

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.	HSDE500-36-5010SC-IBBRSRSHSP	Item No.		Rev. No.	[]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA						
Frame Size		5010SC		Rated Output		375 kW		500 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		436.7 A		545.9 A 1091.8 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				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		0.750	
Duty Type		Continuous (S1)				75% Load		0.850	
Service Factor		1.15				100% Load		0.900	
Mounting		B35		Speed at Full Load		3570 r.p.m			
Bearing	Type	Anti-Friction		Torque					
	DE/N-DE	6315C3 / 6315C3-INS.				Full Load		740.02 lb.ft	
	Lubricant	Grease(Polyrex-EM)				Locked-rotor**		145 %	
External Thrust		Not applicable				Breakdown**		240 %	
Coupling Method		☒ Direct ☐ V-belt		Moment of Inertia (J)					
Shaft Extension		Single				Load(Max.)		381.000 lb.ft2	
Terminal Box	Main	Cast Iron				Motor		76.418 lb.ft2	
	Aux.	Yes		Sound Pressure Level (No-load & mean value at 1m from motor)					
	Location	Refer to Outline Drawing						87 dB(A)	
Application				Vibration		3.8 mm/sec (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	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-T0511C4C7001 4940 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. Uni-directional CCW viewed from drive end. 7. Temp. code : T3(200°C) at sine wave				
SPARE PARTS					
1. Spare Axial Fan (C.W Direction)					
	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

500HP		2P	460V	Cat. No.	HSDE500-36-5010SC-IBBRSRSHSP				
Model		LATER		INS. Class	F		Amps	545.9A	
Type	PJP	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz
Frame	5010SC	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 Torque
Usable at	50Hz 420HP 380V 555.1A 2970rpm S.F.: 1.0 Eff.: 95.8% Code: G								
	50Hz 420HP 400/415V 533.3/513.9A 2972/2975rpm 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 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	4940 lb
4M-136053				Made in Korea H1				HD HYUNDAI ELECTRIC	
MARINE DUTY IEEE45									

WIRING DIAGRAM

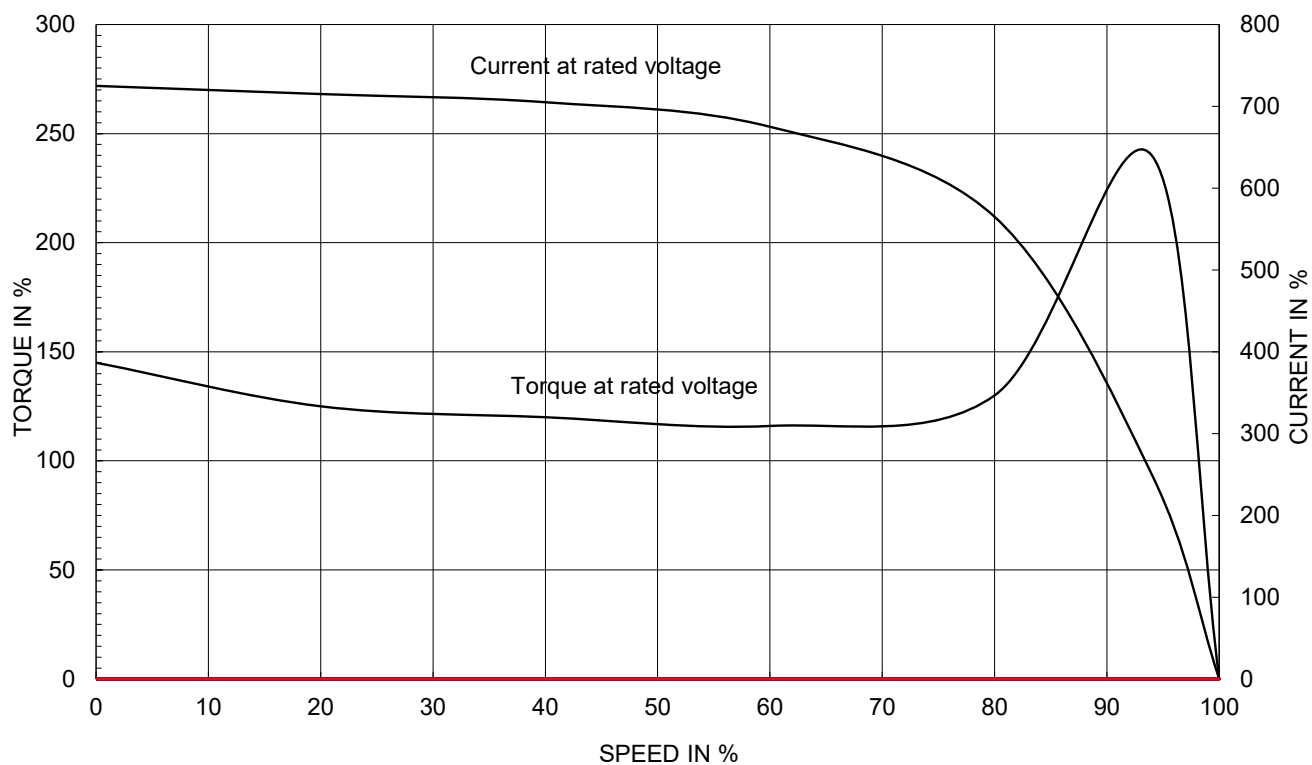
D.O.L (INVERTER & SOFT STARTER) WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES. D.O.L. (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
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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-HSDE500-36-5010SC-IBBRSRSHSP	Revision No.	0	

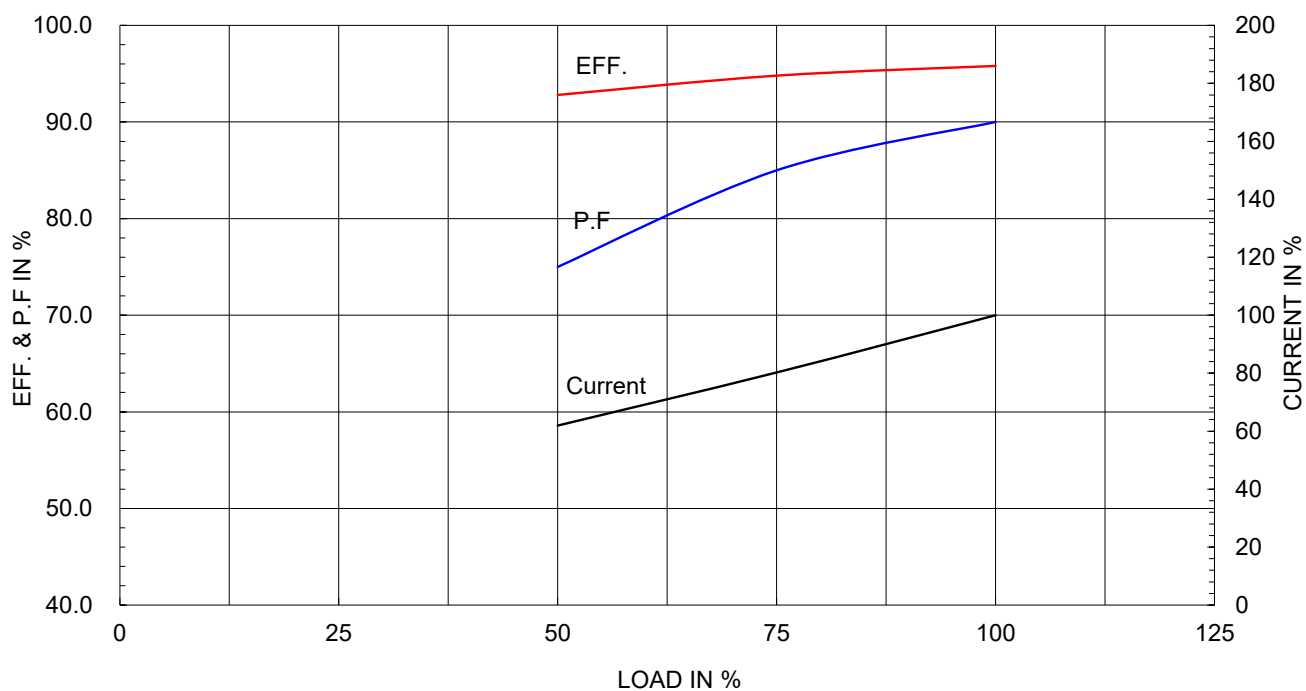
Type :	PJP	
Full Load Torque :	740.02	lb.ft
Load moment of Inertia (J) :	381.000	lb.ft2
Motor moment of Inertia (J) :	76.418	lb.ft2

375kW	500HP	2 P	60 Hz
Speed at Full Load :		3570 RPM	
Rated Voltage	575V	460V	230V
Full Load Current	436.7A	545.9A	1091.8A

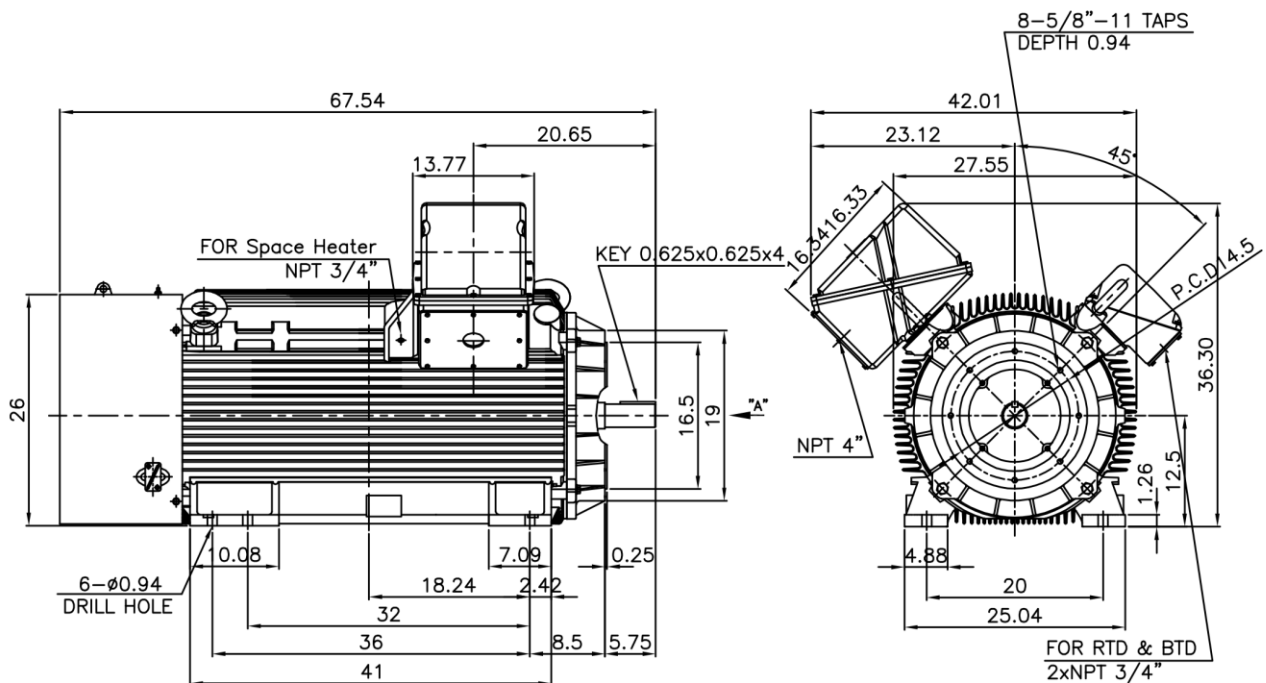
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



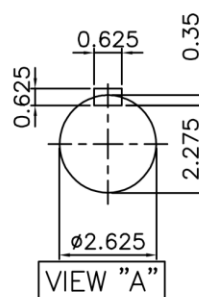
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▽	50S	REV	DATE
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▽▽▽	3.2S		
▽▽▽▽	0.4S		



NOTE

1.TOLERANCE :

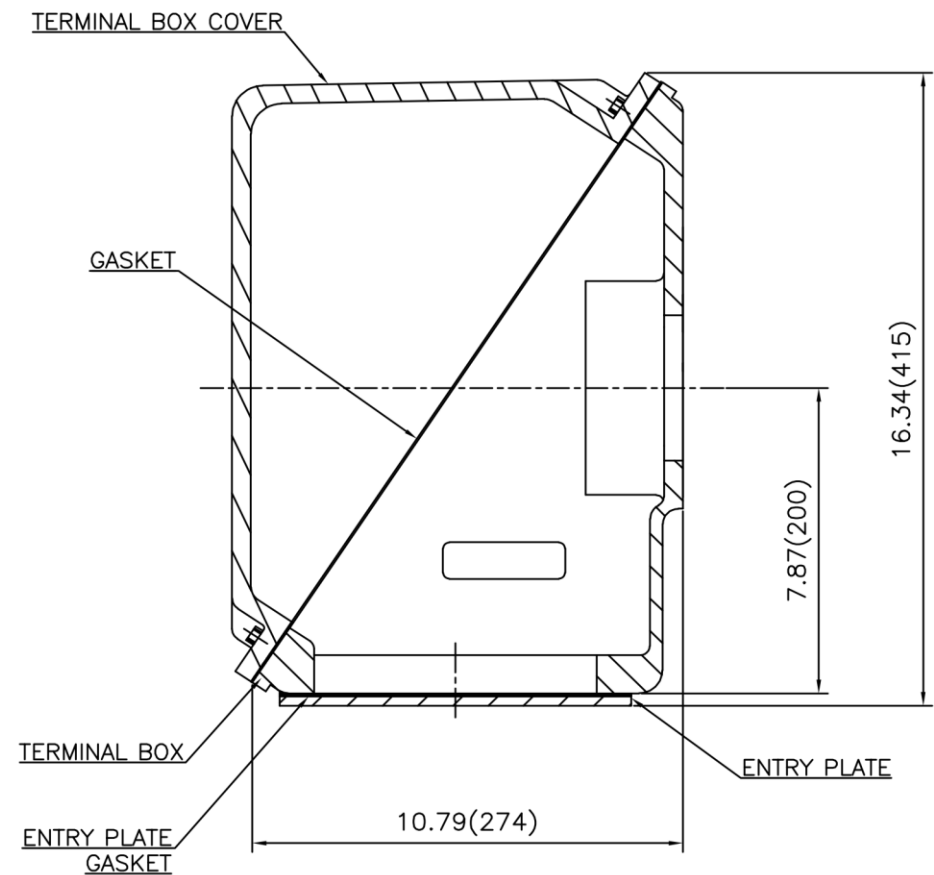
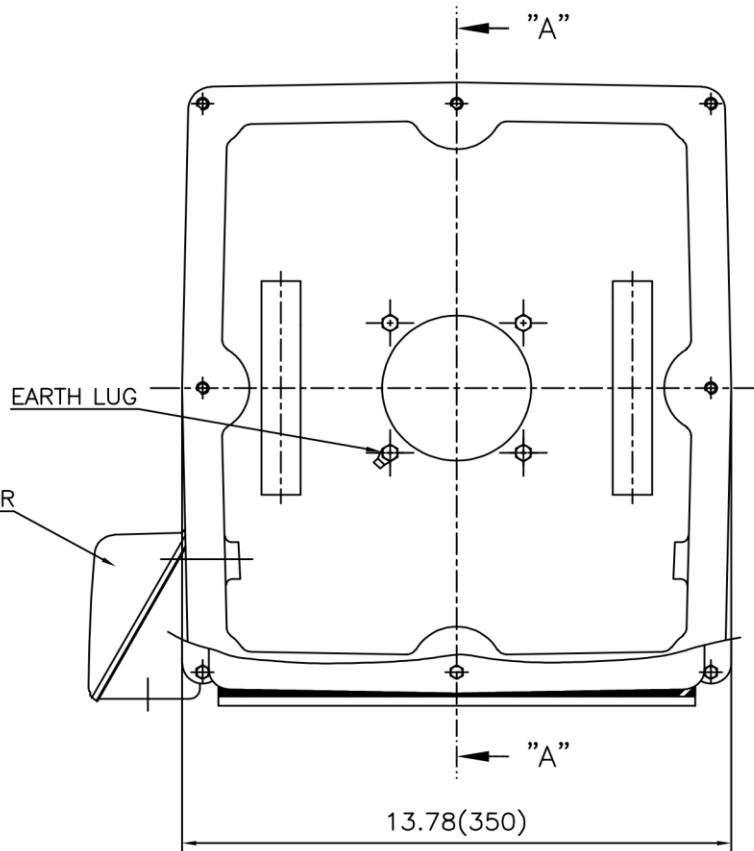
CENTER HEIGHT	12.5	+0.000 -0.060
RABBET DIAMETER	Ø16.5	+0.000 -0.005
SHAFT DIAMETER	Ø2.625	+0.000 -0.001
KEYWAY WIDTH	0.625	+0.002 -0.000



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5010/5011SC	DWG SIZE
CHKD BY	O.J.KIM	SCALE	1/20			A4 (1:20)
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-T0511C4C7001	Revision No. 0

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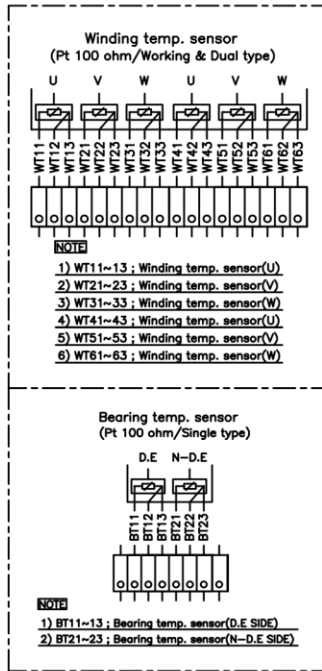
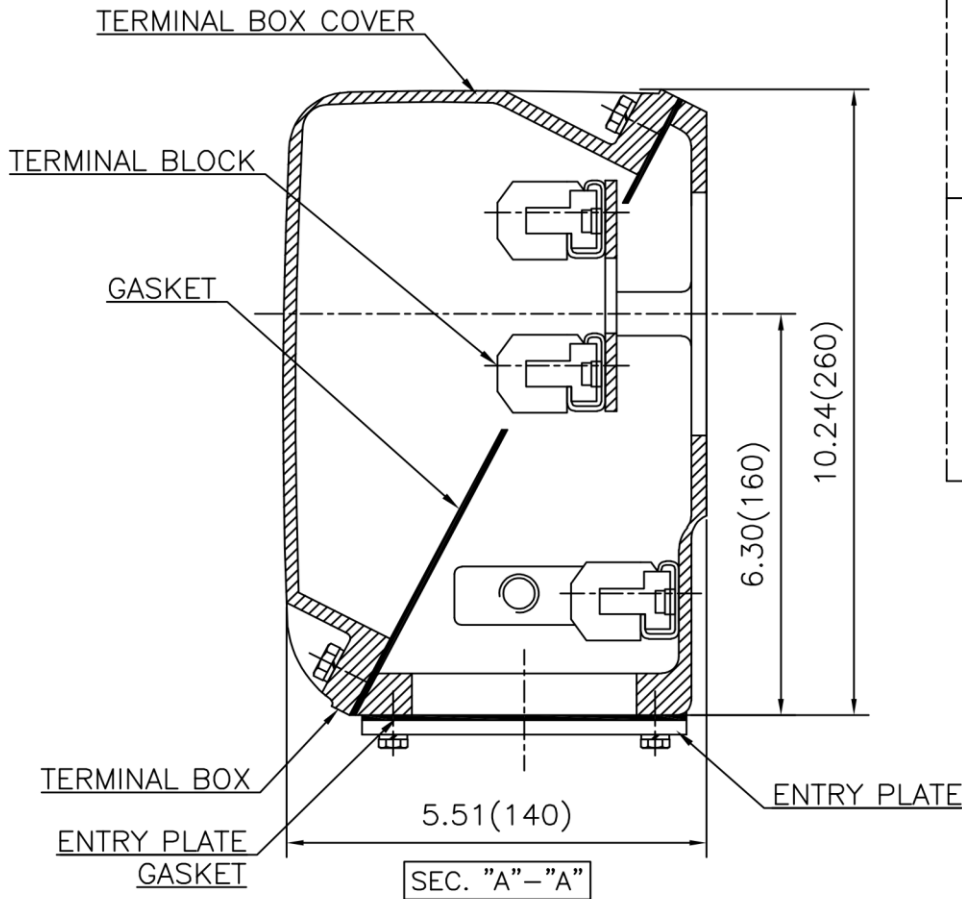
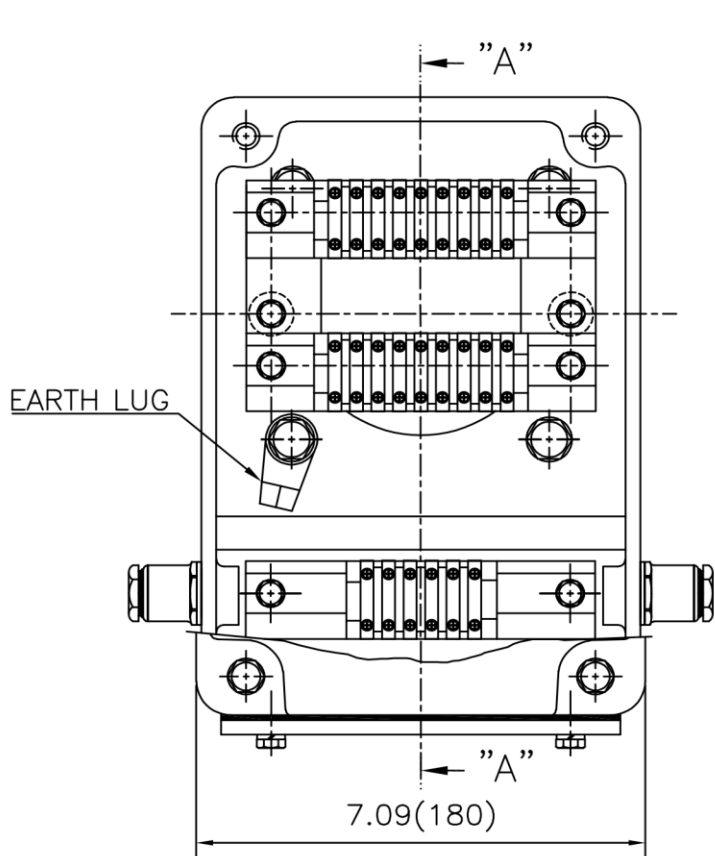
SEC. "A" - "A"

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	DATE		
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

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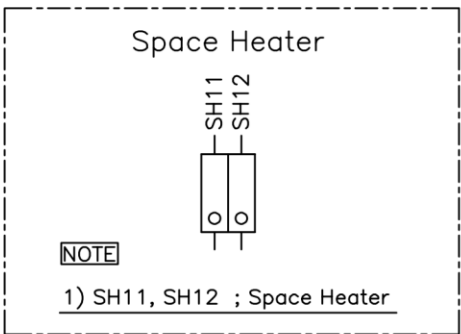
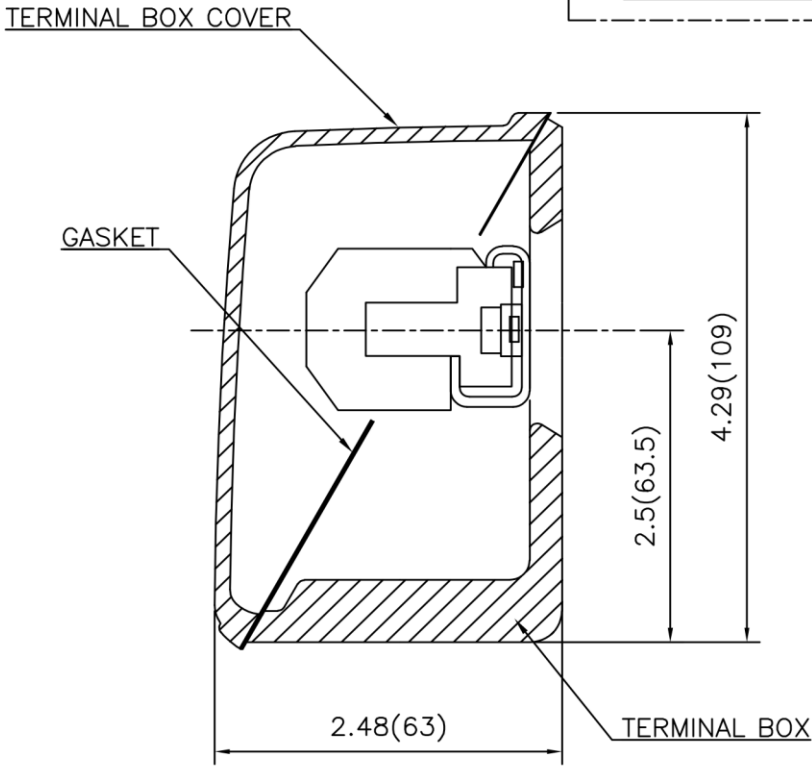
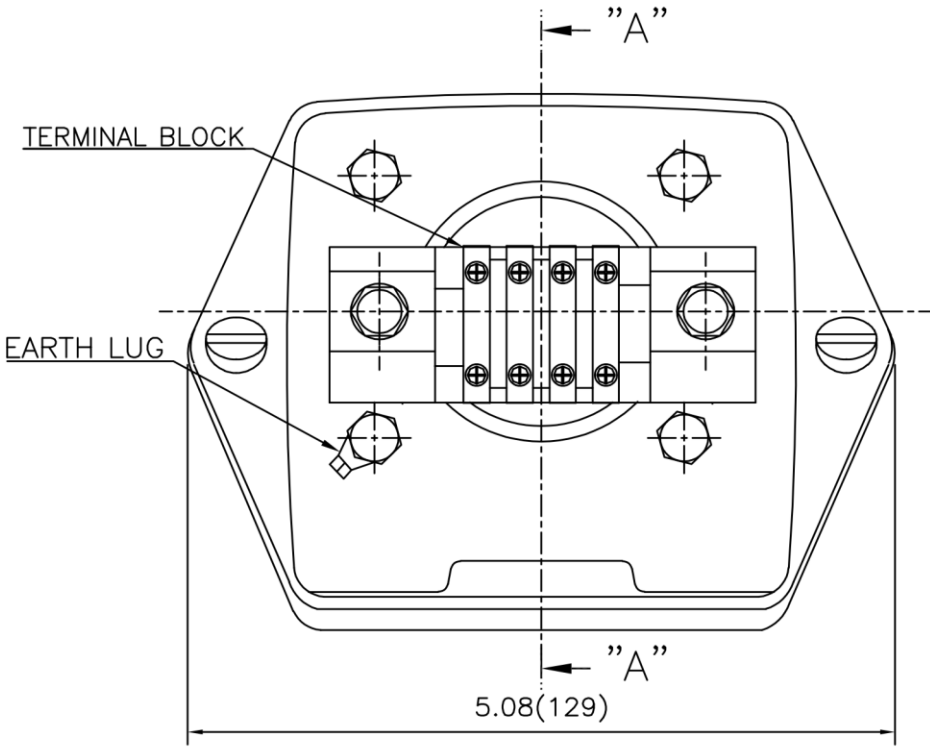


REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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



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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