

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.	HSDE600-36-5012S-IBBRSRSHSP	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	5012S		Rated Output	448 kW		600 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	527.6 A	659.5 A	1319.0 A
Insulation Class	F			Locked-rotor**	790 %	790 %	790 %
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 0.740				
Duty Type	Continuous (S1)		75% Load 0.840				
Service Factor	1.15		100% Load 0.890				
Mounting	B3		Speed at Full Load	3570 r.p.m			
Bearing	Type	Anti-Friction	Torque				
	DE/N-DE	6316C3 / 6316C3-INS.	Full Load 884.07 lb.ft				
	Lubricant	Grease(Polyrex-EM)	Locked-rotor** 180 %				
External Thrust	Not applicable		Breakdown** 250 %				
Coupling Method	☒ Direct ☐ V-belt		Moment of Inertia (J)				
Shaft Extension	Single		Load(Max.) - lb.ft2				
Terminal	Main	Steel	Motor 9,631.550 lb.ft2				
Box	Aux.	Yes	Sound Pressure Level (No-load & mean value at 1m from motor)				
	Location	Refer to Outline Drawing	92 dB(A)				
Application			Vibration 3.8 mm/s (peak)				
Area classification	Hazardous		Permissible number of Cold 2 times				
Type of Ex-Protection	Class I&II, Division 2		consecutive starts 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.			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.

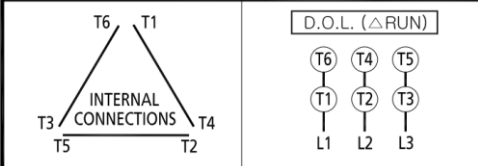
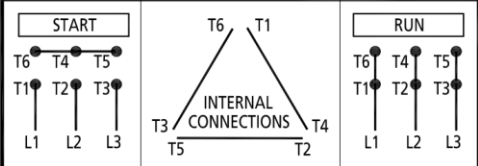
** Data is based on rated voltage & frequency and is expressed as a percentage of full-load value.

MAIN NAMEPLATE

4.72

CROWN TRITON							
Premium Efficiency AC 3 Phase Motor							
600HP 2P 460V		Cat. No. HSDE600-36-5012S-IBBRSRSHSP					
Model -		INS. Class F		Amps 659.5A			
Type PJP		Duty CONT		Code H		Amb. 40°C	
Frame 5012S		Encl. TEFC		S.F. 1.15		RPM 3570	
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	
		CLASS I, Zone 2, Gr. IIA, IIB, & IIC				(sine wave)	
No. -		Date -		Frame		L440FR - 500FR	
4M-137952				Amb. 40°C		T3 (200°C)	
MARINE DUTY IEEE45		Made in Korea H1		Amb. 55°C		T3 (200°C)	
				Weight		5150 lb	

WIRING DIAGRAM

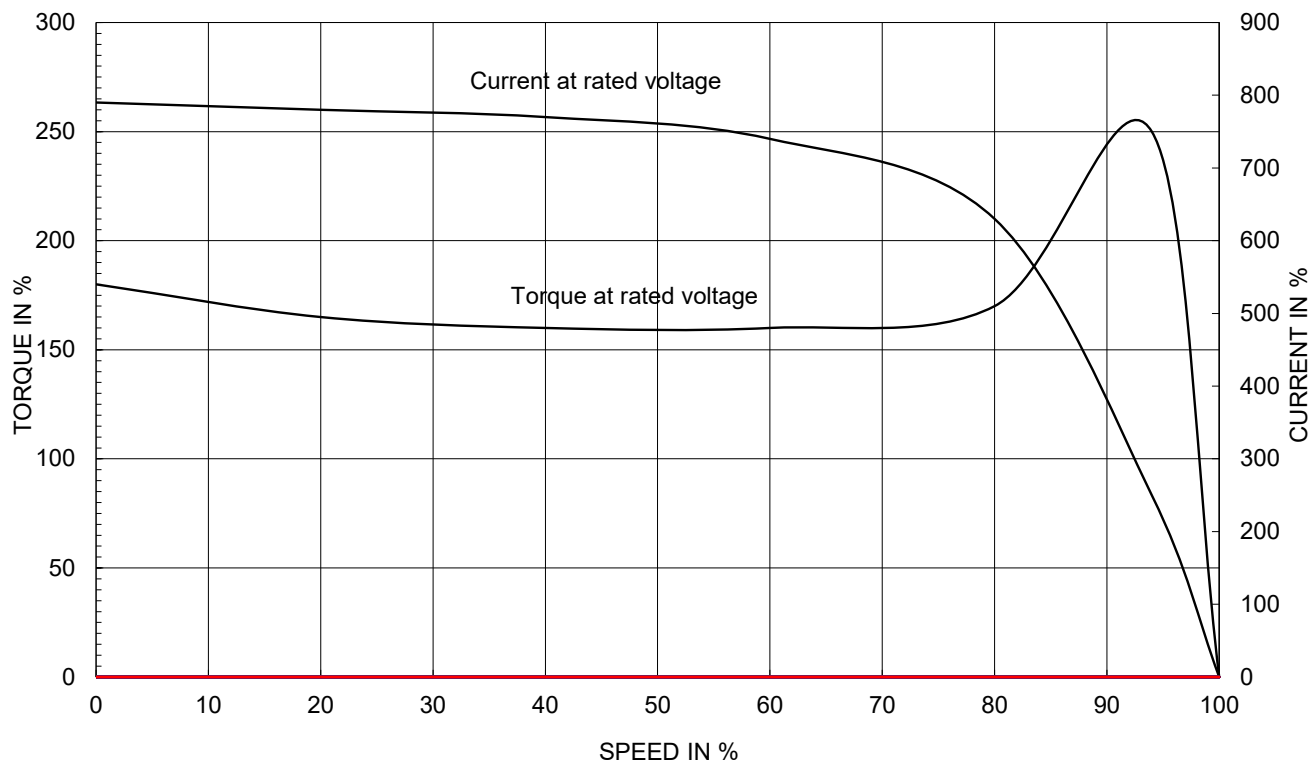
D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
 WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND 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-HSDE600-36-5012S-IBBRSRSHSP	Revision No. 0

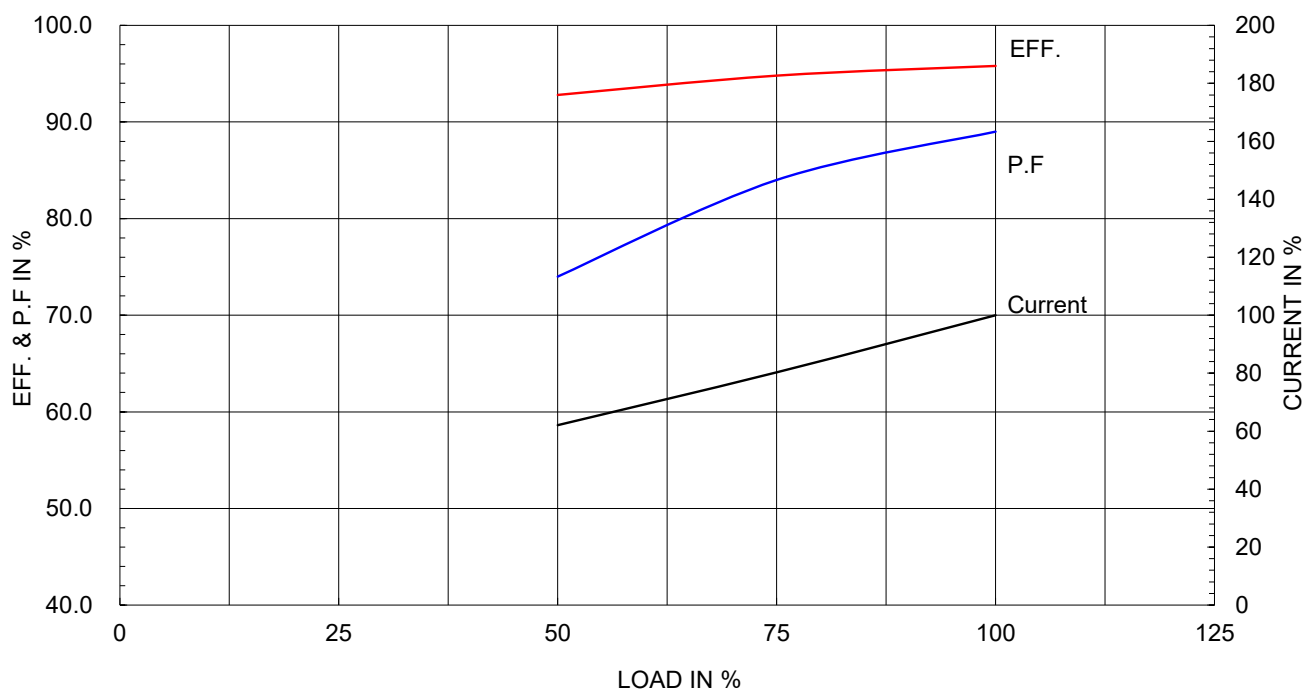
Type :	PJP	
Full Load Torque :	884.07	lb.ft
Load moment of Inertia (J) :	–	lb.ft2
Motor moment of Inertia (J) :	9631.550	lb.ft2

448kW	600HP	2 P	60 Hz
Speed at Full Load :		3570 RPM	
Rated Voltage	575V	460V	230V
Full Load Current	527.6A	659.5A	1319.0A

SPEED VS TORQUE & CURRENT CURVE



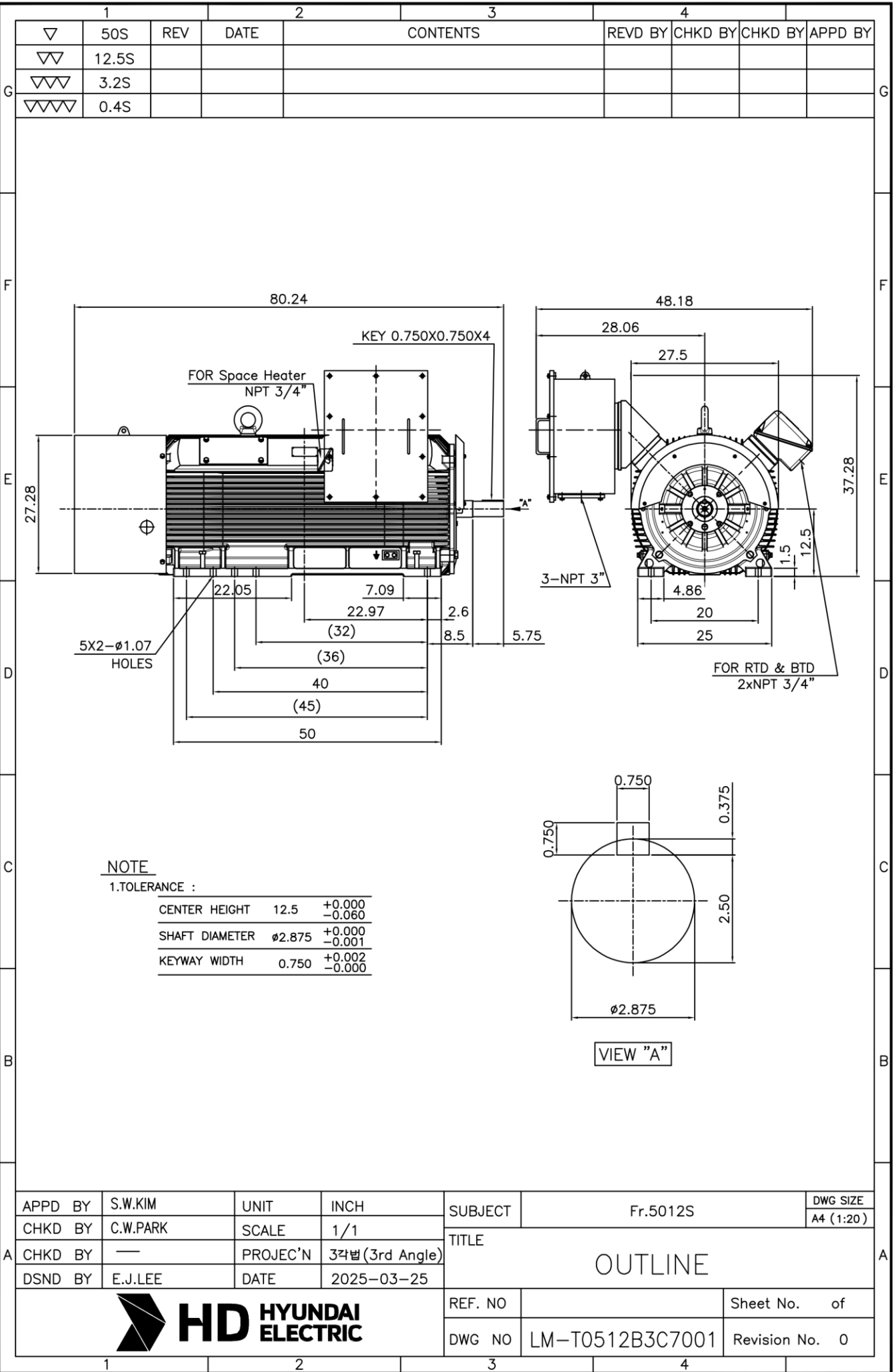
OUTPUT VS EFF., P.F & CURRENT CURVE



THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING
MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

본 도면은 HD현대일렉트릭(주) 재산이며
허가없이 복사할 수 없음 (취급주의)

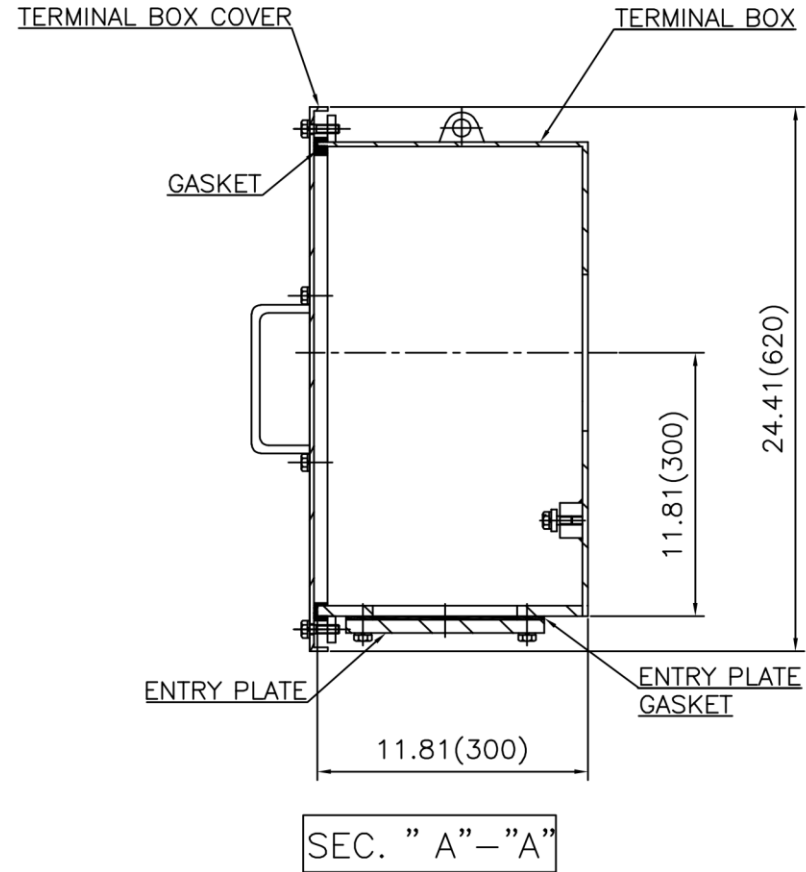
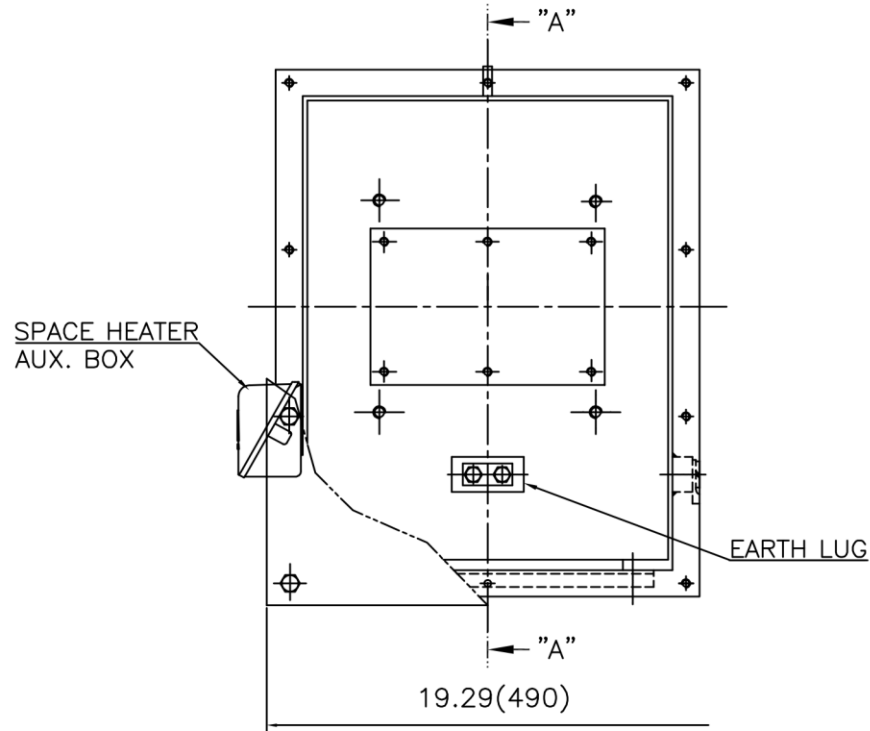
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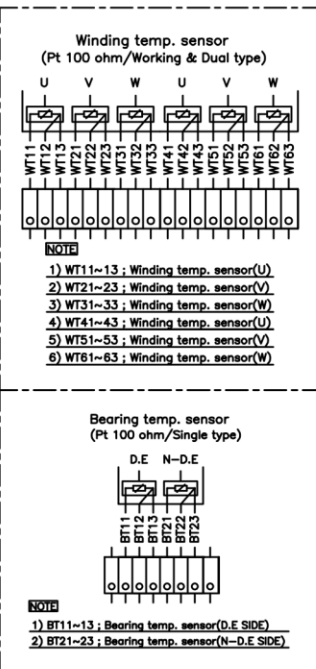
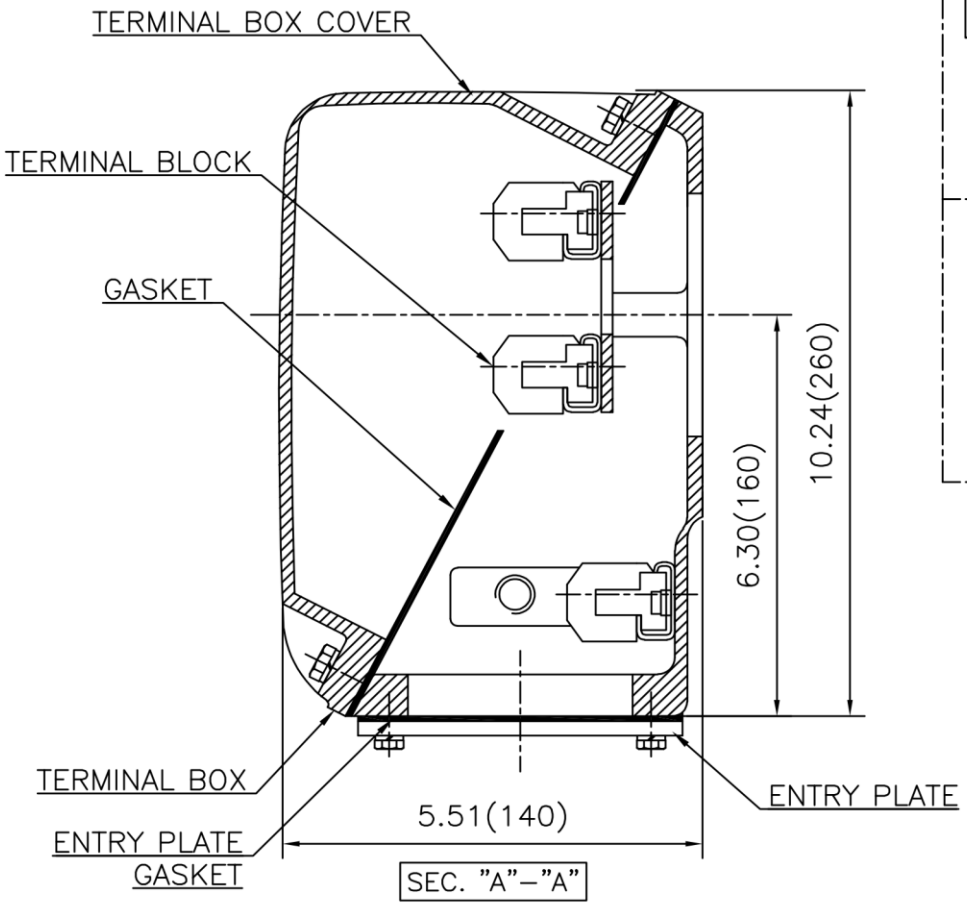
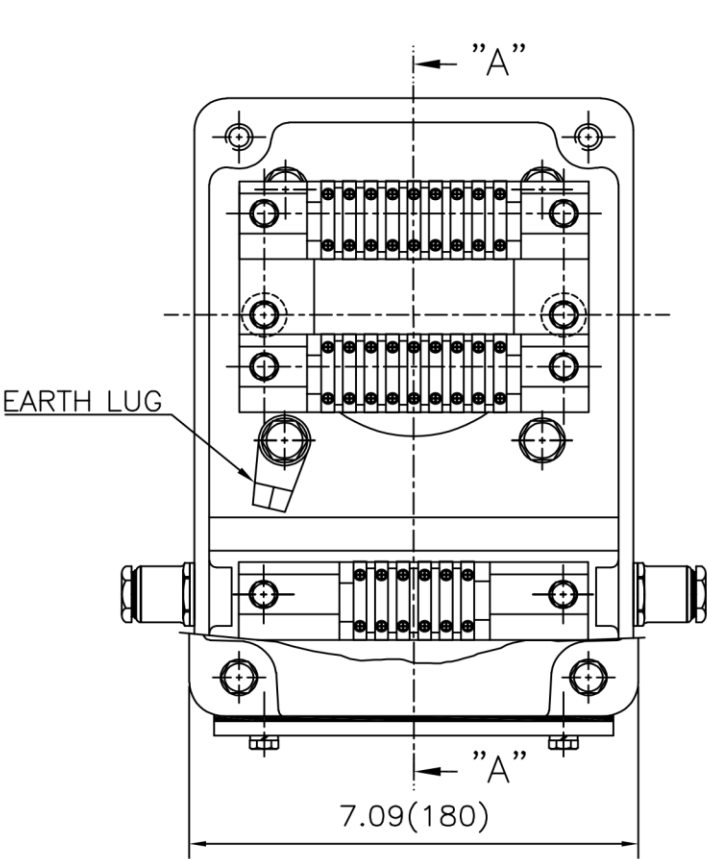
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.580 (STEEL)	DWG SIZE
CHKD BY		SCALE	1/6	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:6)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No. of
DSND BY	내수위	DATE	2023-10-25	DWG NO	3M-248512	Revision No. 0



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

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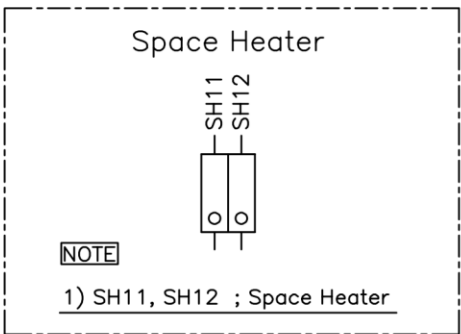
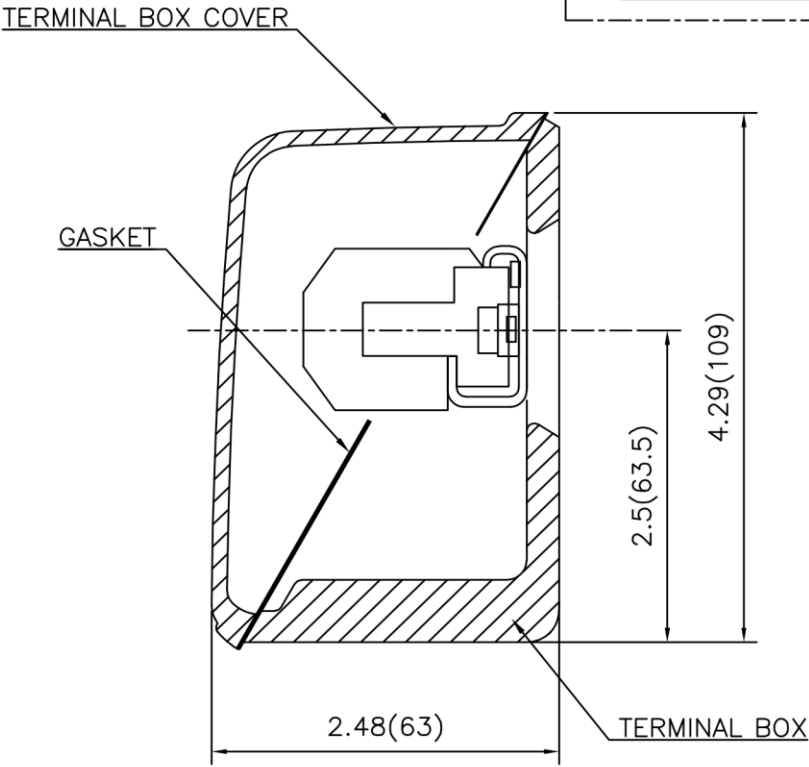
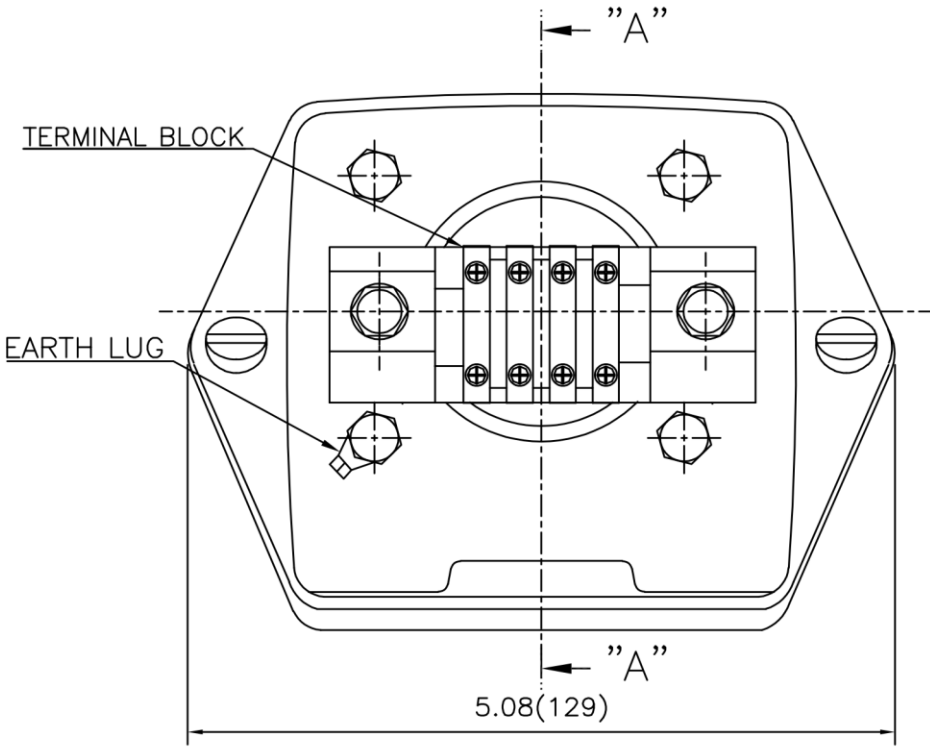


REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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 SUB. TERMINAL BOX ASS'Y		
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