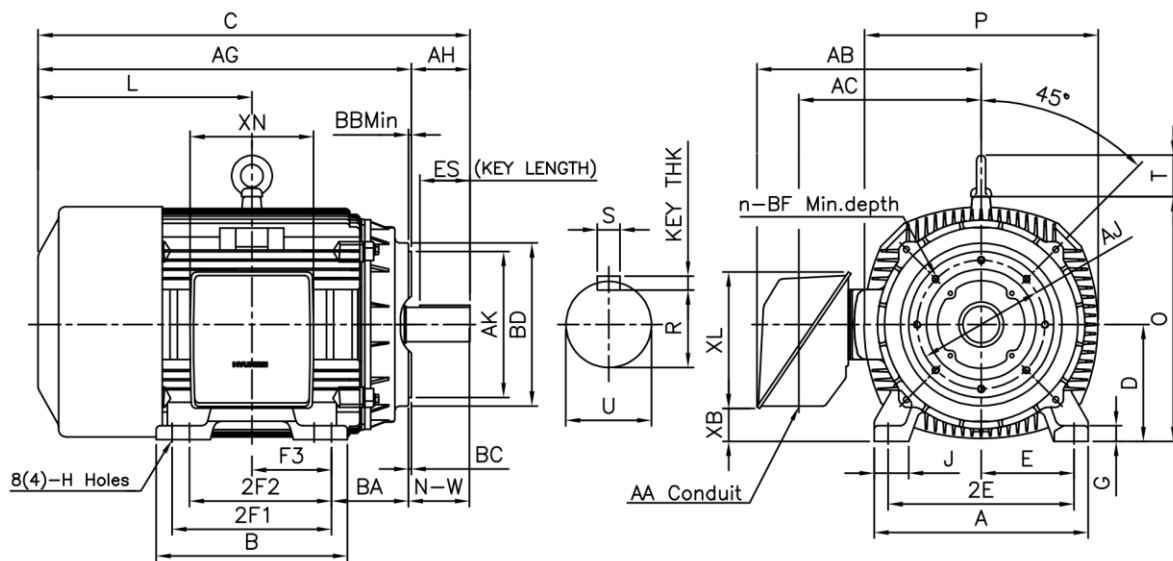
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



1	2	3	4
▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



DIMENSIONS

Unit:inch

M O U N T I N G									CONDUIT BOX						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	1165

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			
6.62	39.42	10.00	18.68	20.79	19.69	3.55	32.17	2.875	7.25	2.450	5.65	0.750	0.750	6316C3	6313C3

C - F A C E								
AJ	AK	BB Min	BC	BD	BF	BF depth	n	AH
11.00	12.50	0.25	0.25	13.94	5/8-11	0.94	8	7.00

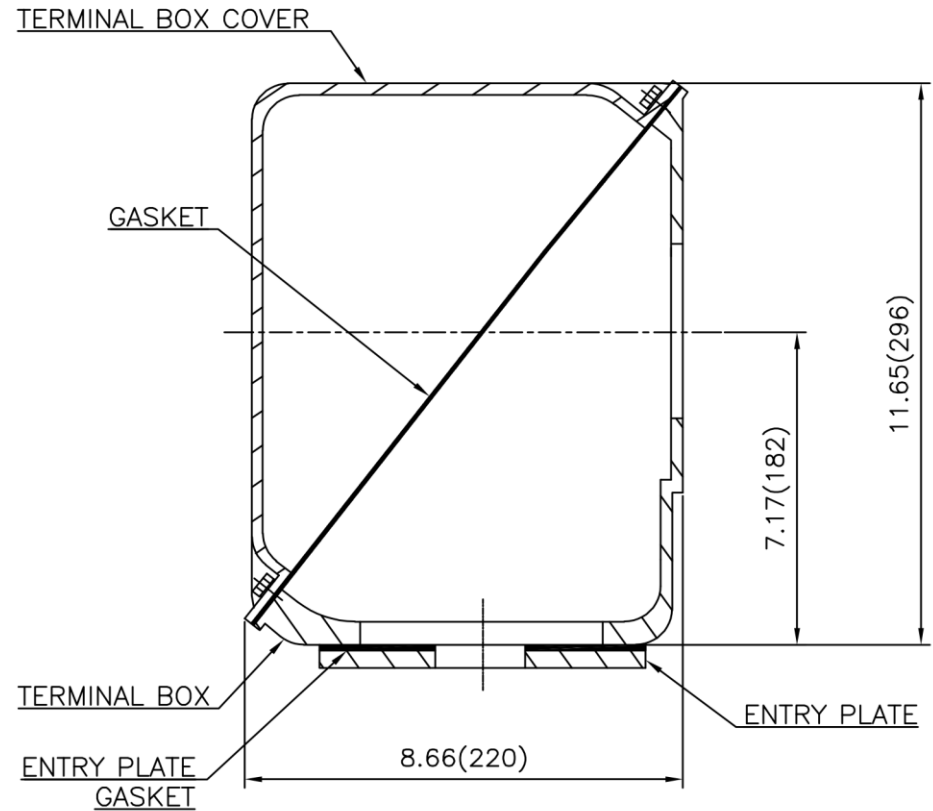
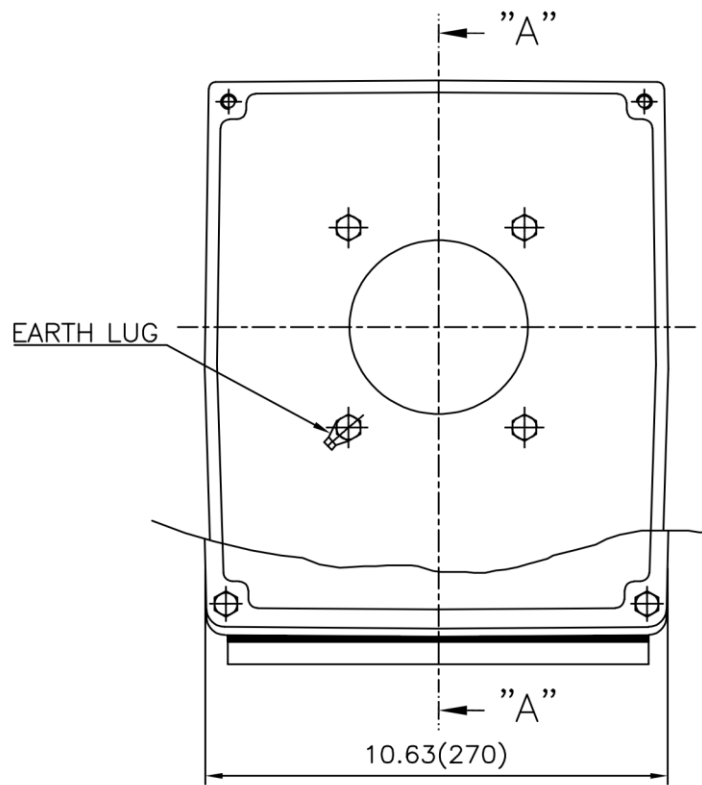
NOTE

- 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.K.HAN	UNIT	inch	SUBJECT	NEMA 405TC	DWG SIZE	A4 < 1:1 >
CHKD BY	S.Y.KIM	SCALE	None	TITLE			
CHKD BY	Y.H.BAE	PROJEC'N	3rd Angle				
DSND BY	H.C.LIM	DATE	2019-06-05	OUTLINE			
				REF. NO	350A1316AA	Sheet No.	of
				DWG NO	LM-T1405C4PL001	Revision No.	0

Cls. I&II, Div. 2

IEEE 841



SEC. "A" - "A"

▽	50S
▽▽	12.5S
▽▽▽	3.2S
▽▽▽▽	0.4S

REV	DATE	CONTENTS	REV'D BY	CHK'D BY	CHK'D BY	APP'D BY	일반기공표	일반계관표
1							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.
APP'D BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. 400-440 (CAST IRON)	DWG SIZE	
CHK'D BY		SCALE	1/1.2	TITLE	MAIN TERMINAL BOX ASS'Y		
CHK'D BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	네슬피	DATE	2023-10-19	DWG NO	3M-248451	Revision No.	0

