

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.	HSDE400-12-5009-IBBRSRSH	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA				
Frame Size		5009		Rated Output		300 kW 400 HP	
Type		PJP		Number of Poles		6	
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	374.3 A	467.9 A 935.8 A
Insulation Class		F			Locked-rotor**	680 %	680 % 680 %
Temp. Rise at full load (by resistance method)			Efficiency				
at 1.0 S.F		80 deg. C		50% Load		92.8 %	
Motor Location		☐ Indoor ☐ 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		0.690	
Duty Type		Continuous (S1)		75% Load		0.790	
Service Factor		1.15		100% Load		0.840	
Mounting		B3		Speed at Full Load		1185 r.p.m	
Bearing	Type	Anti-Friction		Torque			
	DE/N-DE	NU324 / 6320C3-INS.		Full Load		1783.53 lb.ft	
	Lubricant	Grease(Polyrex-EM)		Locked-rotor**		135 %	
External Thrust		Not applicable		Breakdown**		220 %	
Coupling Method		☐ Direct ☐ V-belt		Moment of Inertia (J)			
Shaft Extension		Single		Load(Max.)		4,199.000 lb.ft2	
Terminal Box	Main	Cast Iron		Motor		246.780 lb.ft2	
	Aux.	Yes		Sound Pressure Level (No-load & mean value at 1m from motor)			
	Location	Refer to Outline Drawing				84 dB(A)	
Application				Vibration		3.8 mm/s (peak)	
Area classification		Hazardous		Permissible number of consecutive starts		Cold	2 times
Type of Ex-Protection		Class I&II, Division 2				Hot	1 time
Applicable Standard		NEMA MG1, CSA C390		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)	

ACCESSORIES

- *. B.T.D.(Pt 100 Ω at 0°C,Single) : 2EA/Motor
- *. W.T.D.(Pt 100 Ω at 0°C) : 2EA/Ph.
- *. Space Heater : 1EA/Motor

SPARE PARTS

SUBMITTAL DRAWING

Outline Dimension Drawing	\ Motor Weight(Approx.)		
B3	LM-T0509B3P7001	3970 lb.	

REMARK

- Premium efficiency according to NEMA MG1
- 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
- NDE side : Insulated bearing
- CSA Certification
 - Class I, Division 2, Group A, B, C & D
 - Class II, Division 2 Group F & G
- Shaft material : AISI4140
- Temp. code : T3(200°C) at sine wave

Date	DSND	CHKD	CHKD	APPD
2025-09-19	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.

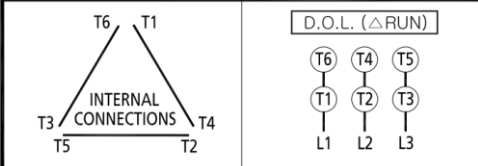
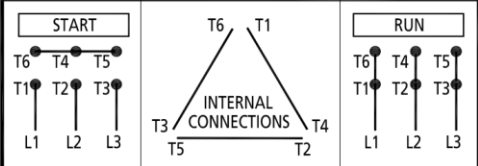
MAIN NAMEPLATE

4.72

2.36

CROWN TRITON							
Premium Efficiency AC 3 Phase Motor							
400HP	6P	460V	Cat. No. HSDE400-12-5009-IBBRSRSH				
Model	-		INS. Class	F	Amps	467.9A	
Type	PJP	Duty	CONT	Code	H	Amb.	40°C
Frame	5009	Encl.	TEFC	S.F.	1.15	RPM	1185
Bearing	Drive	NU324	S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)			3/4 Eff.	94.8%
	Opp.	6320C3-INS.				NEMA Design	B Torque
Usable at	50Hz 335HP 380V 472.0A 985rpm S.F.: 1.0 Eff.: 95.8% Code: G						
	50Hz 335HP 400/415V 459.3/453.8A 986/987rpm S.F.: 1.0 Eff.: 95.8/95.8% Code: H/J						
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	3970 lb		
4M-137952		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	
CHKD BY	I.K.KIM	SCALE	NONE					A4 (1:1)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE				
DSND BY	S.H.LEE	DATE	2024.06.07	NAMEPLATE DRAWING				
				REF. NO	4M-137952 / 4M-129326	Sheet No.	of	
				DWG NO	NP-HSDE400-12-5009-IBBRSRSH	Revision No.	0	

Type : PJP

300kW 400HP

6 P

60 Hz

Full Load Torque : 1783.53 lb.ft

Speed at Full Load : 1185 RPM

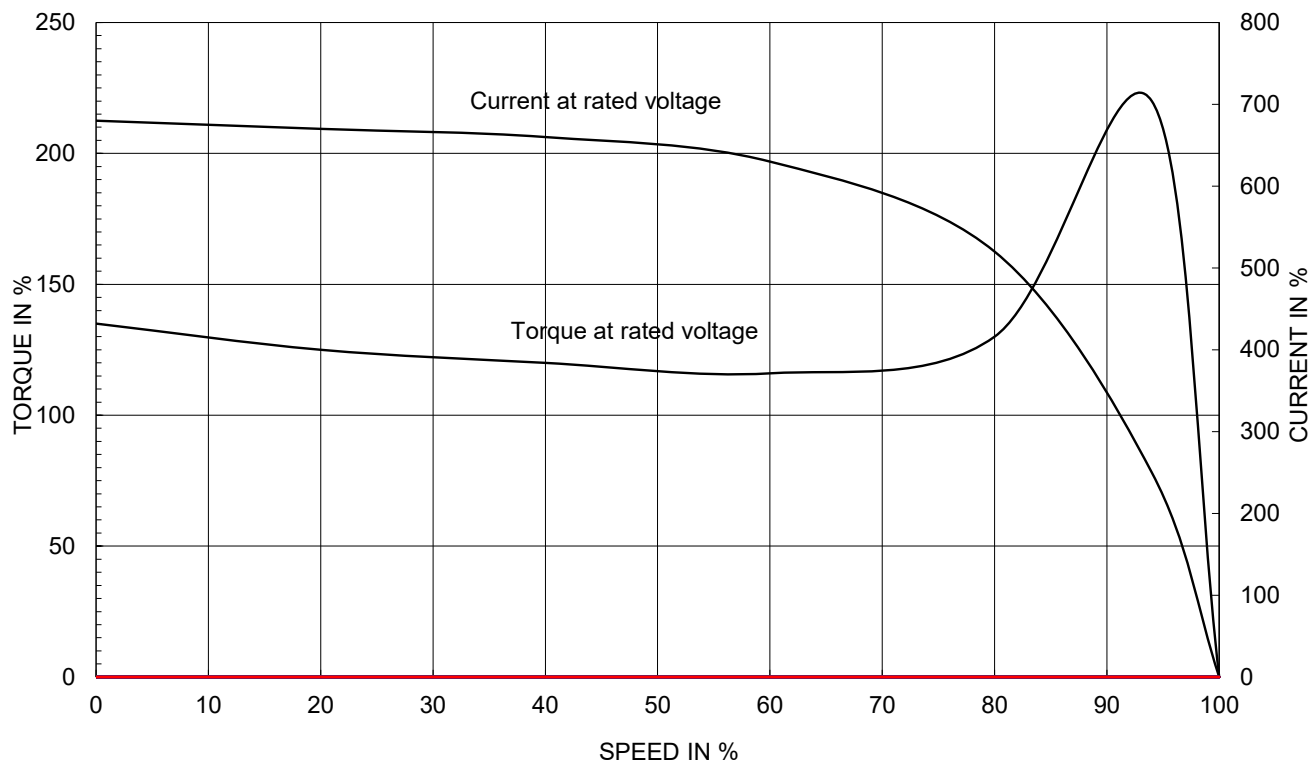
Load moment of Inertia (J) : 4199.000 lb.ft2

Rated Voltage 575V 460V 230V

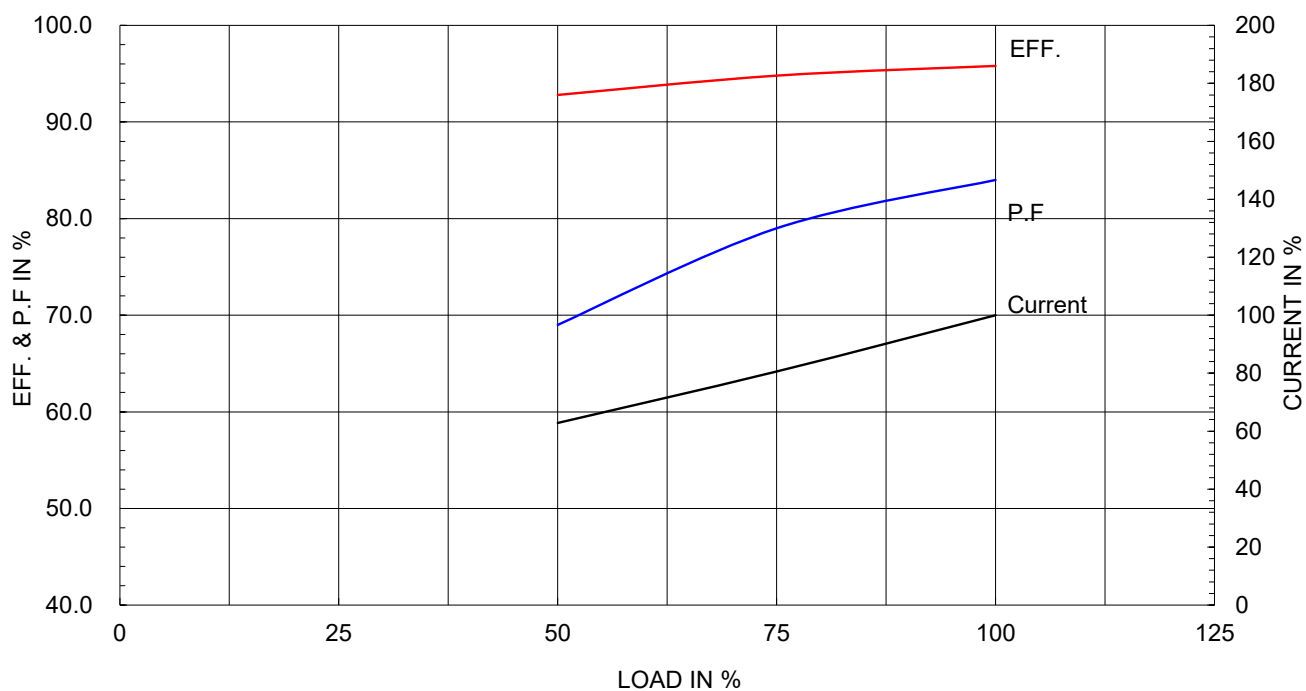
Motor moment of Inertia (J) : 246.780 lb.ft2

Full Load Current 374.3A 467.9A 935.8A

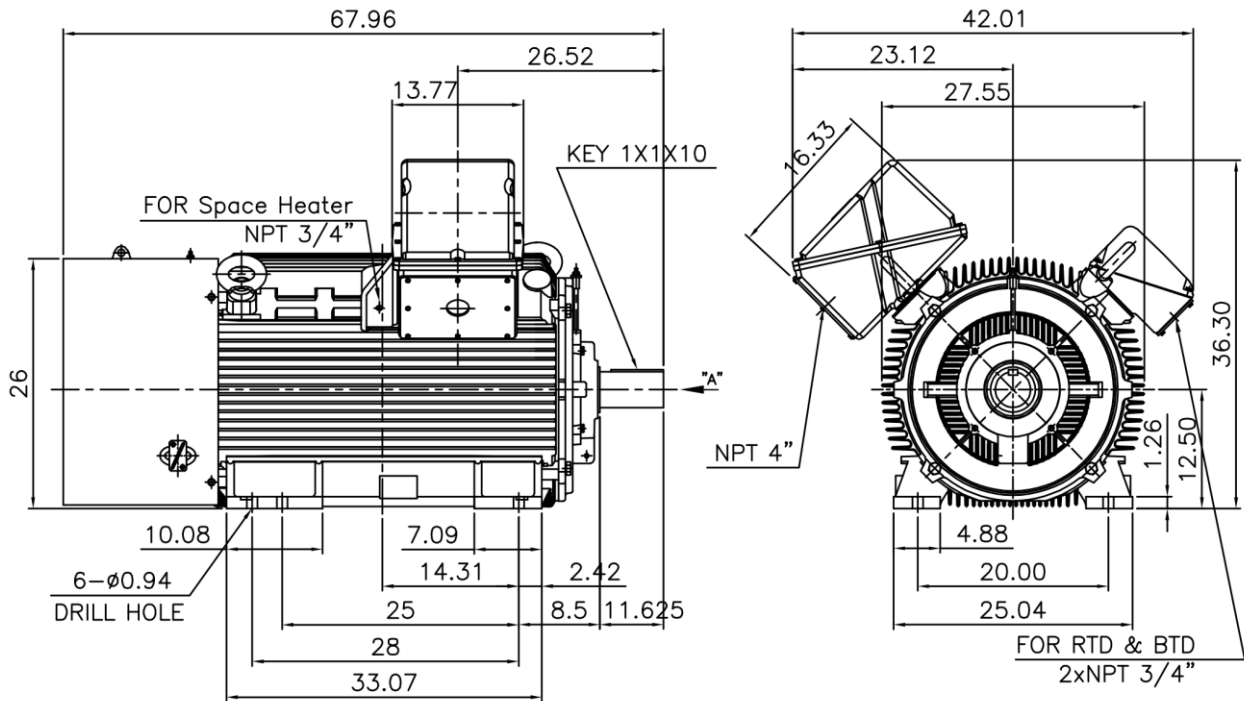
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



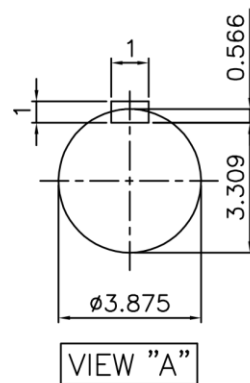
1			2		3		4		
▽	50S	REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S								
▽▽▽	3.2S								
▽▽▽▽	0.4S								



NOTE

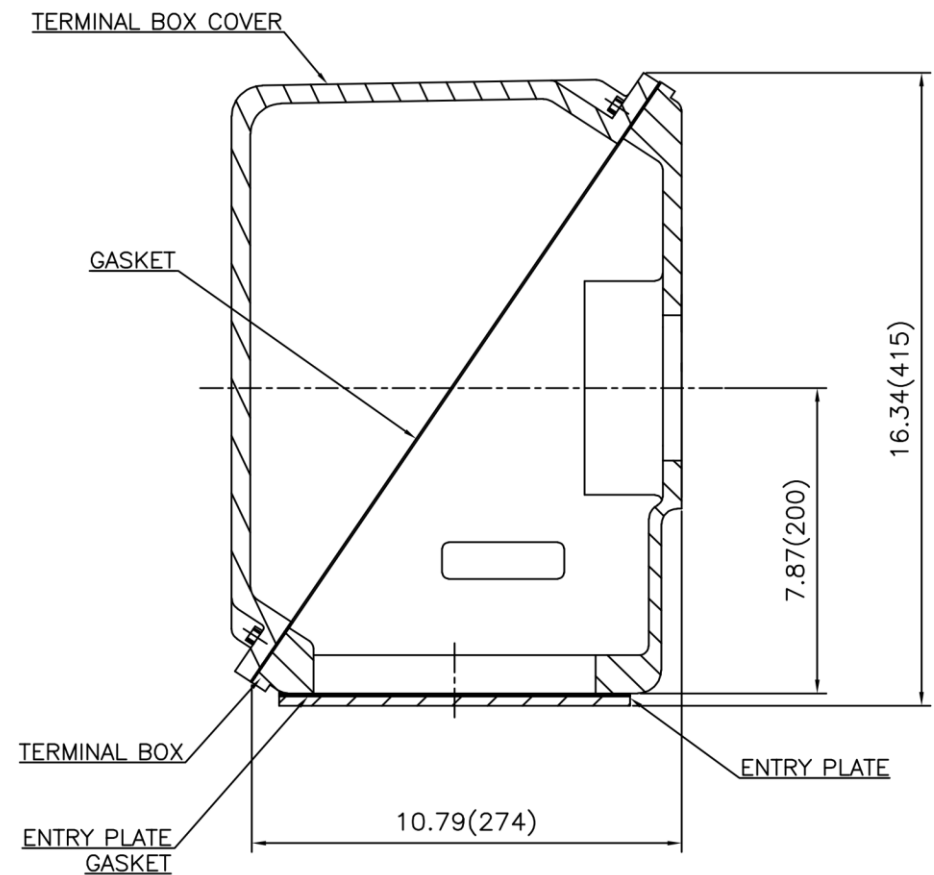
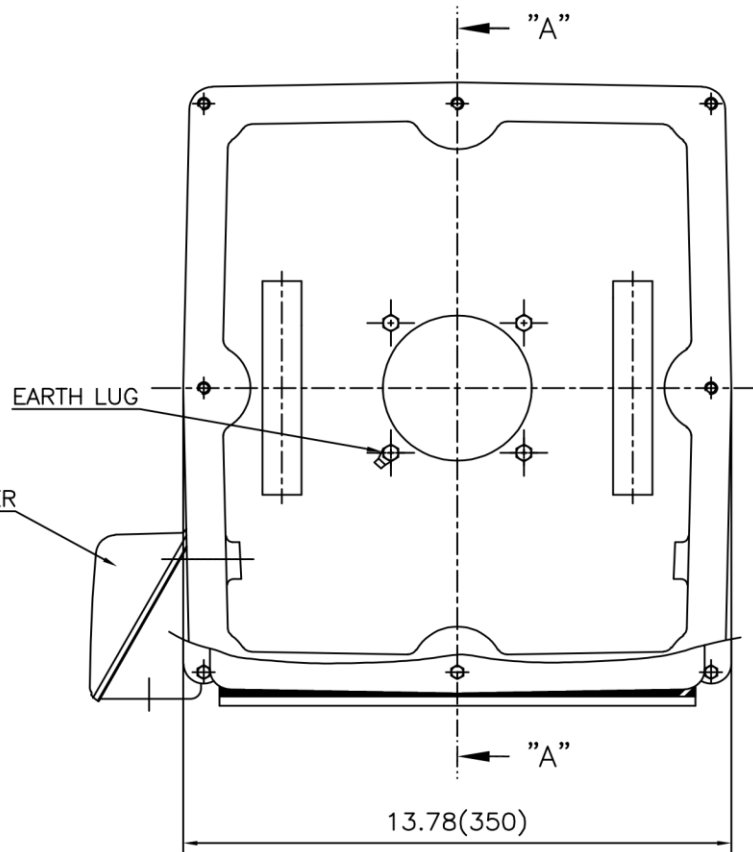
1.TOLERANCE :

CENTER HEIGHT	12.5	+0.000 -0.060
SHAFT DIAMETER	Ø3.875	+0.000 -0.001
KEYWAY WIDTH	1	+0.003 -0.000



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5008 / 5009	DWG SIZE
CHKD BY	O.J.KIM	SCALE	1/19	TITLE		A4 (1:19)
CHKD BY	R.G.KIM	PROJEC'N	3각법 (3rd Angle)			
DSND BY	H.K.LEE	DATE	2021-04-27	OUTLINE		
				REF. NO		Sheet No. of
				DWG NO	LM-T0509B3P7001	Revision No. 0

Cls. I&II, Div. 2 IEEE 841

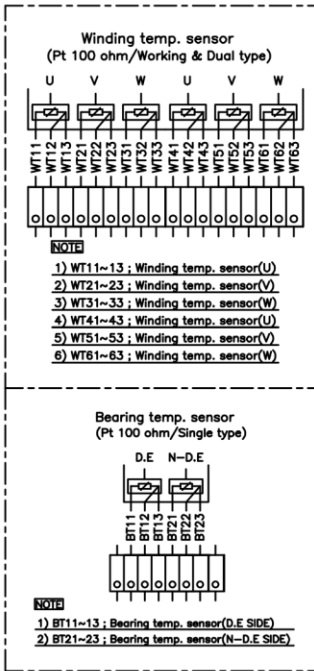
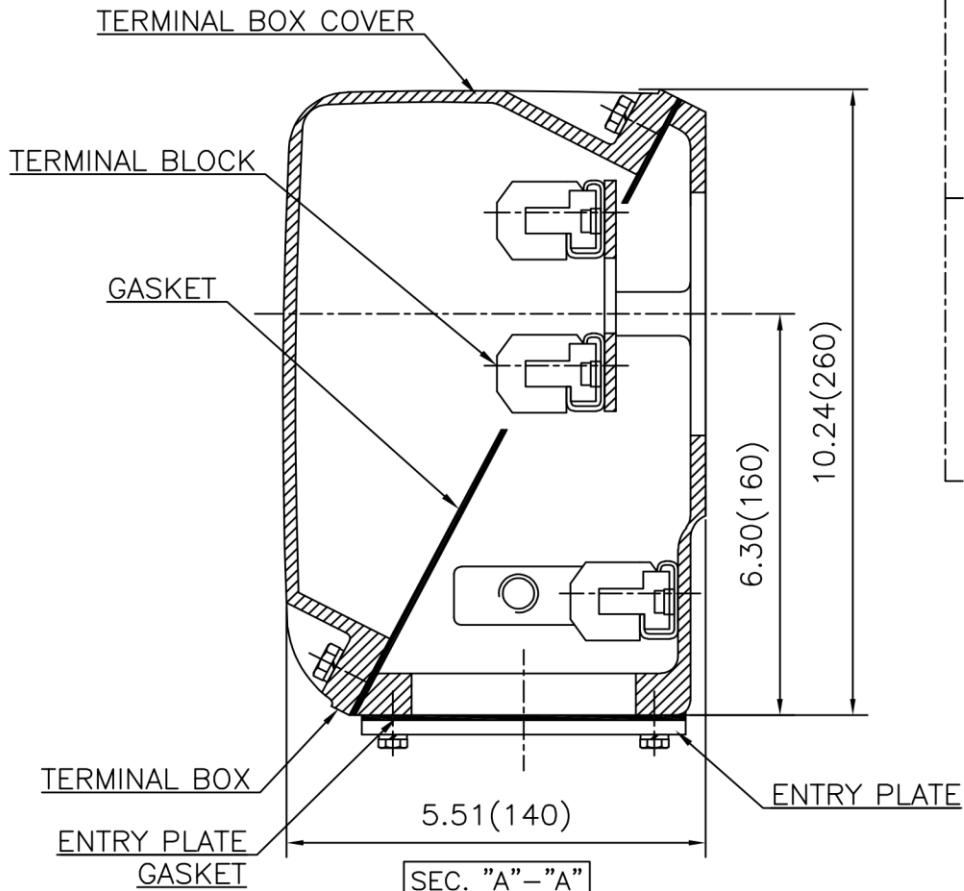
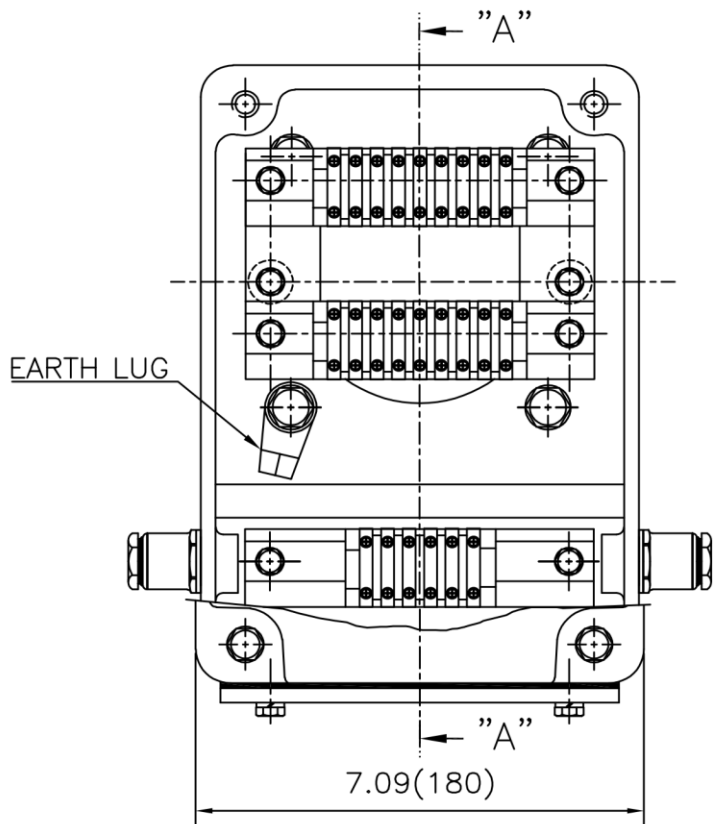


SEC. "A" - "A"

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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	내습의	DATE	2023-10-19	REF. NO		Sheet No. of
				DWG NO	3M-248452	Revision No. 0

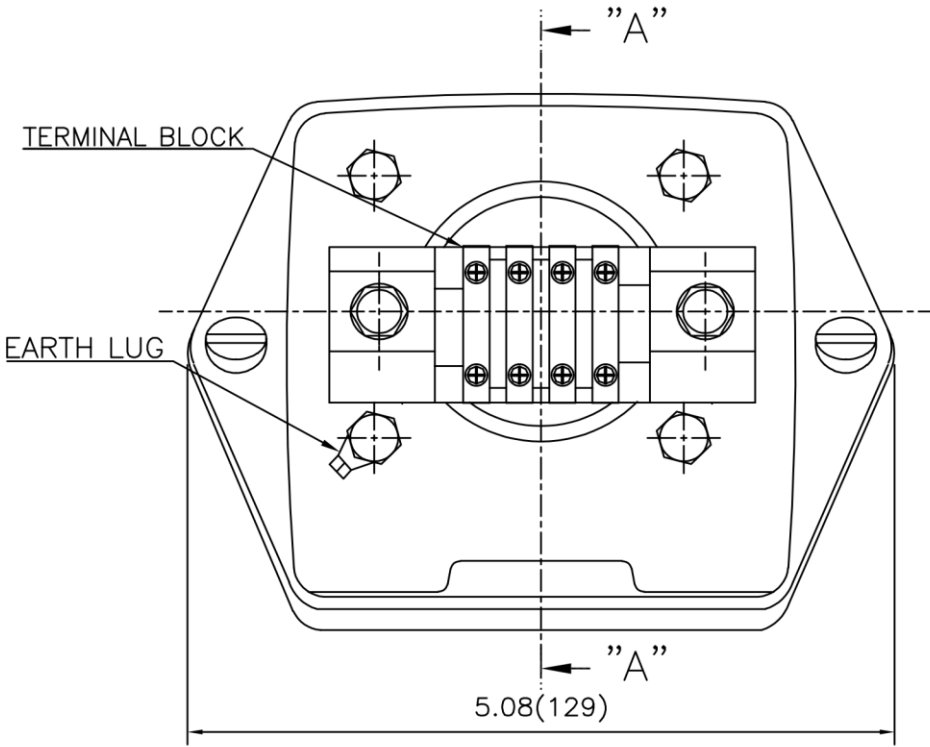
Cls. I&II, Div. 2 IEEE 841



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

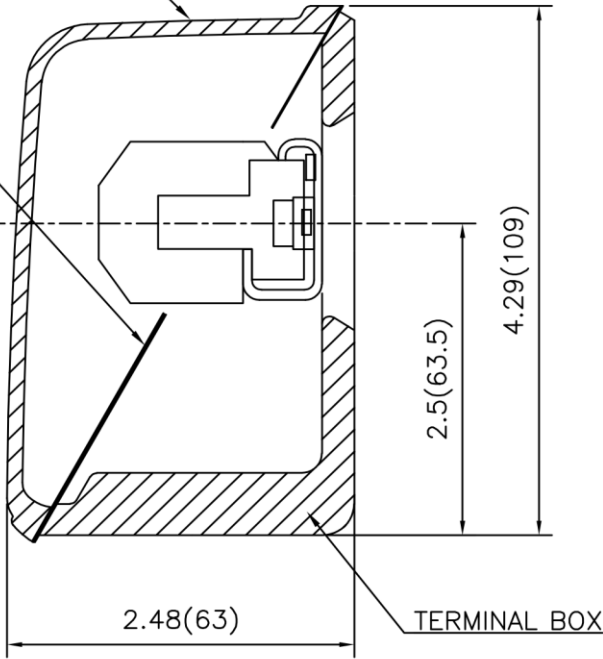
REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

Cls. I&II, Div. 2
IEEE 841



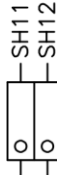
TERMINAL BOX COVER

GASKET



SEC. "A"-"A"

Space Heater



NOTE

1) SH11, SH12 ; Space Heater

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

