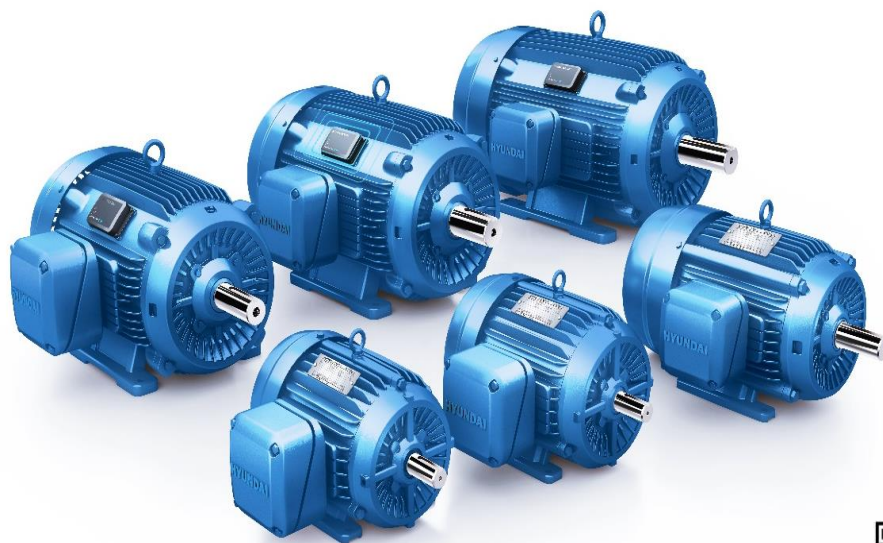


Customer :
Project Name :
Project No. :
Revision No. :

SPECIFICATION for INDUCTION MOTOR



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

AC INDUCTION MOTOR DATA SHEET

Catalog No.	HSDE500-36-5010S-IBBRSRSHSP	Item No.			Rev. No.	[]	
Project Name		Project No.			Quantity	sets	
GENERAL SPECIFICATION				PERFORMANCE DATA			
Frame Size	5010S		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					
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 740.02 lb.ft				
External Thrust	Not applicable		Locked-rotor** 145 %				
Coupling Method	☒ Direct ☐ V-belt		Breakdown** 240 %				
Shaft Extension	Single		Moment of Inertia (J)				
Terminal	Main	Cast Iron	Load(Max.) 381.000 lb.ft2				
Box	Aux.	Yes	Motor 76.418 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 Cold 2 times				
Applicable Standard	NEMA MG1, CSA C390		consecutive starts Hot 1 time				
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			Paint Munsell No. 4.0PB5.4/5.5(VL-451)				
			SUBMITTAL DRAWING				
			Outline Dimension Drawing \ Motor Weight(Approx.)				
			B3	LM-T0511B3C7001	4800 lb.		
SPARE PARTS 1. Spare Axial Fan (C.W Direction)			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				
			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.

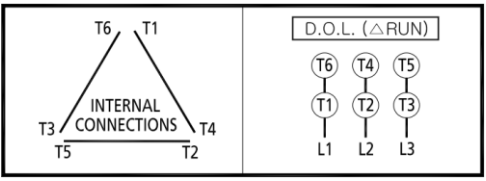
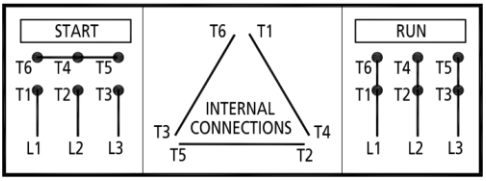
MAIN NAMEPLATE

4.72

CROWN TRITON									
Premium Efficiency AC 3 Phase Motor		C Energy Verified		US CC038A					
500HP	2P	460V	Cat. No.	HSDE500-36-5010S-IBBRSRSHSP					
Model	LATER		INS. Class	F	Amps	545.9A			
Type	PJP	Duty	CONT	Code	H	Amb.	40°C	Hertz	60Hz
Frame	5010S	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 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	4800 lb				
4M-136053		Made in Korea H1							
MARINE DUTY IEEE45									

2.36

WIRING DIAGRAM

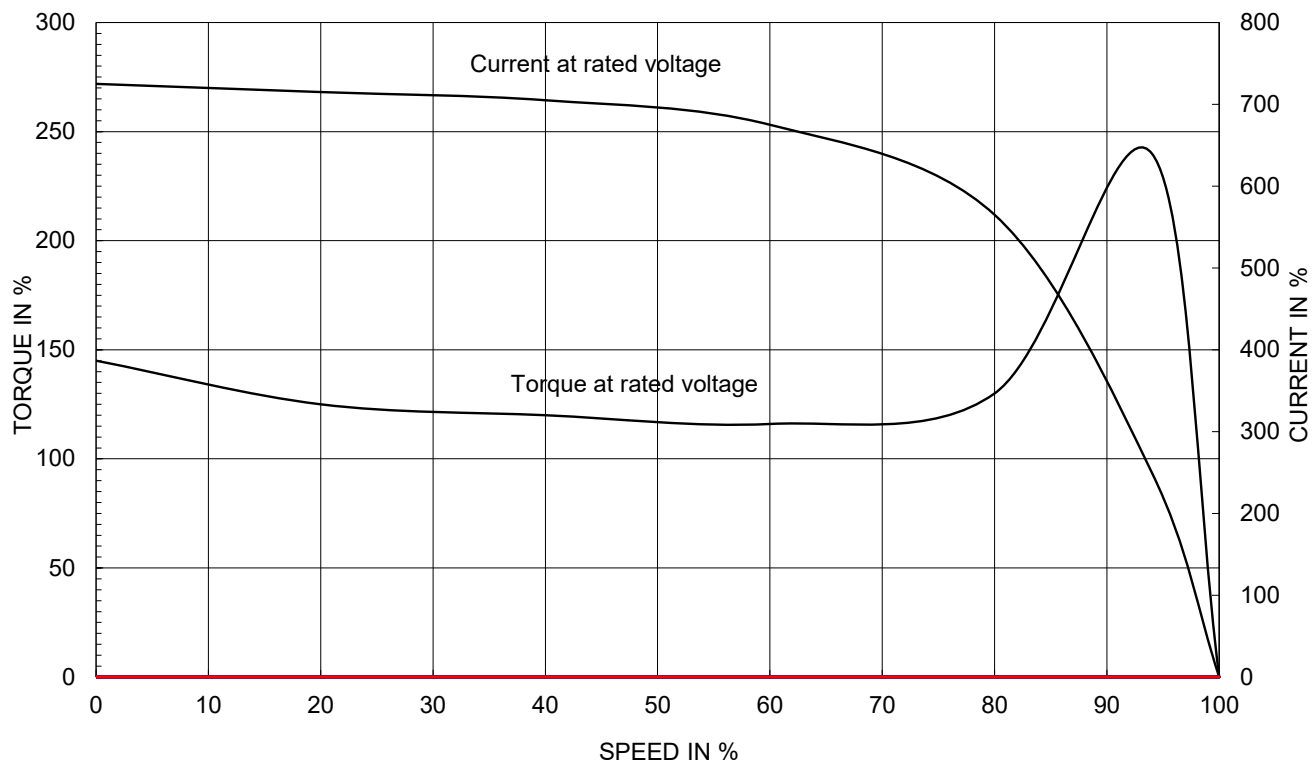
D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)
 WARNING IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND 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	TITLE NAMEPLATE DRAWING			A4 (1:1)
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-HSDE500-36-5010S-IBBRSRSHSP	Revision No.	0

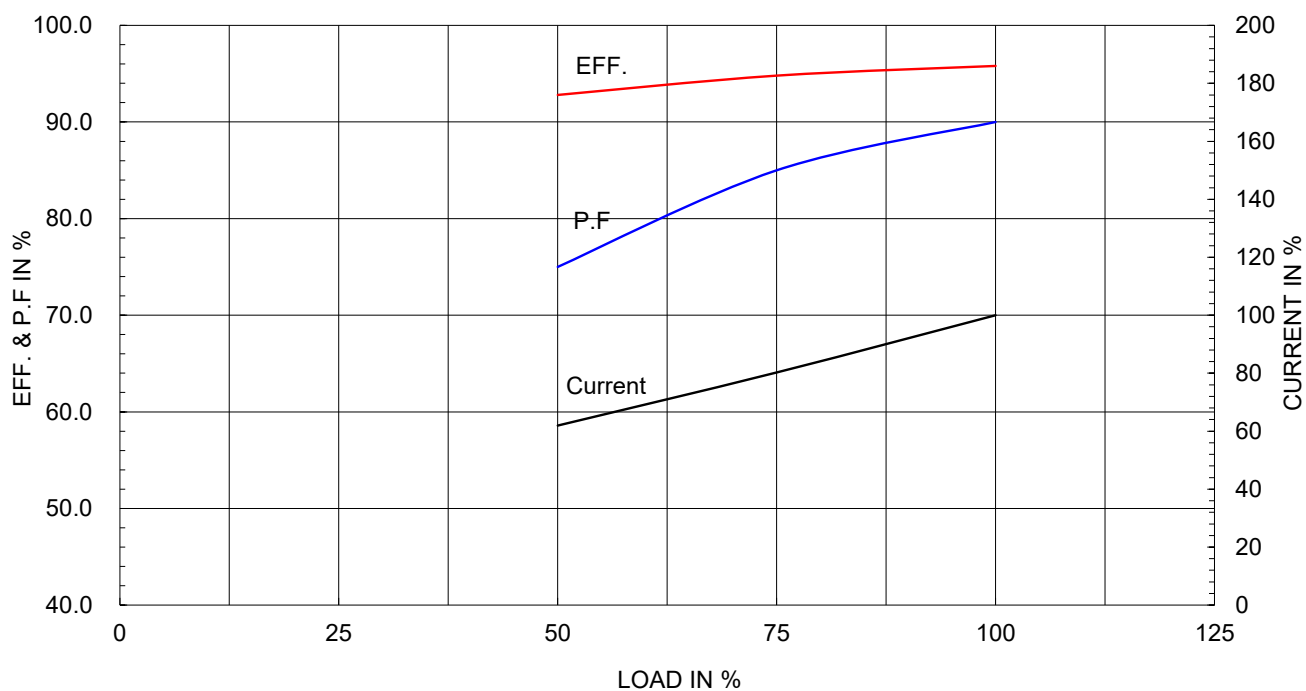
Type :	PJP	
Full Load Torque :	740.02	lb.ft
Load moment of Inertia (J) :	381.000	lb.ft2
Motor moment of Inertia (J) :	76.418	lb.ft2

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

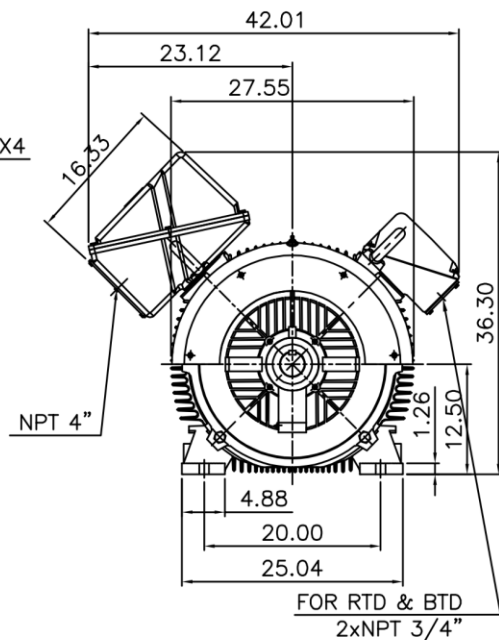
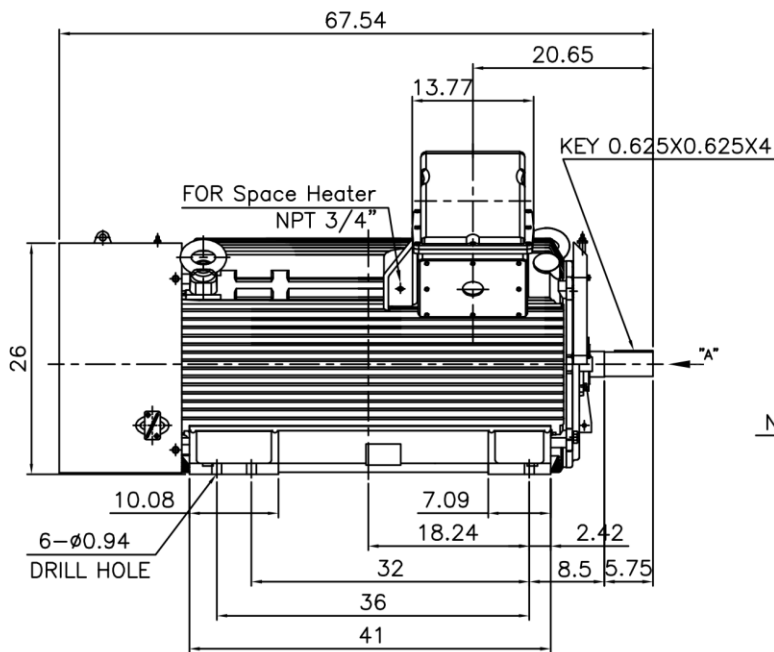
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



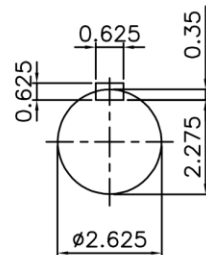
1			2		3		4		
▽	50S	REV	DATE	CONTENTS		REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S								
▽▽▽	3.2S								
▽▽▽▽	0.4S								



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

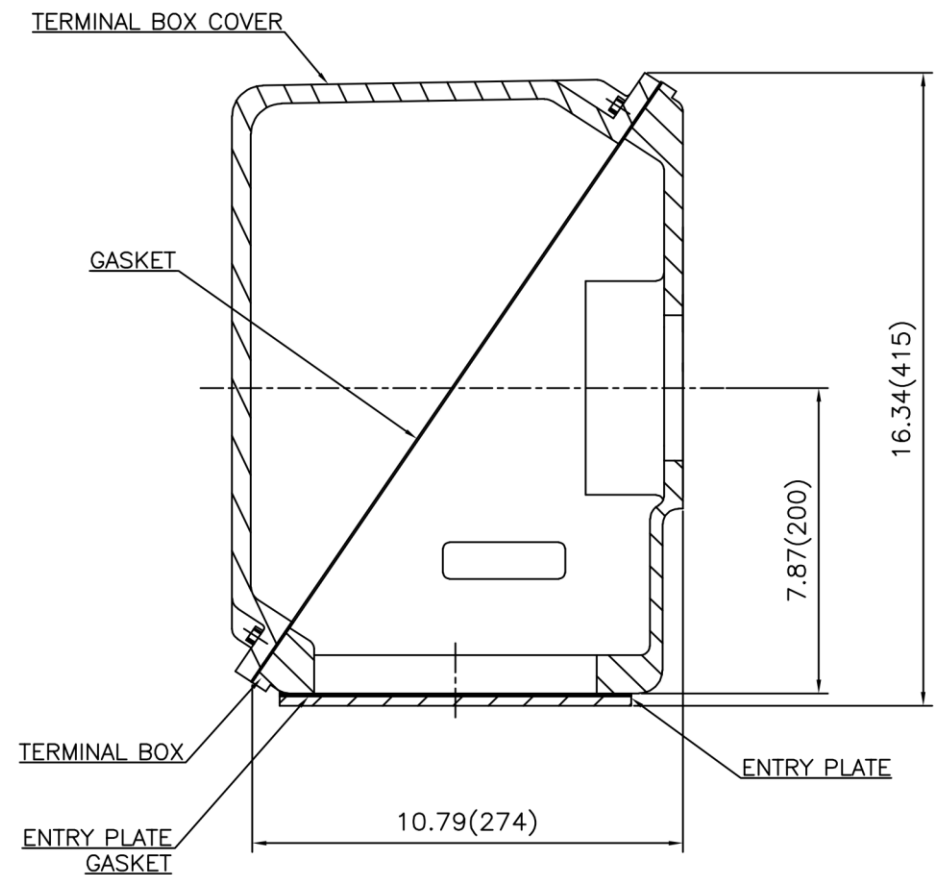
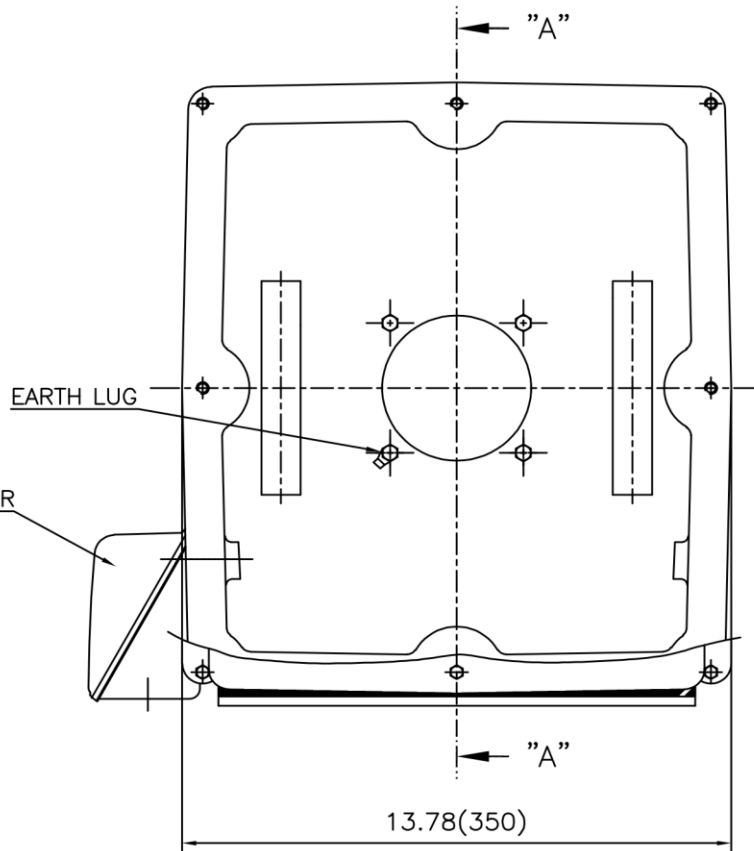


VIEW "A"

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5010S / 5011S	DWG SIZE
CHKD BY	O.J.KIM	SCALE	1/20	TITLE		A4 (1:20)
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-T0511B3C7001	Revision No. 0

Cls. I&II, Div. 2

IEEE 841



SEC. "A" - "A"

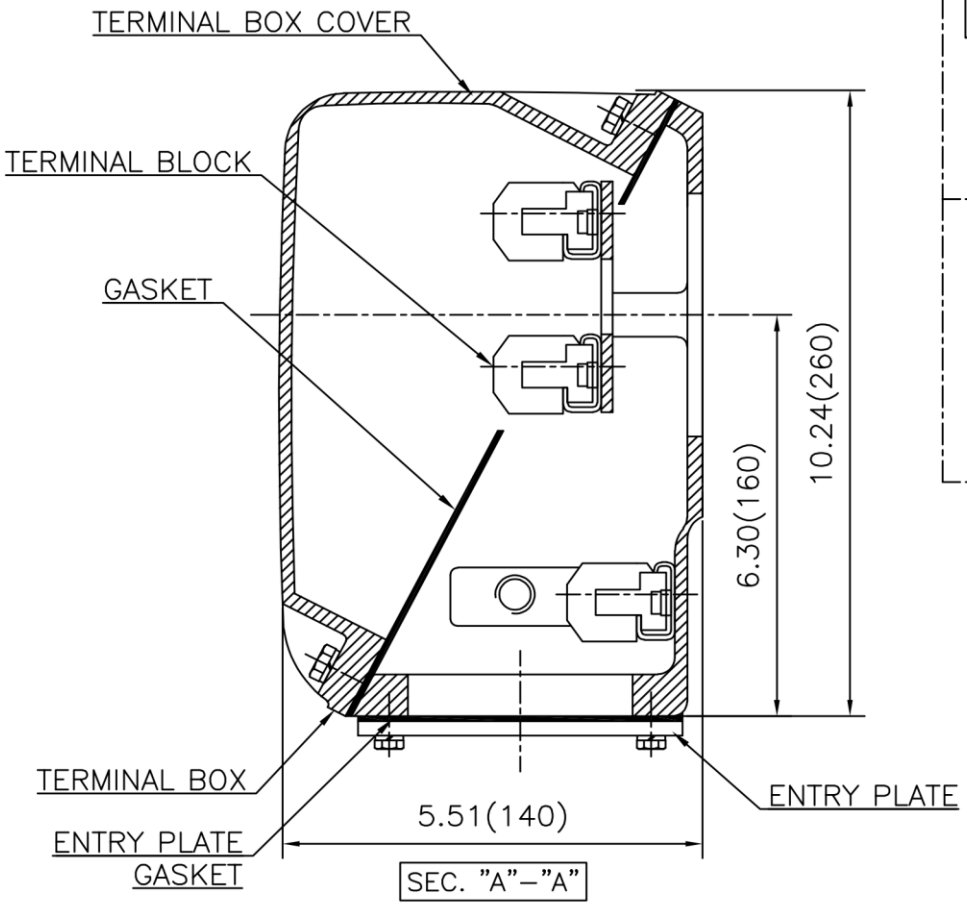
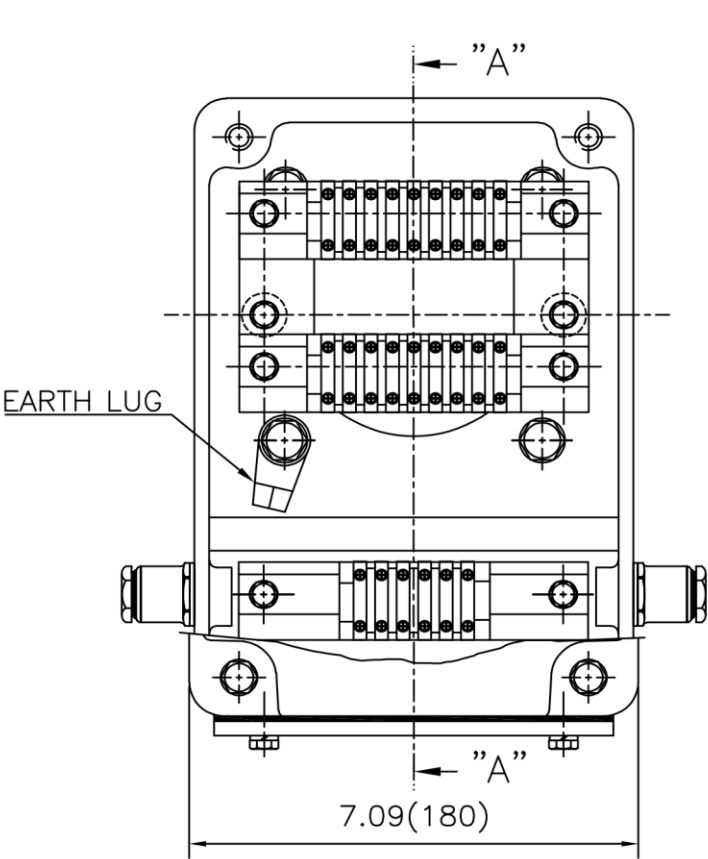
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. L440 (CAST IRON)	DWG SIZE	A3 (1:3.5)
CHKD BY		SCALE	1/3.5	TITLE	MAIN TERMINAL BOX ASS'Y		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	REF. NO		Sheet No.	of
DSND BY	내수익	DATE	2023-10-19	DWG NO	3M-248452	Revision No.	0



REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

Cls. I&II, Div. 2

IEEE 841



Winding temp. sensor
(Pt 100 ohm/Working & Dual type)

U	V	W	U	V	W
WT11	WT12	WT13	WT21	WT22	WT23
WT31	WT32	WT33	WT41	WT42	WT43
WT51	WT52	WT53	WT61	WT62	WT63

NOTE

- 1) WT11~13 ; Winding temp. sensor(U)
- 2) WT21~23 ; Winding temp. sensor(V)
- 3) WT31~33 ; Winding temp. sensor(W)
- 4) WT41~43 ; Winding temp. sensor(U)
- 5) WT51~53 ; Winding temp. sensor(V)
- 6) WT61~63 ; Winding temp. sensor(W)

Bearing temp. sensor
(Pt 100 ohm/Single type)

D.E	N-D.E
BT11	BT12
BT21	BT22
BT31	BT32

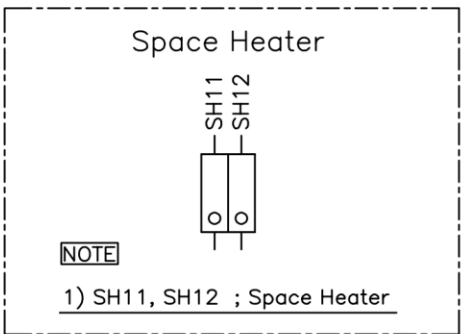
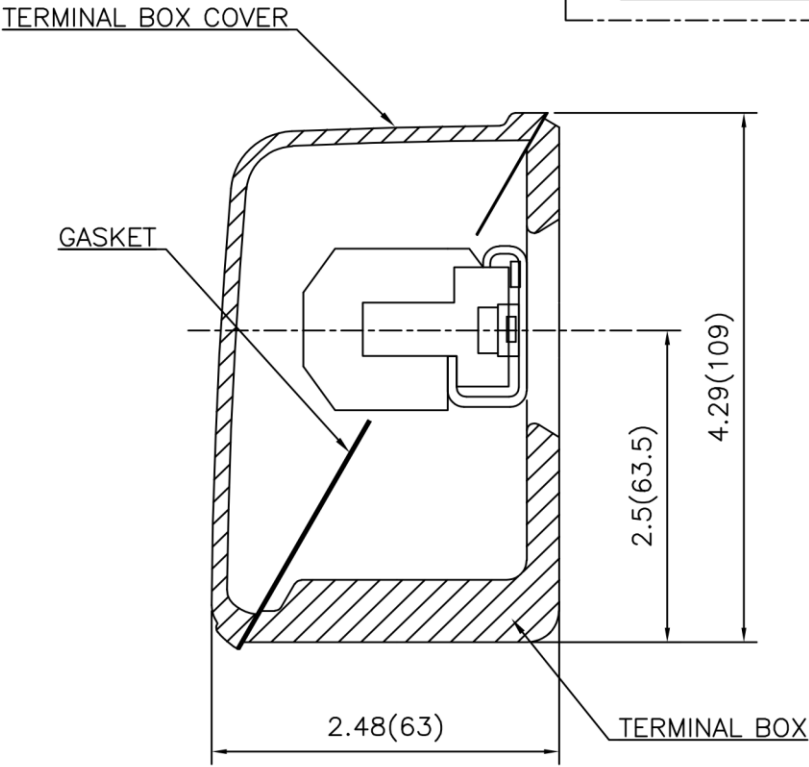
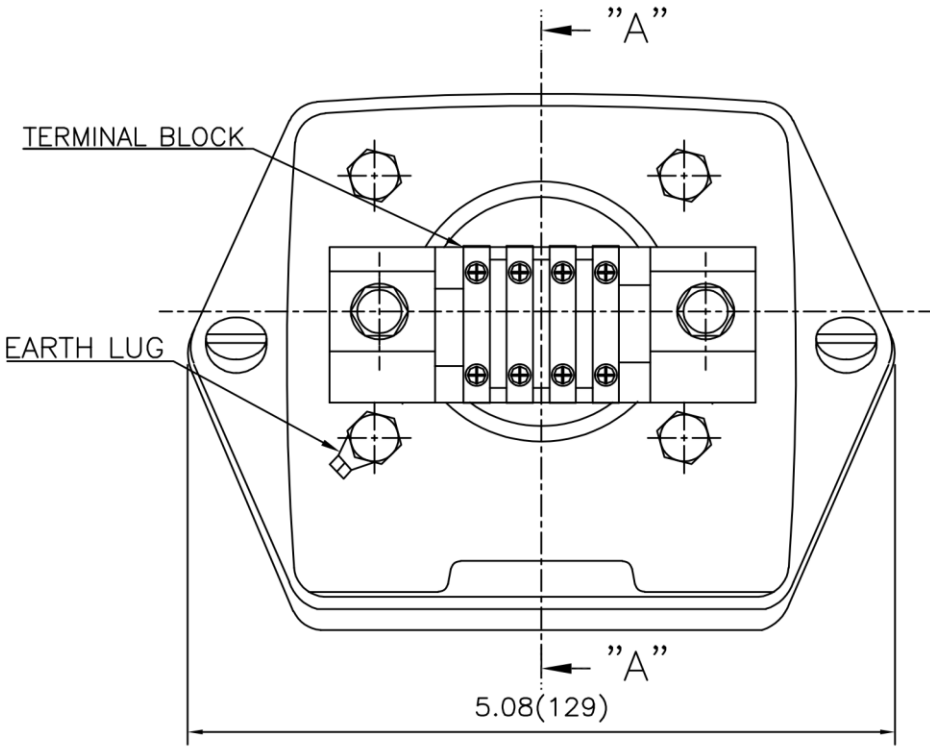
NOTE

- 1) BT11~13 ; Bearing temp. sensor(D.E SIDE)
- 2) BT21~23 ; Bearing temp. sensor(N-D.E SIDE)

APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR.360 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/1	A3 (1:2.2)		
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle	TITLE AUX. TERMINAL BOX ASS'Y		
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

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