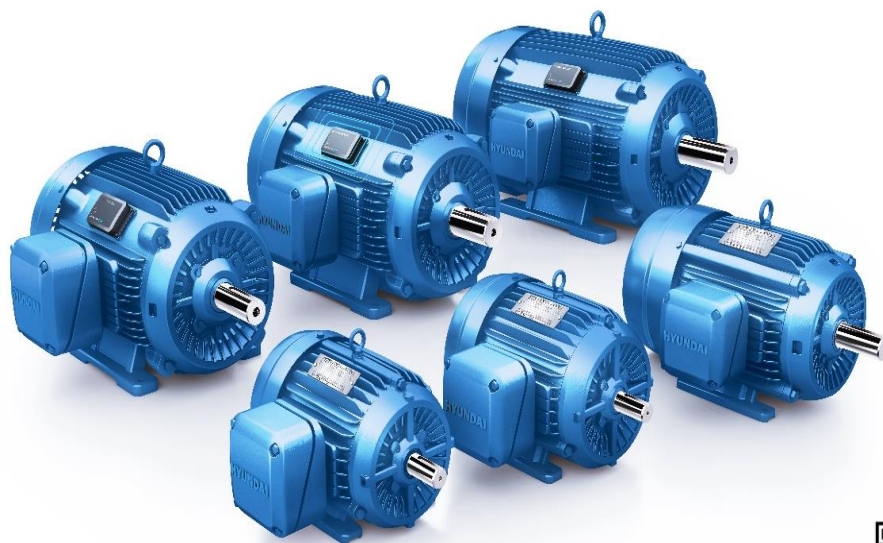


Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HSDE450-36-5009S-IBSHSP	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	5009S		Rated Output	335 kW		450 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	390.1 A	487.7 A	975.3 A
Insulation Class	F			Locked-rotor**	725 %	725 %	725 %
Temp. Rise at full load (by resistance method)			Efficiency				
	at 1.0 S.F	80 deg. C					
Motor Location	☐ Indoor ☐ Outdoor		50% Load 92.8 %				
Altitude	Less than 1,000 meter		75% Load 94.8 %				
Relative Humidity	Less than 80 %		100% Load 95.8 %				
Ambient Temp.	40 deg. C (Max.)		Power Factor(p.u)				
Duty Type	Continuous (S1)		50% Load 0.750				
Service Factor	1.15		75% Load 0.850				
Mounting	B3		100% Load 0.900				
Bearing	Type	Anti-Friction	Speed at Full Load		3570 r.p.m		
	DE/N-DE	6315C3 / 6315C3-INS.	Torque				
	Lubricant	Grease(Polyrex-EM)	Full Load		661.08 lb.ft		
External Thrust	Not applicable		Locked-rotor**		130 %		
Coupling Method	☒ Direct ☐ V-belt		Breakdown**		230 %		
Shaft Extension	Single		Moment of Inertia (J)				
Terminal	Main	Cast Iron	Load(Max.)		349.000 lb.ft2		
Box	Aux.	Yes	Motor		70.485 lb.ft2		
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)				
Application					87 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				
*. Space Heater : 1EA/Motor			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B3	LM-T0509B3CE001	3860 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 (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. Uni-directional CCW viewed from drive end.				
			7. Temp. code : T3(200°C) at sine wave				
SPARE PARTS			Date	DSND	CHKD	CHKD	APPD
1. Spare Axial Fan (C.W Direction)			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.

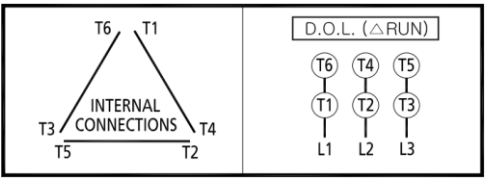
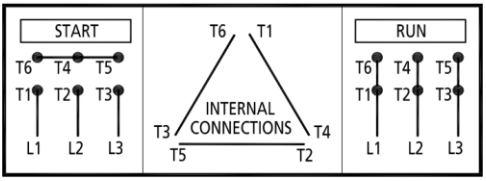
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

CROWN TRITON									
Premium Efficiency AC 3 Phase Motor		C Energy Verified		CC038A					
450HP 2P 460V		Cat. No. HSDE450-36-5009S-IBSHSP							
Model LATER		INS. Class F		Amps 487.7A					
Type PJP		Duty CONT		Code G		Amb. 40°C		Hertz 60Hz	
Frame 5009S		Encl. TEFC		S.F. 1.15		RPM 3570		NEMA Nom. Eff. 95.8%	
Bearing		Drive 6315C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff. 94.8%			
		Opp. 6315C3-INS.				NEMA Design B			
Usable at		50Hz 335HP 380V 445.5A 2970rpm S.F.: 1.15 Eff.: 95.8% Code: H							
		50Hz 335HP 400/415V 428.0/417.3A 2972/2975rpm S.F.: 1.15 Eff.: 95.8/95.8% Code: J/K							
CSA Certified for		CLASS I, Div. 2, Gr. A, B, C & D CLASS I, Zone 2, Gr. IIA, IIB, & IIC		CLASS II, Div. 2, Gr. F & G		Temp. Code		Frame L440FR - 500FR	
						(sine wave)		Amb. 40°C T3 (200°C)	
								Amb. 55°C T3 (200°C)	
No. -		Date -		Weight 3860 lb					
4M-136053		Made in Korea H1							
MARINE DUTY IEEE45									

WIRING DIAGRAM

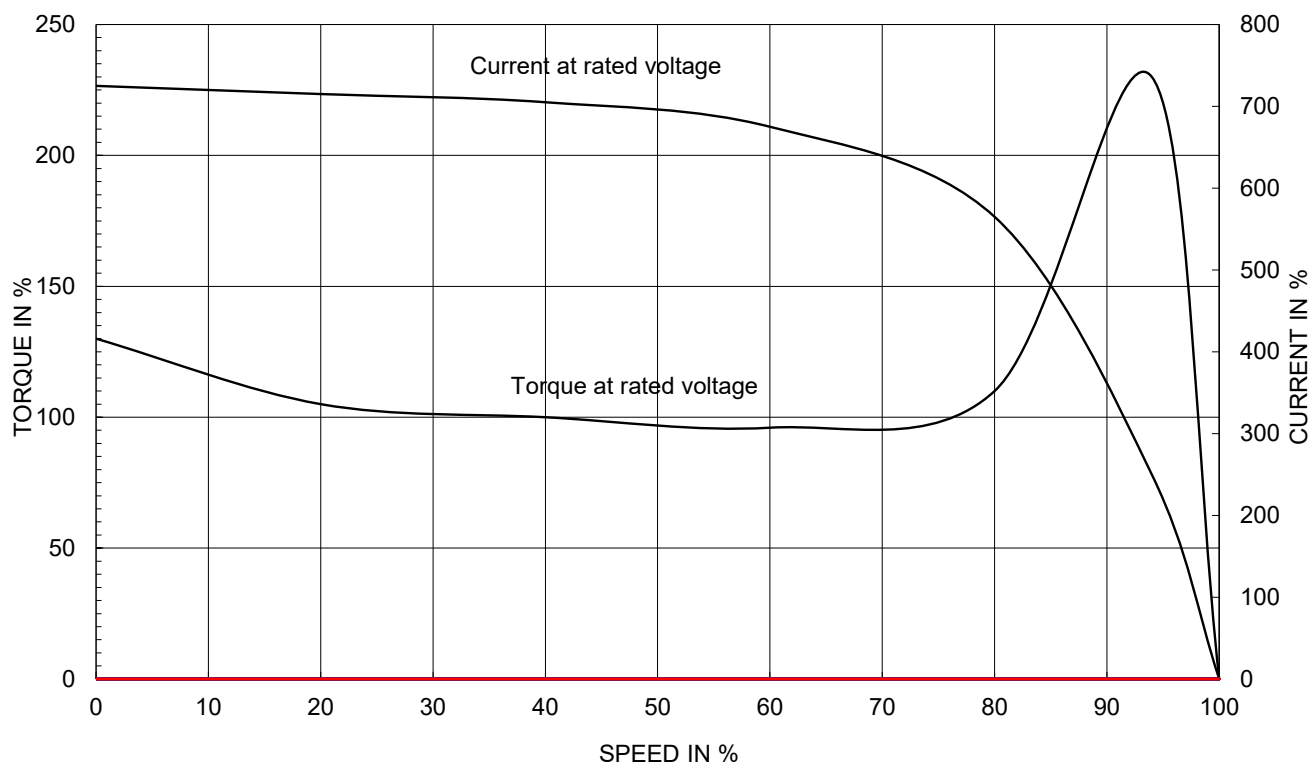
D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
 WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES.  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	 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.  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 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-136053 / 4M-129326	Sheet No. of
		DWG NO NP-HSDE450-36-5009S-IBSHSP	Revision No. 0

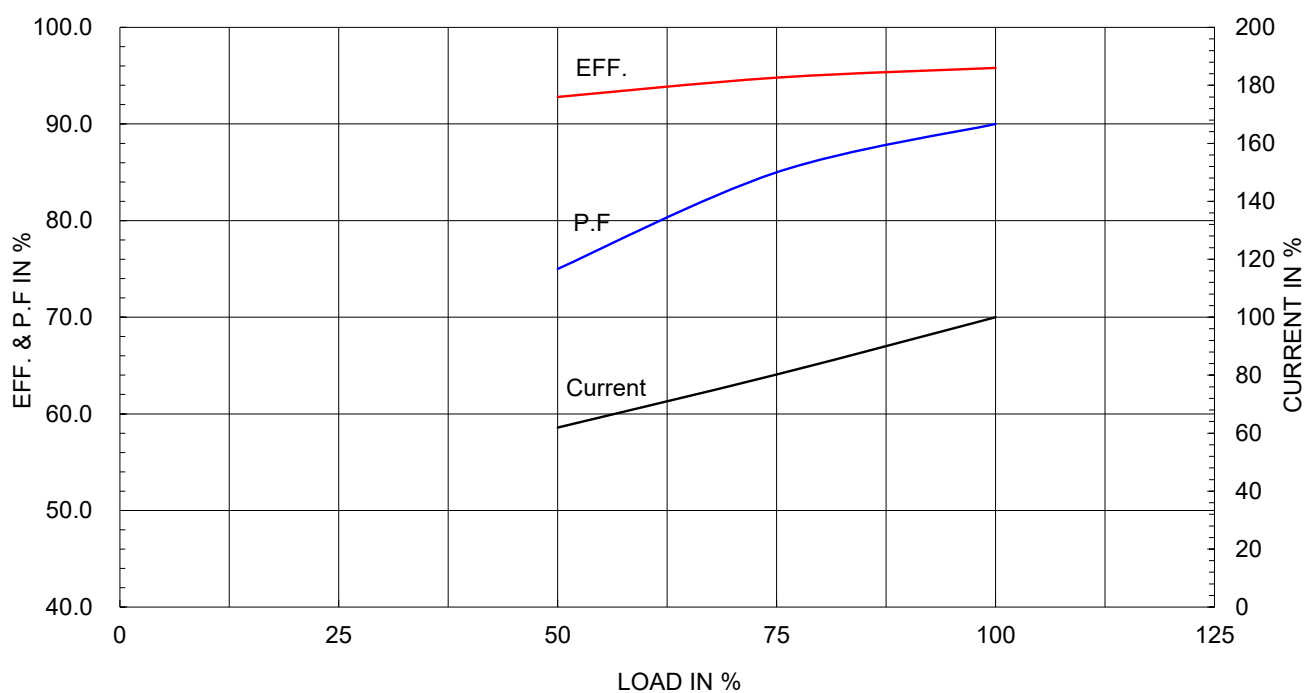
Type :	PJP	
Full Load Torque :	661.08	lb.ft
Load moment of Inertia (J) :	349.000	lb.ft2
Motor moment of Inertia (J) :	70.485	lb.ft2

335kW	450HP	2 P	60 Hz
Speed at Full Load :		3570 RPM	
Rated Voltage	575V	460V	230V
Full Load Current	390.1A	487.7A	975.3A

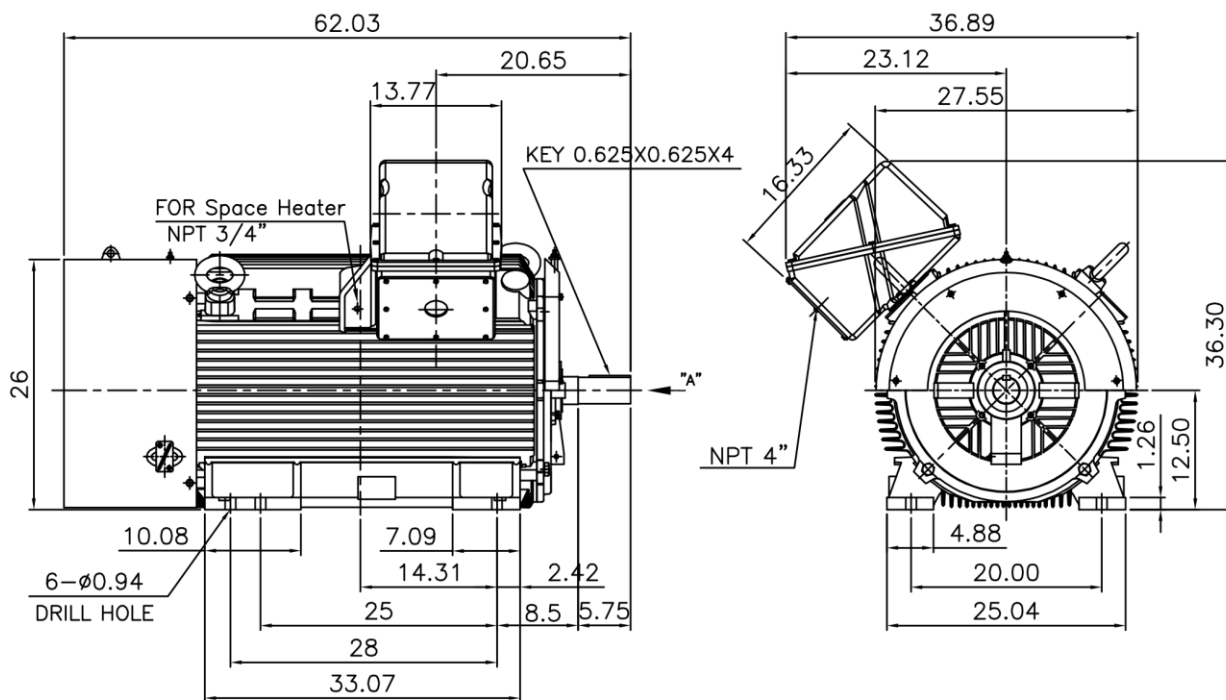
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



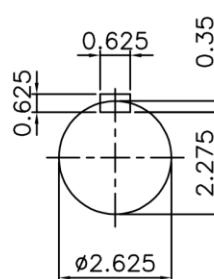
1			2		3		4		
▽	50S	REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S								
▽▽▽	3.2S								
▽▽▽▽	0.4S								



NOTE

1.TOLERANCE :

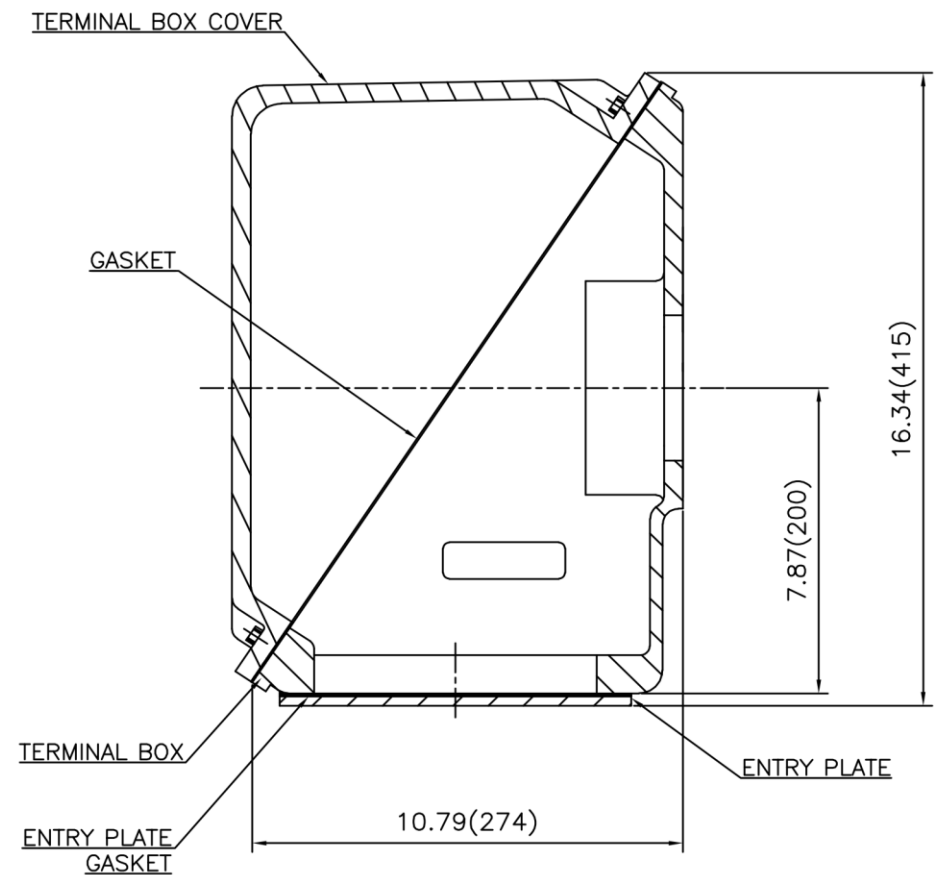
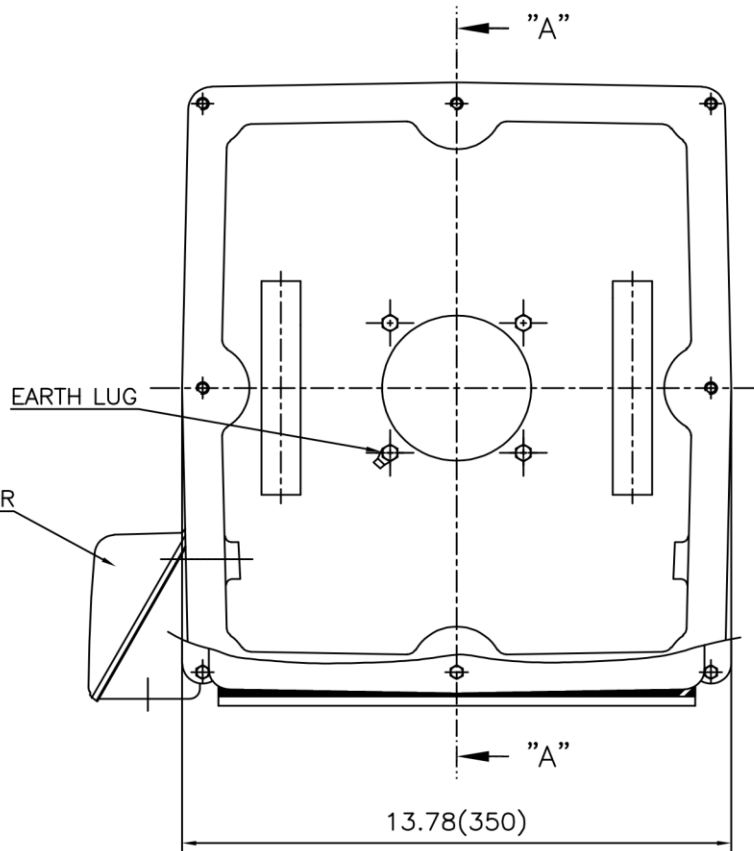
CENTER HEIGHT	12.5	+0.000 -0.060
SHAFT DIAMETER	Ø2.625	+0.000 -0.001
KEYWAY WIDTH	0.625	+0.002 -0.000



VIEW "A"

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5008/5009S	DWG SIZE
CHKD BY	O.J.KIM	SCALE	1/19			A4 (1:19)
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-T0509B3CE001	Revision No. 0

Cls. I&II, Div. 2 IEEE 841

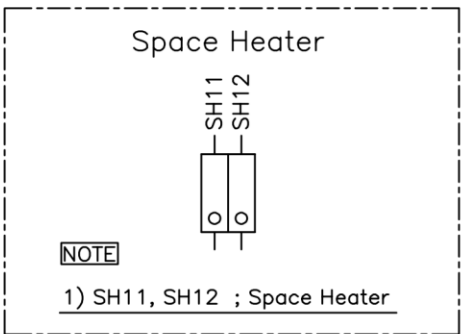
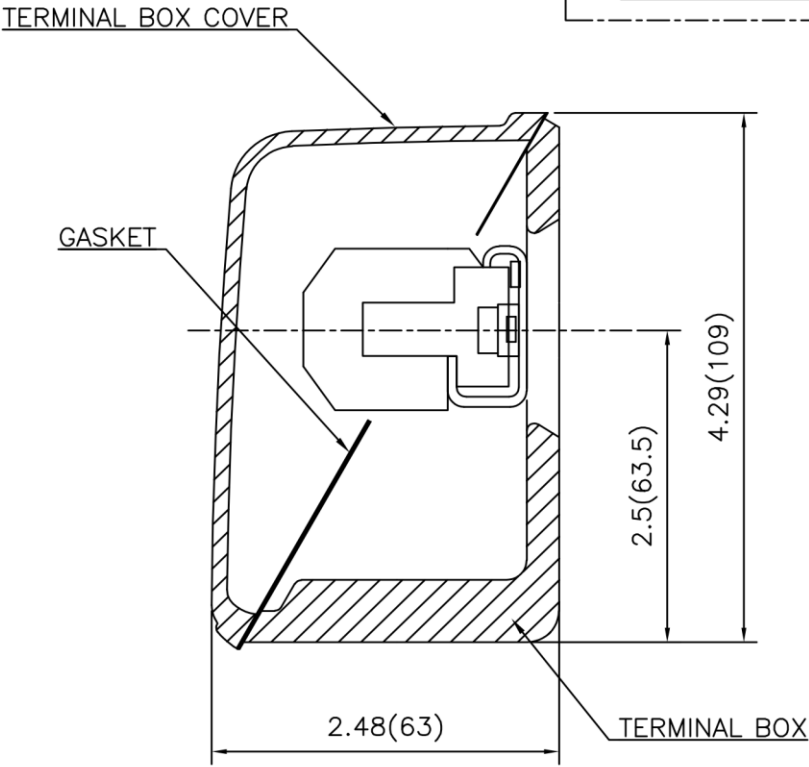
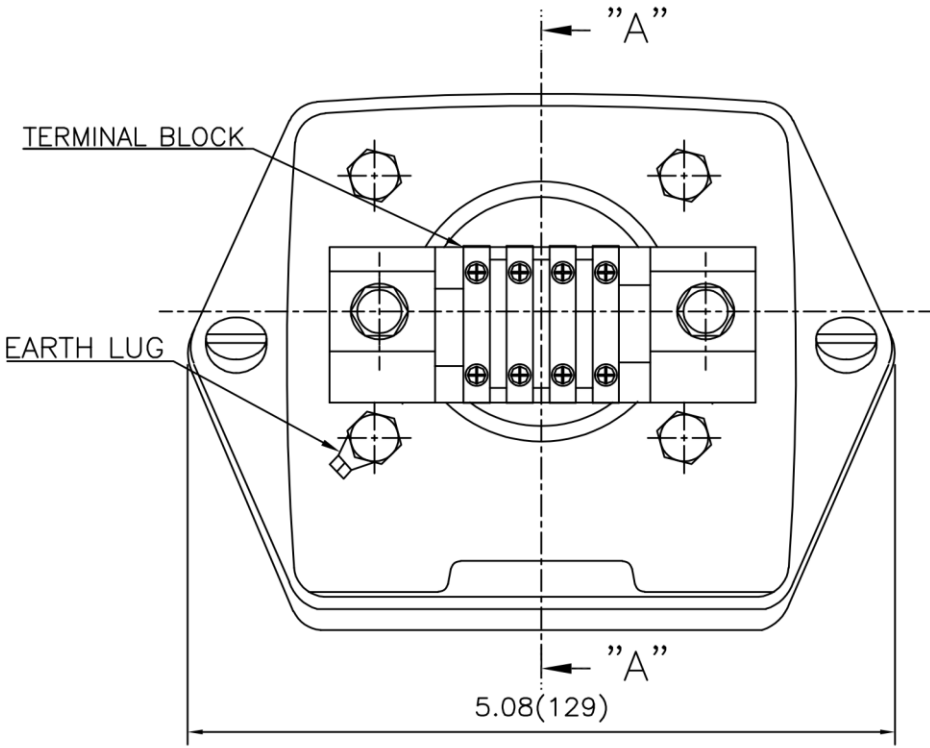


SEC. "A" - "A"

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

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

Cls. I&II, Div. 2
IEEE 841



APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.180 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/1	TITLE		A3 (1:1.1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	배승희	DATE	2024-01-18	SUB. TERMINAL BOX ASS'Y		
				REF. NO		Sheet No. of
				DWG NO	3M-165278	Revision No. 0

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY