

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.	HSDE400-18-L449TC-IBBRSRSH	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	L449TC		Rated Output	300 kW		400 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	355.8 A	444.8 A	889.6 A
Insulation Class	F			Locked-rotor**	710 %	710 %	710 %
Temp. Rise at full load (by resistance method)			Efficiency				
at 1.0 S.F			80 deg. C				
Motor Location	☐ Indoor ☐ Outdoor		50% Load		93.2 %		
Altitude	Less than 1,000 meter		75% Load		95.2 %		
Relative Humidity	Less than 80 %		100% Load		96.2 %		
Ambient Temp.	40 deg. C (Max.)		Power Factor(p.u)				
Duty Type	Continuous (S1)		50% Load		0.730		
Service Factor	1.15		75% Load		0.830		
Mounting	B35		100% Load		0.880		
Bearing	Type	Anti-Friction	Speed at Full Load		1785 r.p.m		
	DE/N-DE	6322C3 / 6318C3-INS.	Torque				
	Lubricant	Grease(Polyrex-EM)	Full Load		1184.03 lb.ft		
External Thrust	Not applicable		Locked-rotor**		135 %		
Coupling Method	☒ Direct ☐ V-belt		Breakdown**		225 %		
Shaft Extension	Single		Moment of Inertia (J)				
Terminal	Main	Cast Iron	Load(Max.)		1,550.000 lb.ft2		
Box	Aux.	Yes	Motor		129.342 lb.ft2		
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)				
Application			85 dB(A)				
Area classification	Hazardous		Vibration		3.8 mm/sec (peak)		
Type of Ex-Protection	Class I&II, Division 2		Permissible number of consecutive starts		Cold 2 times Hot 1 time		
Applicable Standard	NEMA MG1, CSA C390		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		
ACCESSORIES			SUBMITTAL DRAWING				
*. B.T.D.(Pt 100 Ω at 0°C,Single) : 2EA/Motor			Outline Dimension Drawing \ Motor Weight(Approx.)				
*. W.T.D.(Pt 100 Ω at 0°C) : 2EA/Ph.			B35		LM-T044XC4U7001	3720 lb.	
*. Space Heater : 1EA/Motor							
			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. NDE side : Insulated bearing				
			4. CSA Certification				
			-. Class I, Division 2, Group A, B, C & D				
			-. Class II, Division 2 Group F & G				
			5. Shaft material : AISI4140				
			6. Temp. code : T3(200°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

400HP		4P	460V	Cat. No.	HSDE400-18-L449TC-IBBRSRSH				
Model		LATER		INS. Class	F		Amps	444.8A	
Type	PJP	Duty	CONT	Code	G	Amb.	40°C	Hertz	60Hz
Frame	L449TC	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	96.2%
Bearing	Drive	6322C3			S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	95.2%
	Opp.	6318C3-INS.						NEMA Design	B Torque
Usable at	50Hz 335HP 380V 449.6A 1485rpm S.F.: 1.0 Eff.: 96.0% Code: G								
	50Hz 335HP 400/415V 437.1/430.9A 1486/1487rpm S.F.: 1.0 Eff.: 96.0/96.1% Code: H/J								
CSA Certified for	CLASS I, Div. 2, Gr. A, B, C & D		CLASS II, Div. 2, Gr. F & G		Temp. Code		Frame	L440FR - 500FR	
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC				(sine wave)		Amb. 40°C	T3 (200°C)	
							Amb. 55°C	T3 (200°C)	
No.	-			Date	-			Weight	3720 lb
4M-136053				Made in Korea H1				HD HYUNDAI ELECTRIC	
MARINE DUTY IEEE45									

WIRING DIAGRAM

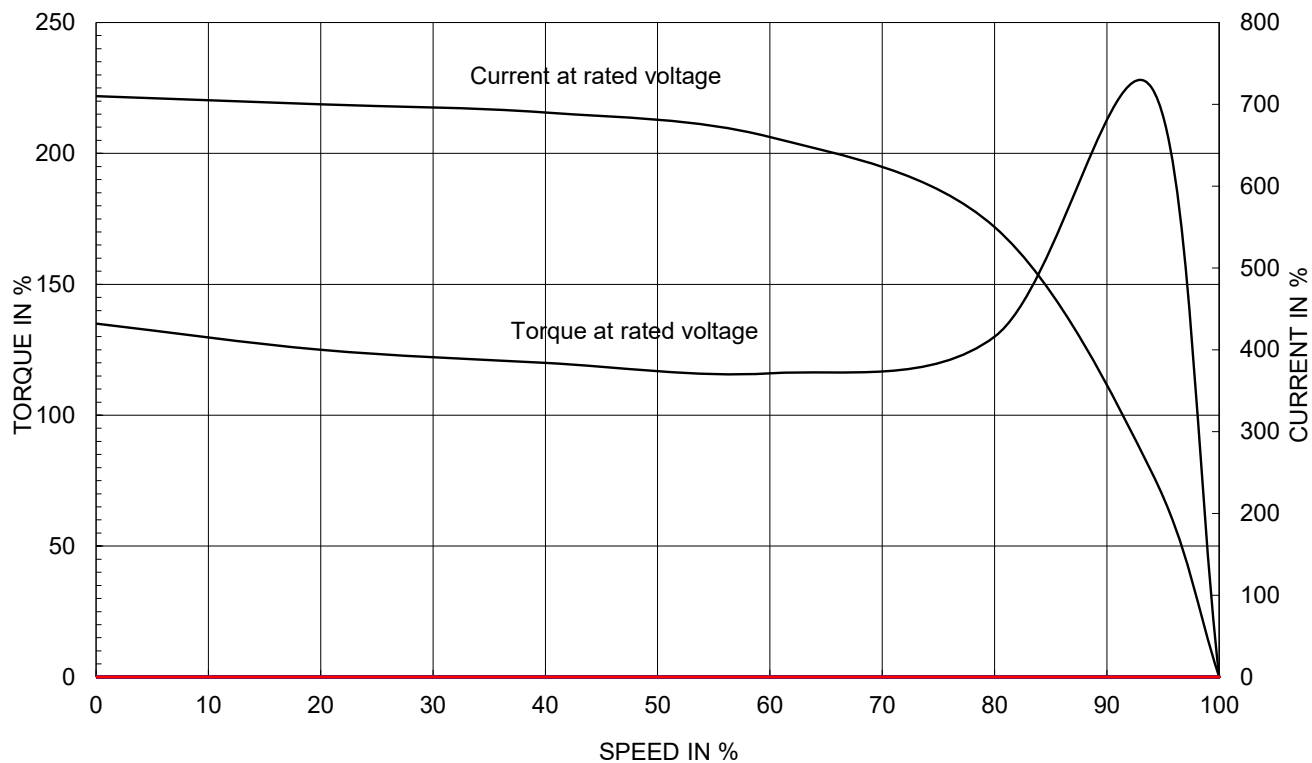
D.O.L (INVERTER & SOFT STARTER) WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. D.O.L. (ΔRUN) KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-129326	WYE-DELTA (Y-D) WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. START RUN KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK. 4M-128852
--	--

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	CSA Class I, Division2 Severe Duty (HSDE, L449-500)		DWG SIZE	
CHKD BY	I.K.KIM	SCALE	NONE	NAMEPLATE DRAWING				A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle					
DSND BY	S.H.LEE	DATE	2024.06.07					
HD HYUNDAI ELECTRIC				REF. NO	4M-136053 / 4M-129326	Sheet No.	of	
				DWG NO	NP-HSDE400-18-L449TC-IBBRSRSH	Revision No.	0	

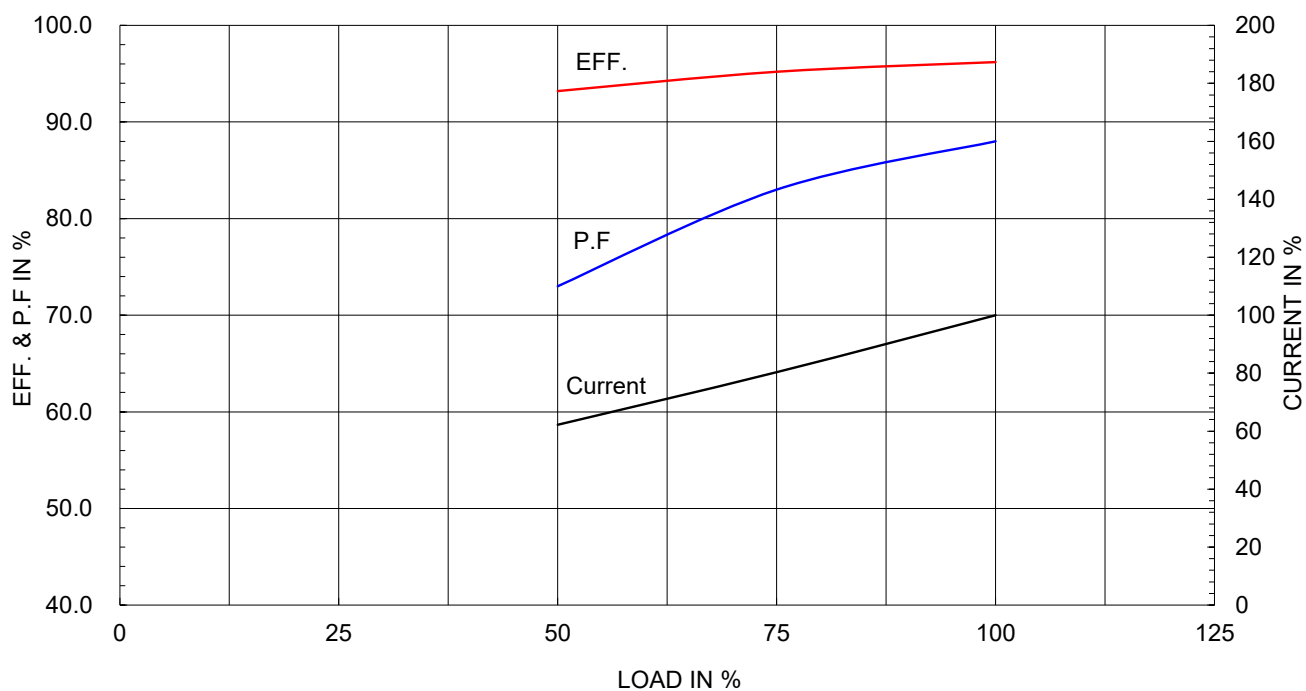
Type :	PJP	
Full Load Torque :	1184.03	lb.ft
Load moment of Inertia (J) :	1550.000	lb.ft2
Motor moment of Inertia (J) :	129.342	lb.ft2

300kW	400HP	4 P	60 Hz
Speed at Full Load :			1785 RPM
Rated Voltage	575V	460V	230V
Full Load Current	355.8A	444.8A	889.6A

SPEED VS TORQUE & CURRENT CURVE



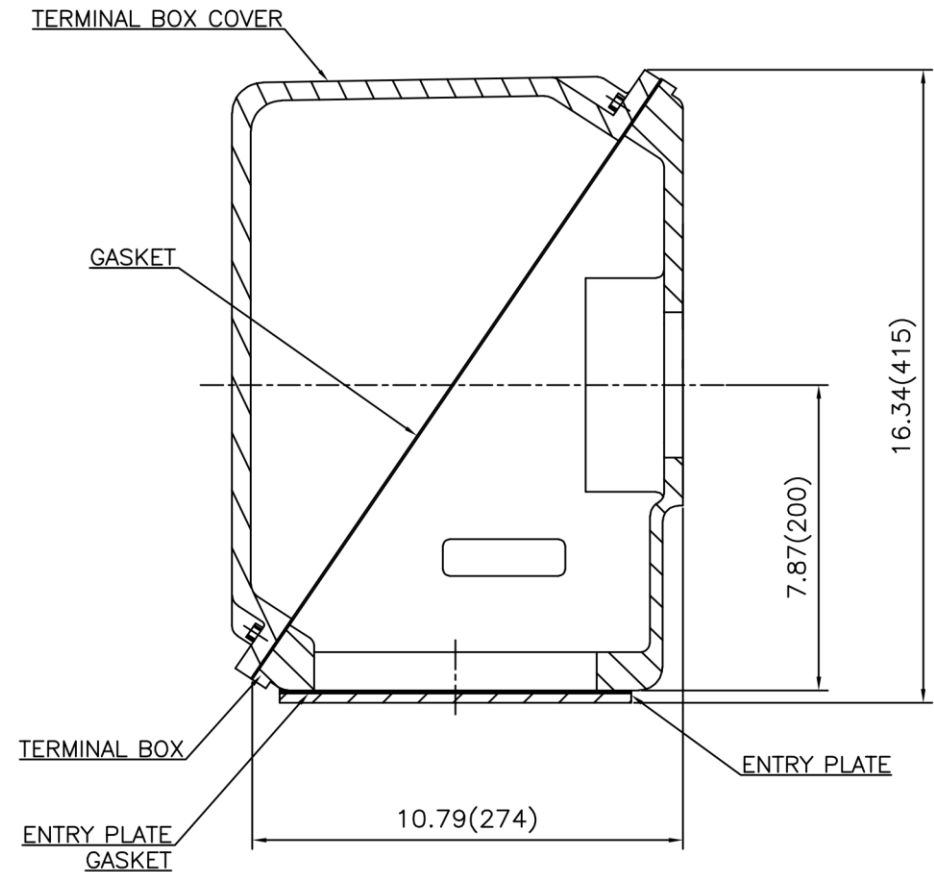
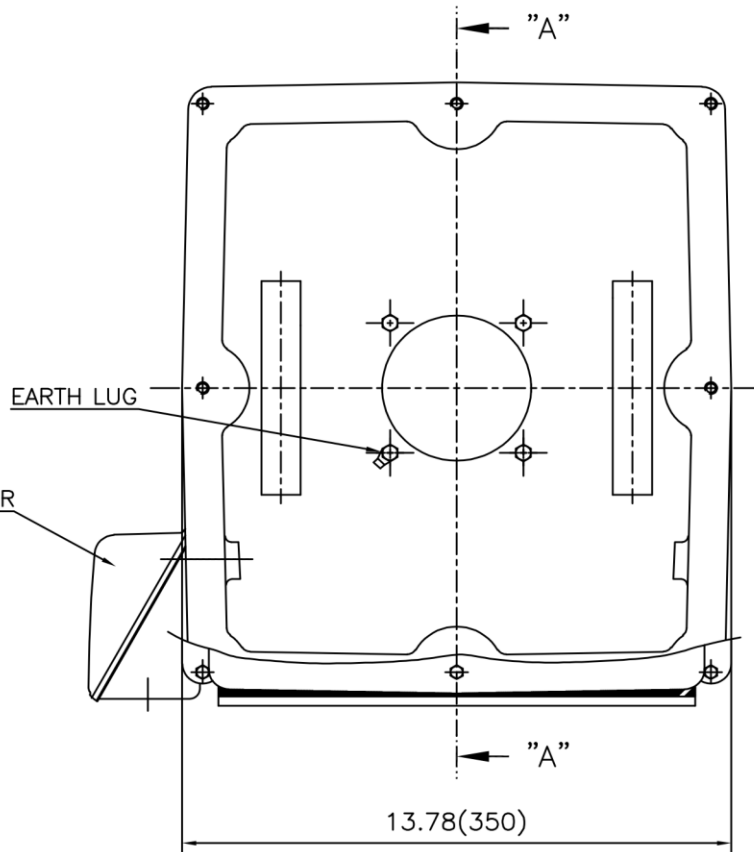
OUTPUT VS EFF., P.F & CURRENT CURVE



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.L449TC	DWG SIZE
CHKD BY	O.J.KIM	SCALE	1/18			A4 (1:18)
CHKD BY	R.G.KIM	PROJEC'N	3각법 (3rd Angle)	TITLE	OUTLINE	
DSND BY	H.K.LEE	DATE	2021-04-27			
				REF. NO		Sheet No. of
				DWG NO	LM-T044XC4U7001	Revision No. 0

Cls. I&II, Div. 2

IEEE 841



SEC. "A" - "A"

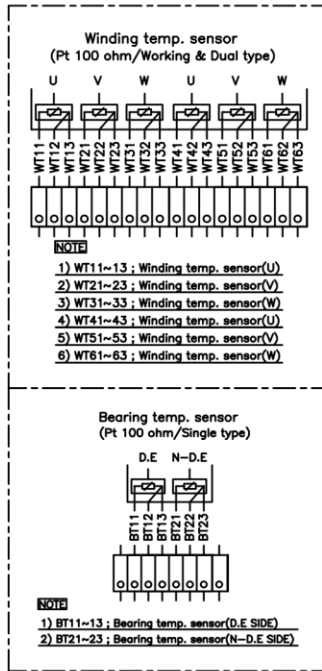
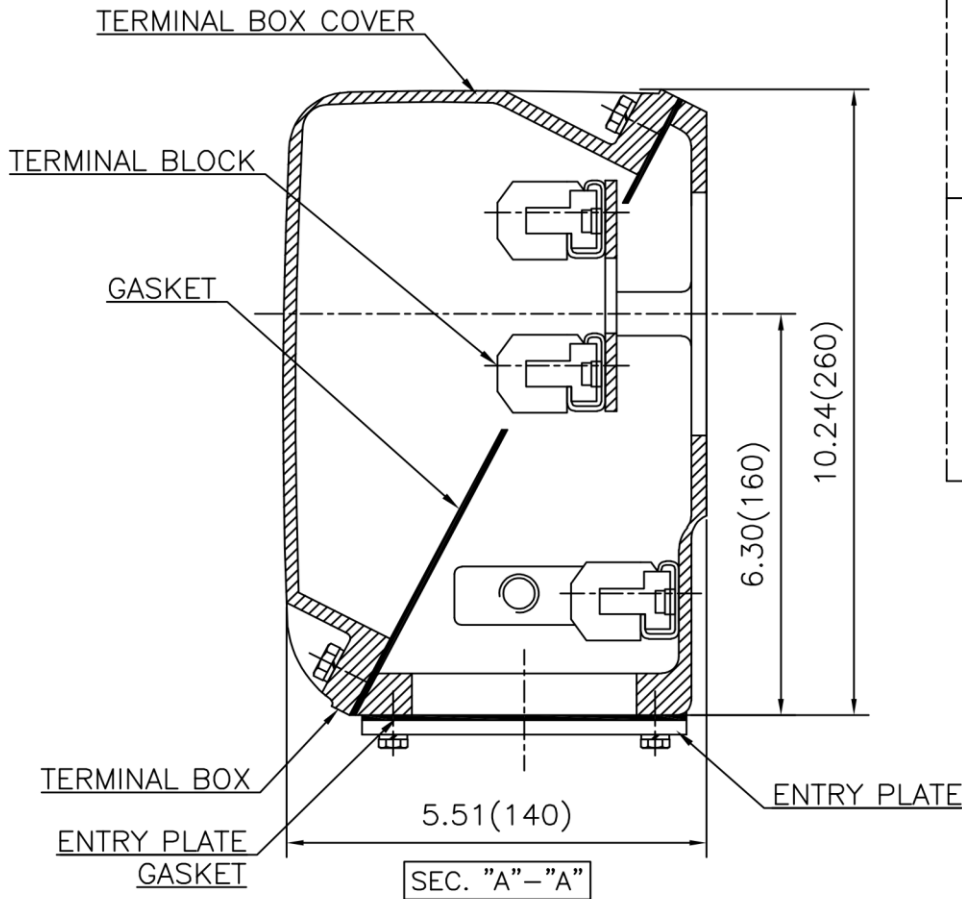
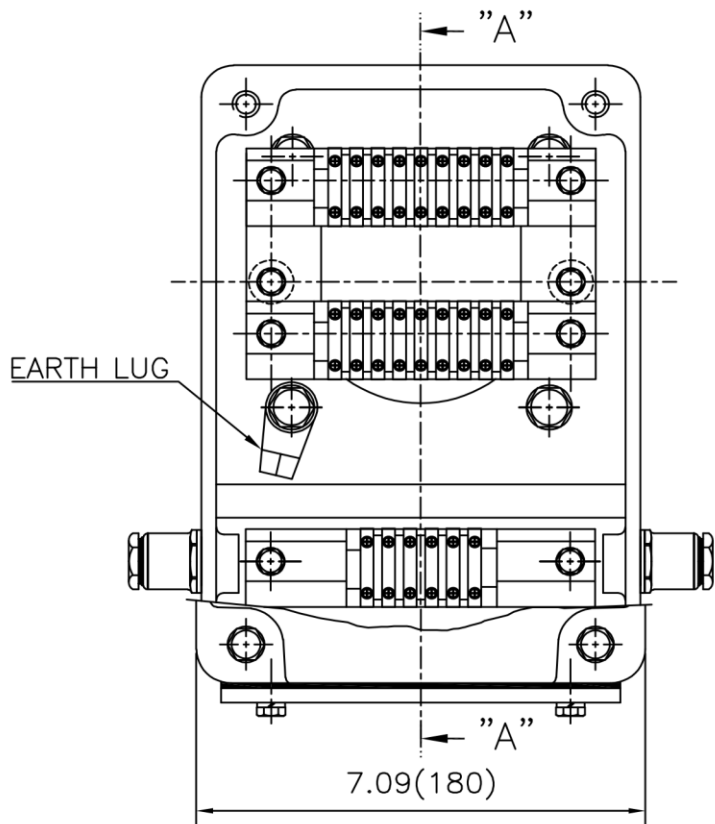
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. L440 (CAST IRON)	DWG SIZE	A3 (1:3.5)
CHKD BY		SCALE	1/3.5	TITLE	MAIN TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	내수익	DATE	2023-10-19	DWG NO	3M-248452	Revision No.	0



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

Cls. I&II, Div. 2

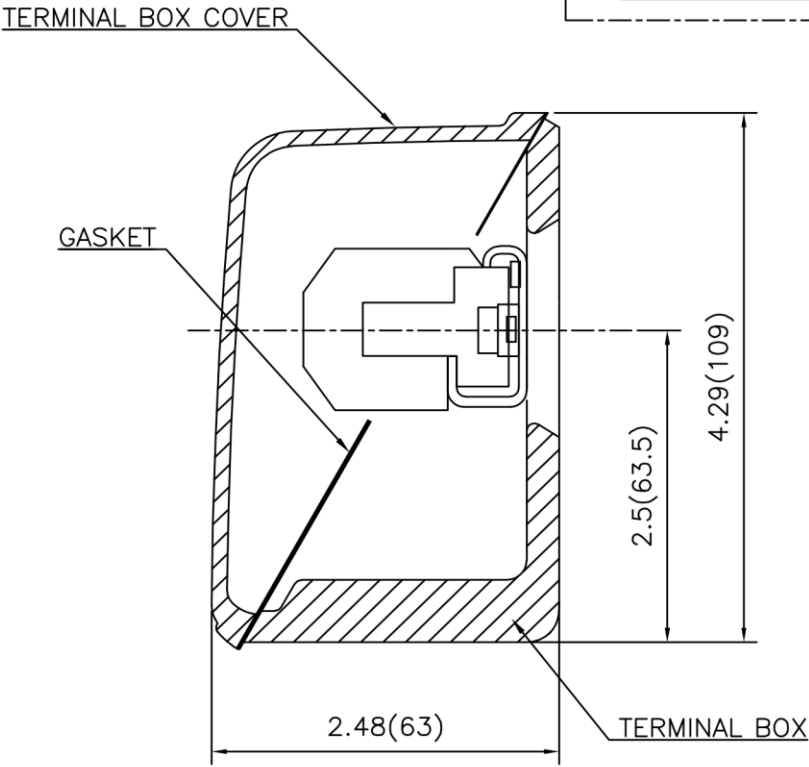
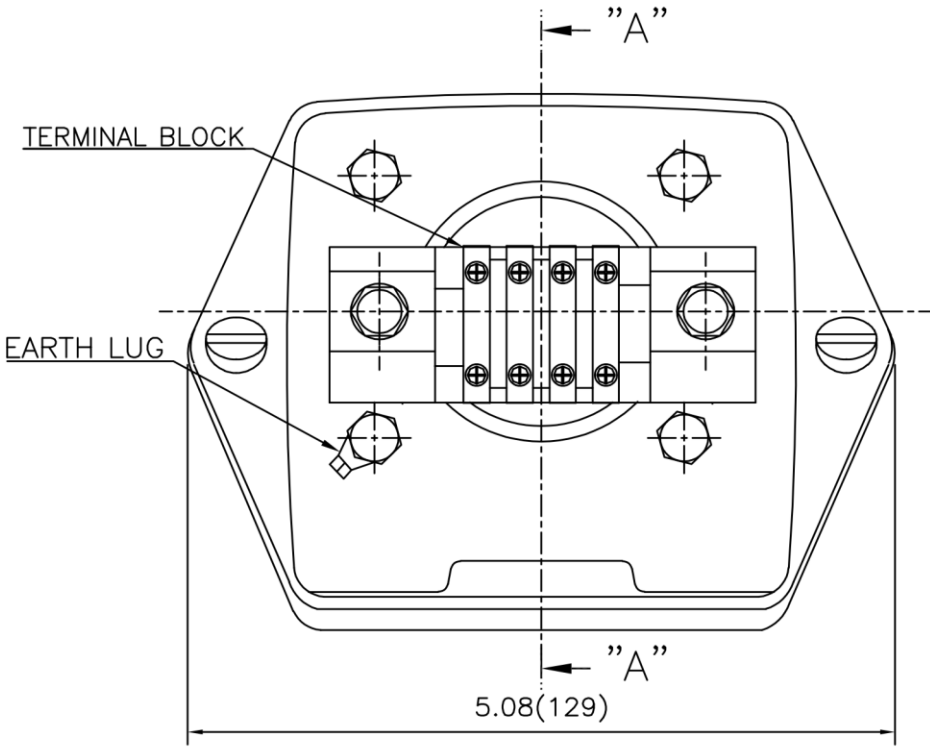
IEEE 841



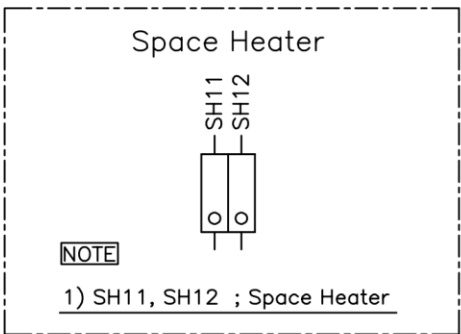
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.360 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/1	TITLE		A3 (1:2.2)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	AUX. TERMINAL BOX ASS'Y		
DSND BY	배승희	DATE	2024-01-18	REF. NO		Sheet No. of
				DWG NO	3M-165277	Revision No. 0

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

Cls. I&II, Div. 2
IEEE 841



SEC. "A"-"A"



APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.180 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/1	TITLE	SUB. TERMINAL BOX ASS'Y	
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	배승희	DATE	2024-01-18	REF. NO		Sheet No. of
				DWG NO	3M-165278	Revision No. 0

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY