

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.	HSDE700-36-5012S-IBBRSRSHSP-F	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	5012S		Rated Output	522 kW		700 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	607.9 A	759.9 A	1519.8 A
Insulation Class	F			Locked-rotor**	720 %	720 %	720 %
Temp. Rise at full load (by resistance method)			Efficiency				
at 1.0 S.F			105 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	6316C3 / 6316C3-INS.	Torque				
	Lubricant	Grease(Polyrex-EM)	Full Load		1030.10 lb.ft		
External Thrust	Not applicable		Locked-rotor**		150 %		
Coupling Method	☒ Direct ☐ V-belt		Breakdown**		230 %		
Shaft Extension	Single		Moment of Inertia (J)				
Terminal	Main	Steel	Load(Max.)		- lb.ft2		
Box	Aux.	Yes	Motor		9,635.110 lb.ft2		
	Location	Refer to Outline Drawing	Sound Pressure Level (No-load & mean value at 1m from motor)				
Application			92 dB(A)				
Area classification	Hazardous		Vibration		3.8 mm/s (peak)		
Type of Ex-Protection	Class I&II, Division 2		Permissible number of consecutive starts		Cold	2 times	
Applicable Standard	NEMA MG1, CSA C390		Hot		1 time		
			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.			B3		LM-T0512B3C7001	5150 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				
			-. 2:1 CT				
			3. NDE side : Insulated bearing				
			4. CSA Certification				
			-. Class I, Division 2, Group A, B, C & D				
			5. Shaft material : AISI4140				
			6. Temp. code : T3(200°C) at sine wave				
SPARE PARTS							
1. Spare Axial Fan (C.W Direction)							
			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

700HP		2P	460V	Cat. No.	HSDE700-36-5012S-IBBRSRSHSP-F				
Model		-		INS. Class	F		Amps	759.9A	
Type	PJP	Duty	CONT	Code	G	Amb.	40°C	Hertz	60Hz
Frame	5012S	Encl.	TEFC	S.F.	1.15	RPM	3570	NEMA Nom. Eff.	95.8%
Bearing	Drive	6316C3		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)				3/4 Eff.	94.8%
	Opp.	6316C3-INS.						NEMA Design	B Torque
Usable at									
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)	
No.	-		Date	-		Weight		5150 lb	
4M-137985				Made in Korea H1		HD HYUNDAI ELECTRIC			

2.36

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. INTERNAL CONNECTIONS 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 INTERNAL CONNECTIONS 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-137985 / 4M-129326	Sheet No.	of	
				DWG NO	NP-HSDE700-36-5012S-IBBRSRSHSP-F	Revision No.	0	

Type : PJP

522kW 700HP

2 P

60 Hz

Full Load Torque : 1030.10 lb.ft

Speed at Full Load : 3570 RPM

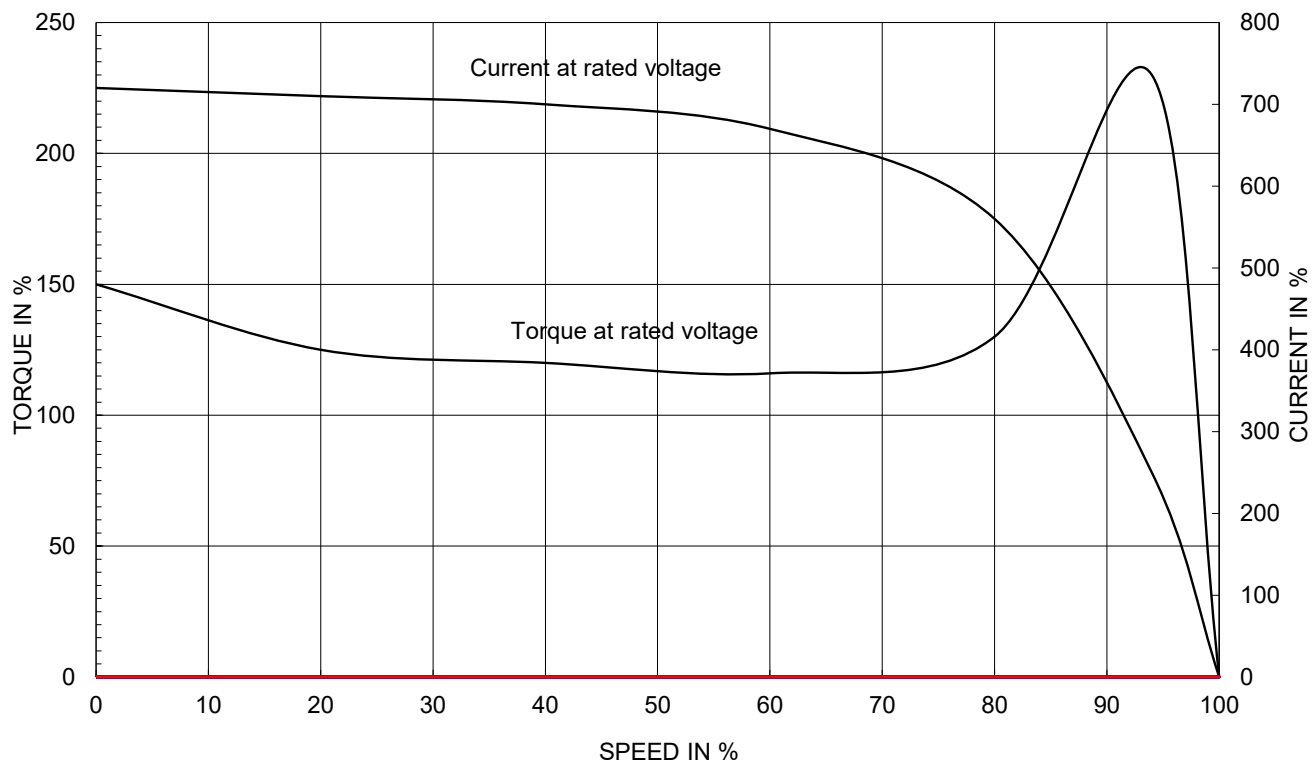
Load moment of Inertia (J) : - lb.ft2

Rated Voltage 575V 460V 230V

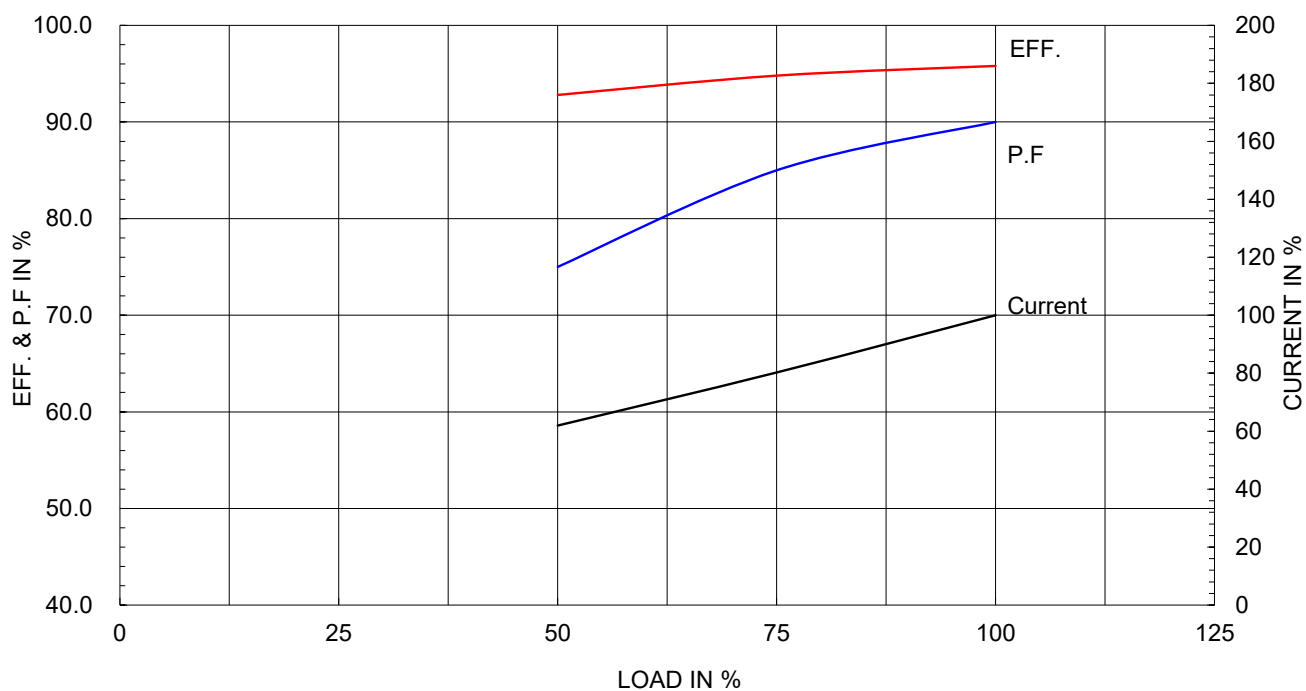
Motor moment of Inertia (J) : 9635.110 lb.ft2

Full Load Current 607.9A 759.9A 1519.8A

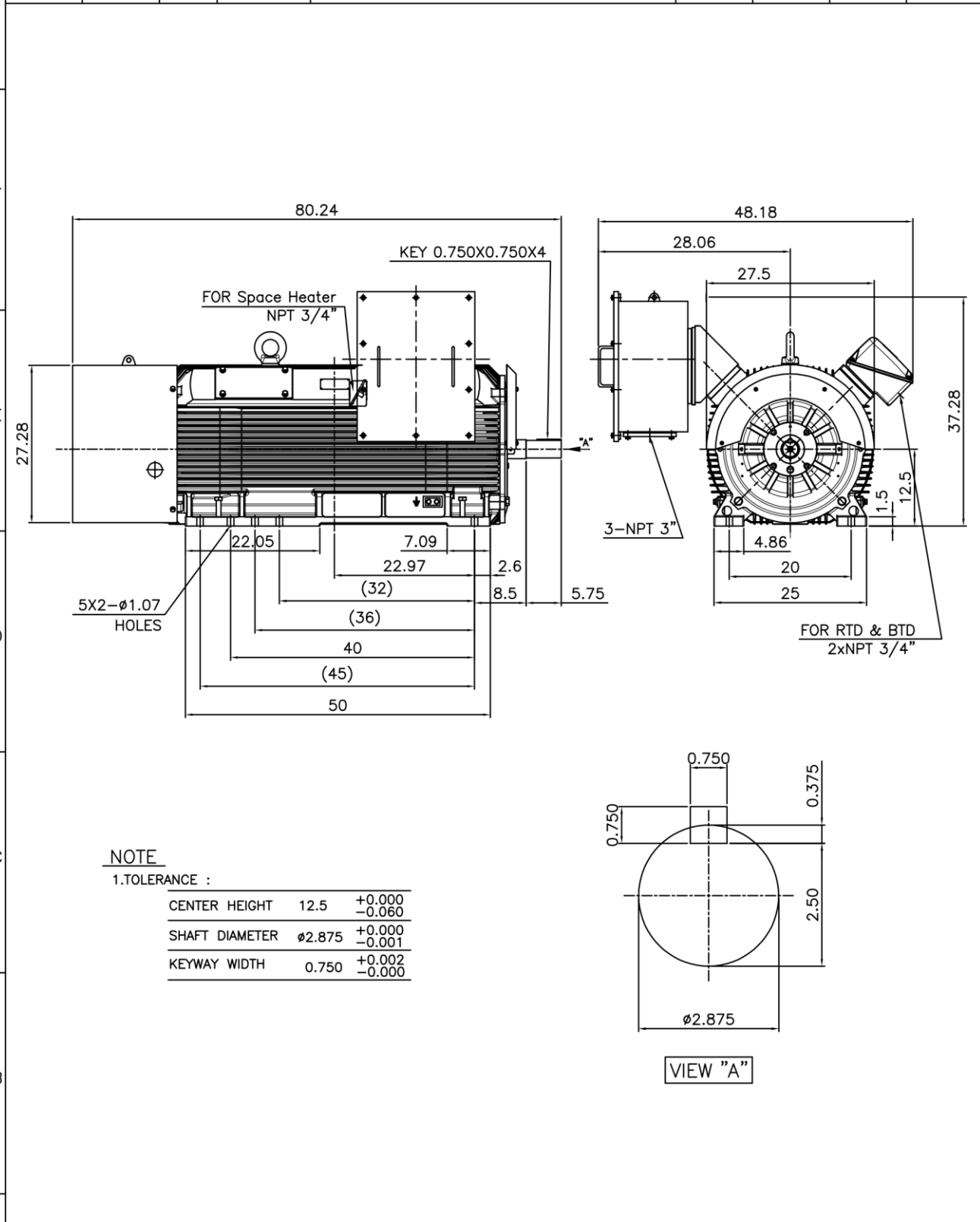
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



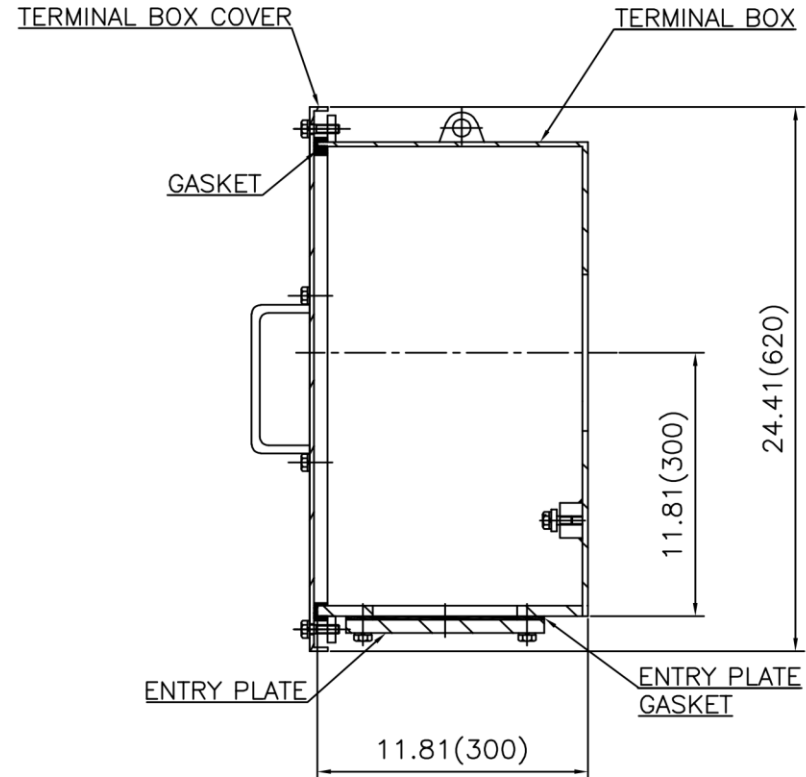
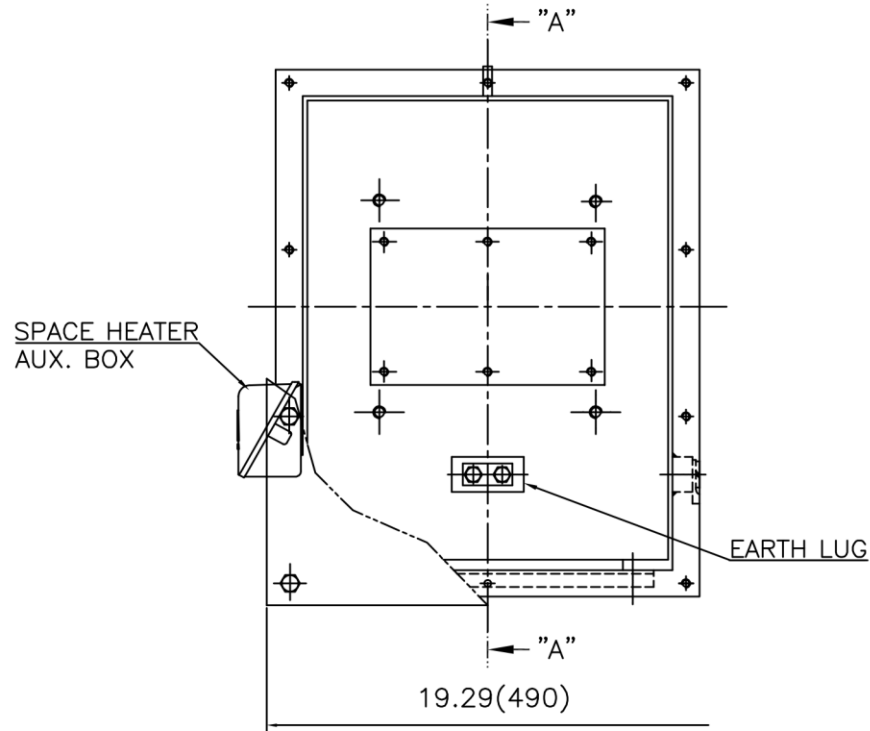
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▽	50S	REV	DATE
▽▽	12.5S		
▽▽▽	3.2S		
▽▽▽▽	0.4S		



APPD BY	S.W.KIM	UNIT	INCH	SUBJECT	Fr.5012S	DWG SIZE	A4 (1:20)
CHKD BY	C.W.PARK	SCALE	1/1	TITLE	OUTLINE		
CHKD BY	—	PROJEC'N	3각법 (3rd Angle)				
DSND BY	E.J.LEE	DATE	2025-03-25				
				REF. NO		Sheet No.	of
				DWG NO	LM-T0512B3C7001	Revision No.	0

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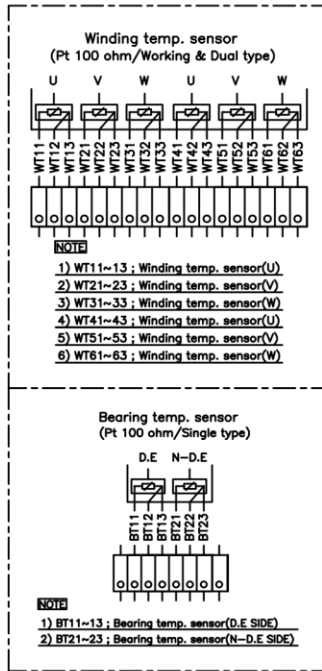
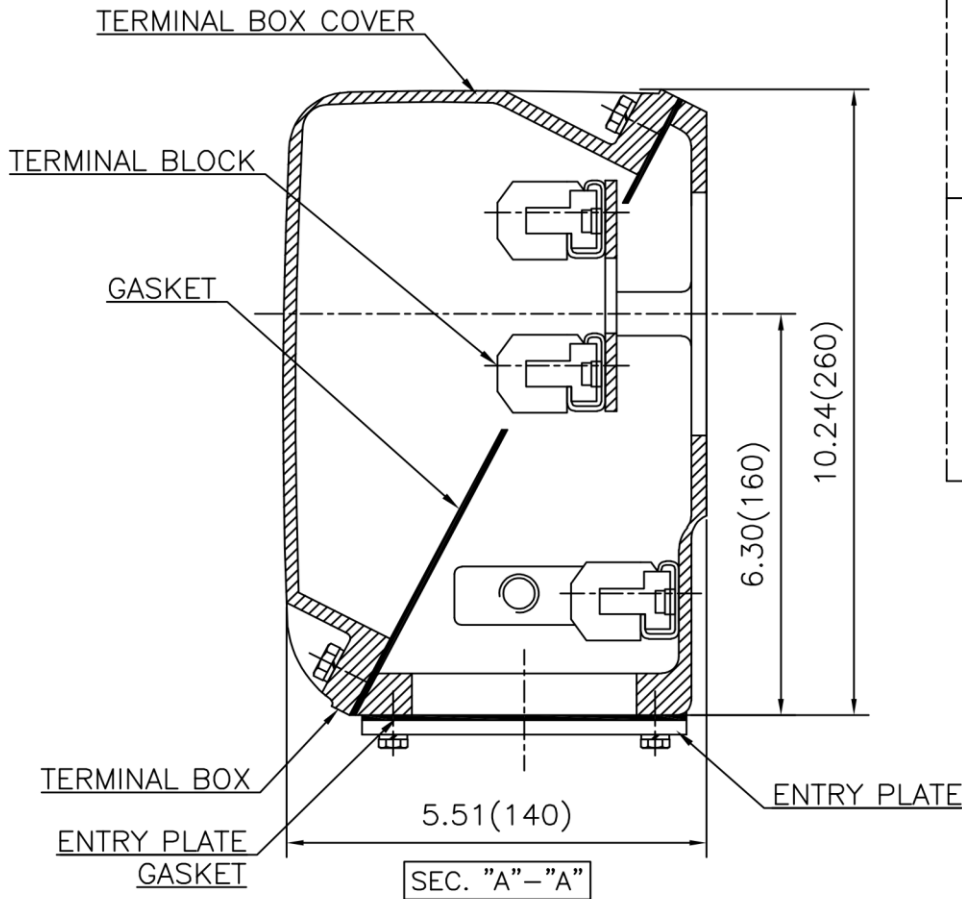
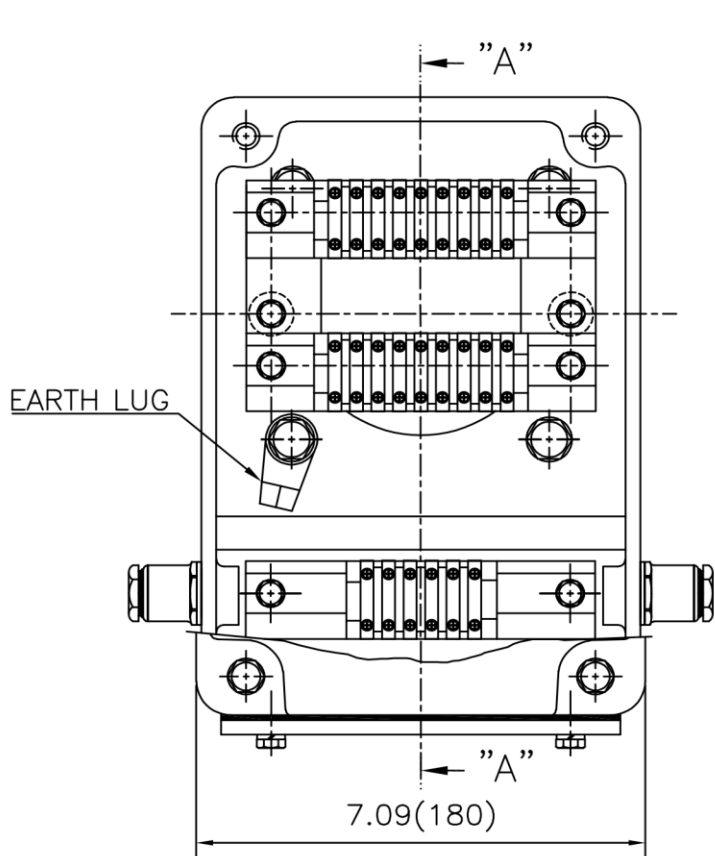
SEC. "A" - "A"

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

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.580 (STEEL)	DWG SIZE
CHKD BY		SCALE	1/6	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:6)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No. of
DSND BY	내수위	DATE	2023-10-25	DWG NO	3M-248512	Revision No. 0



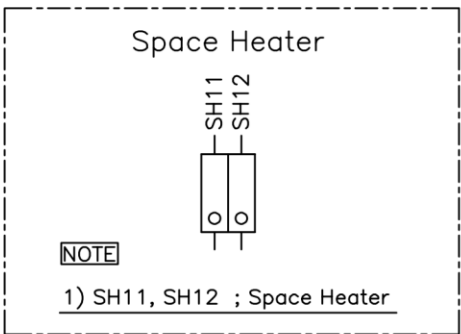
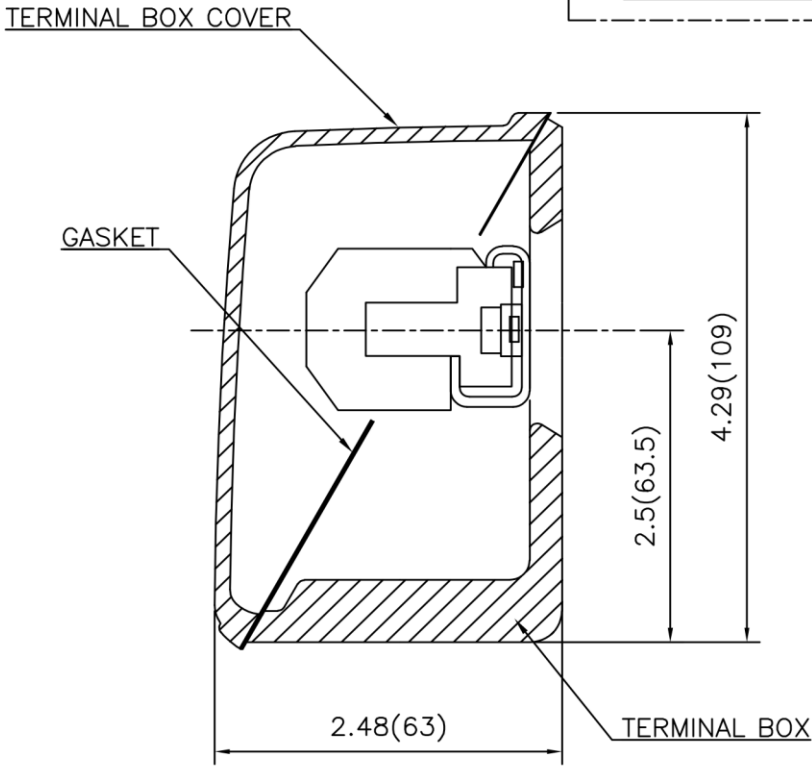
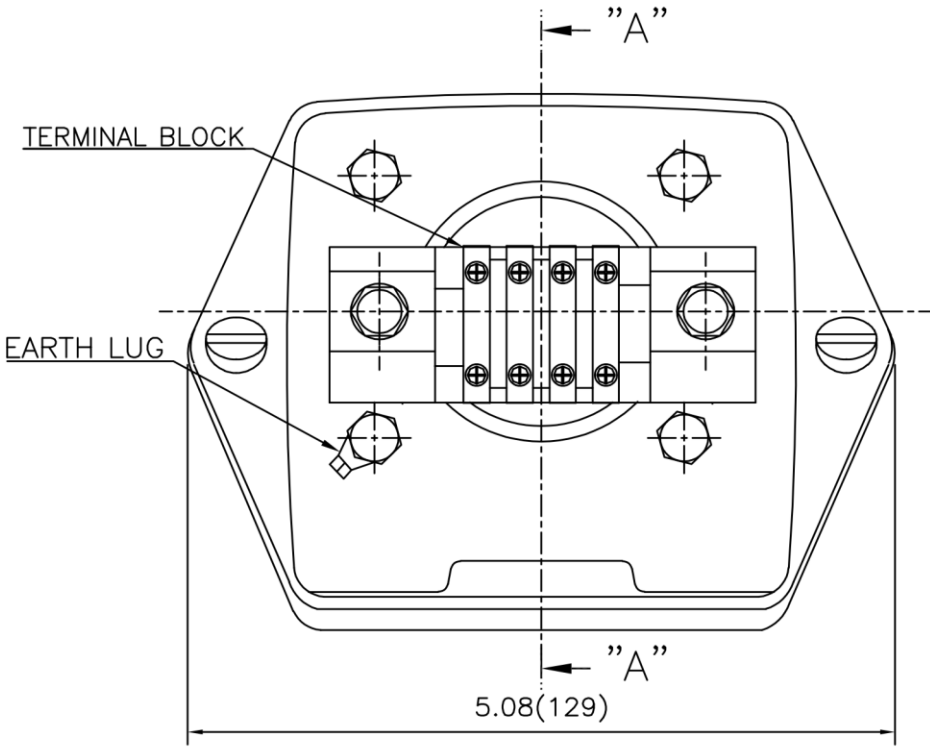
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APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.360 (CAST IRON)	DWG SIZE	A3 (1:2.2)
CHKD BY		SCALE	1/1	TITLE AUX. TERMINAL BOX ASS'Y			
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle				
DSND BY	배승희	DATE	2024-01-18	REF. NO		Sheet No.	of
				DWG NO	3M-165277	Revision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

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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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