

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.	HSDE500-18-5010-IBSH	Item No.	Rev. No.	[]
Project Name		Project No.	Quantity	sets

GENERAL SPECIFICATION			PERFORMANCE DATA			
Frame Size	5010		Rated Output	375 kW 500 HP		
Type	PJP		Number of Poles	4		
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	439.8 A	549.7 A 1,099.5 A
Insulation Class	F			Locked-rotor**	720 %	720 % 720 %
Temp. Rise at full load (by resistance method)			Efficiency			
at 1.0 S.F	80 deg. C		50% Load		93.2 %	
Motor Location	<input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor		75% Load		95.2 %	
Altitude	Less than 1,000 meter		100% Load		96.2 %	
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	1785 r.p.m		
Bearing	Type	Anti-Friction	Torque			
	DE/N-DE	NU324 / 6320C3-INS.	Full Load	1,480.0 lb.ft		
	Lubricant	Grease(Polyrex-EM)	Locked-rotor**	135 %		
External Thrust	Not applicable		Breakdown**	220 %		
Coupling Method	<input type="checkbox"/> Direct <input type="checkbox"/> V-belt		Moment of Inertia (J)			
Shaft Extension	Single		Load(Max.)	1,880.000 lb.ft2		
Terminal Box	Main	Cast Iron	Motor	176.332 lb.ft2		
	Aux.	Yes	Sound Pressure Level (No-load & mean value at 1m from motor)			
Location	Refer to Outline Drawing				85 dB(A)	
Application			Vibration		3.8 mm/sec (peak)	
Area classification	Hazardous		Permissible number of consecutive starts		Cold 2 times Hot 1 time	
Type of Ex-Protection	Class I&II, Division 2		Paint	Munsell No.	4.0PB5.4/5.5(VL-451)	
Applicable Standard	NEMA MG1, CSA C390					

ACCESSORIES

*. Space Heater : 1EA/Motor

SPARE PARTS

SUBMITTAL DRAWING

Outline Dimension Drawing		Motor Weight(Approx.)	
B3	LM-T0511B3PE001	4820 lb.	

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
 - . 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; Temp code : T3
 - . Class II, Division 2 Group F & G; Temp code : T3
5. Shaft material : AISI4140

Date	DSND	CHKD	CHKD	APPD
2024-07-13	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.

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REV	DATE	CONTENTS	REVD BY CHKD BY CHKD BY APPD BY


4.72

CROWN TRITON


Premium Efficiency AC 3 Phase Motor

500HP	4P	460V	Cat. No.	HSDE500-18-5010-IBSH					
Model	LATER		INS. Class	F	Amps	549.7			
Type	PJP	Duty	CONT	Code	H	Amb. 40°C	Hertz	60Hz	
Frame	5010	Encl.	TEFC	S.F.	1.15	RPM	1785	NEMA Nom. Eff.	96.2%
Bearing	Drive	NU324		S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	95.2%		
	Opp.	6320C3-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 (sine wave)	Frame	L440FR - 500FR		
	CLASS I, Zone 2, Gr. IIA, IIB, & IIC					Amb. 40°C	T3 (200°C)		
						Amb. 55°C	T3 (200°C)		
No.	-	Date	-	Weight	4820 lb				

4M-136053 Made in Korea H1 

2.36

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 NAMEPLATE DRAWING		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	4M-136053	Sheet No. of
				DWG NO	NP-HSDE500-18-5010-IBSH	Revision No. 0



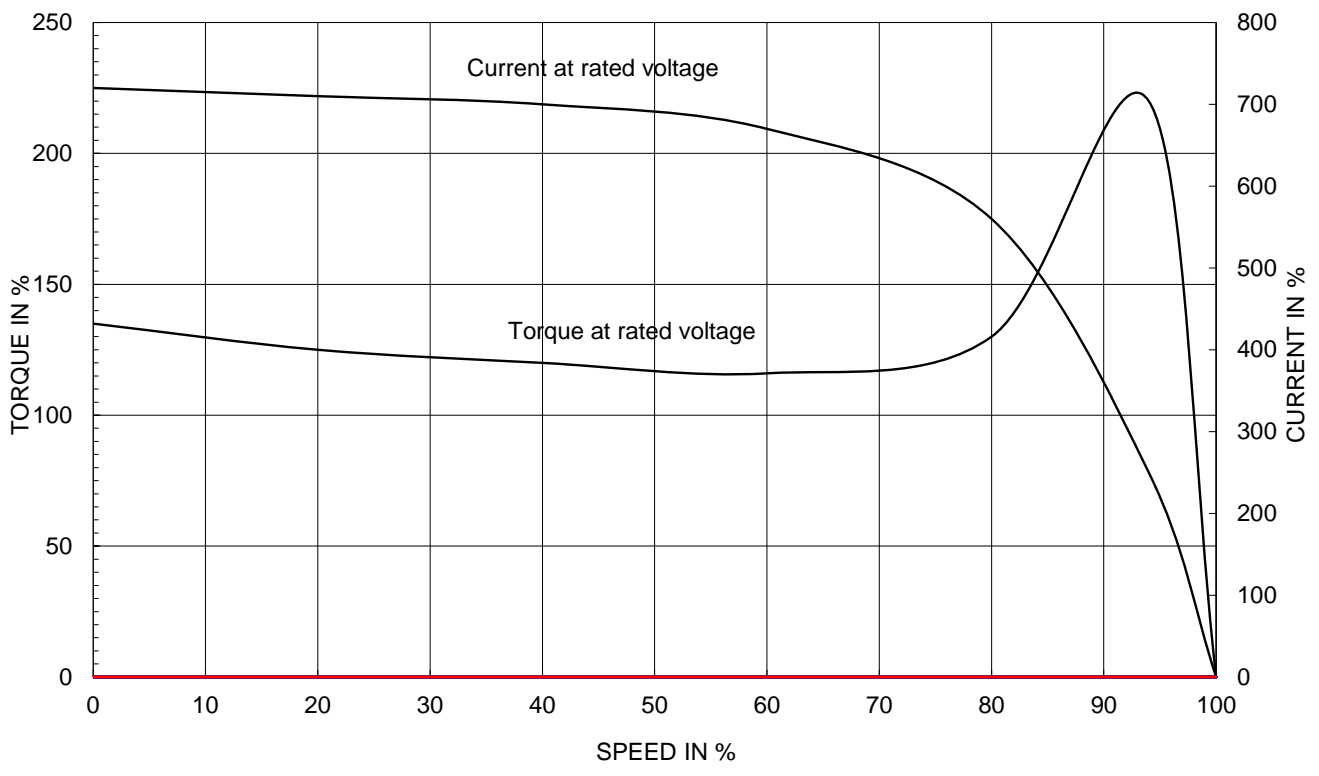
PERFORMANCE CURVE

CURVE NO.
PC-HSDE500-18-5010-IBSH

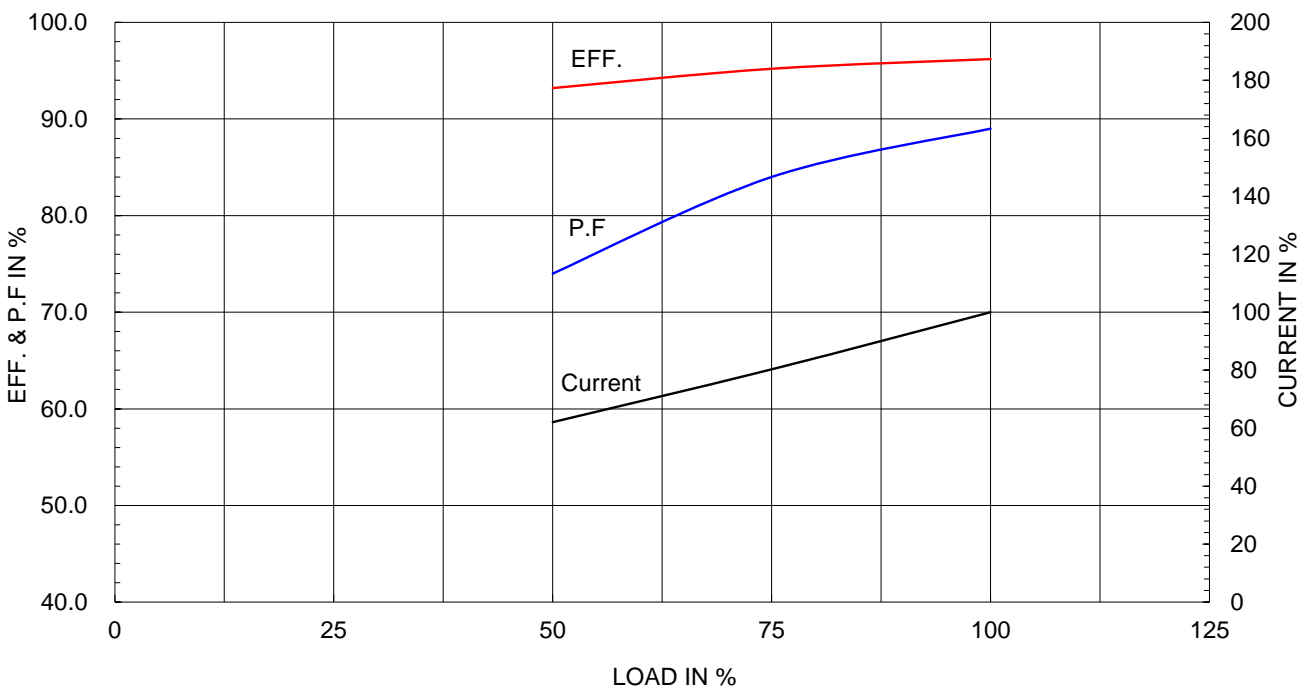
Type :	PJP
Full Load Torque :	1480.0 lb.ft
Load moment of Inertia (J) :	1880.000 lb.ft2
Motor moment of Inertia (J) :	176.332 lb.ft2

375kW	500HP	4 P	60 Hz
Speed at Full Load :			1785 RPM
Rated Voltage	575V	460V	230V
Full Load Current	439.8A	549.7A	####

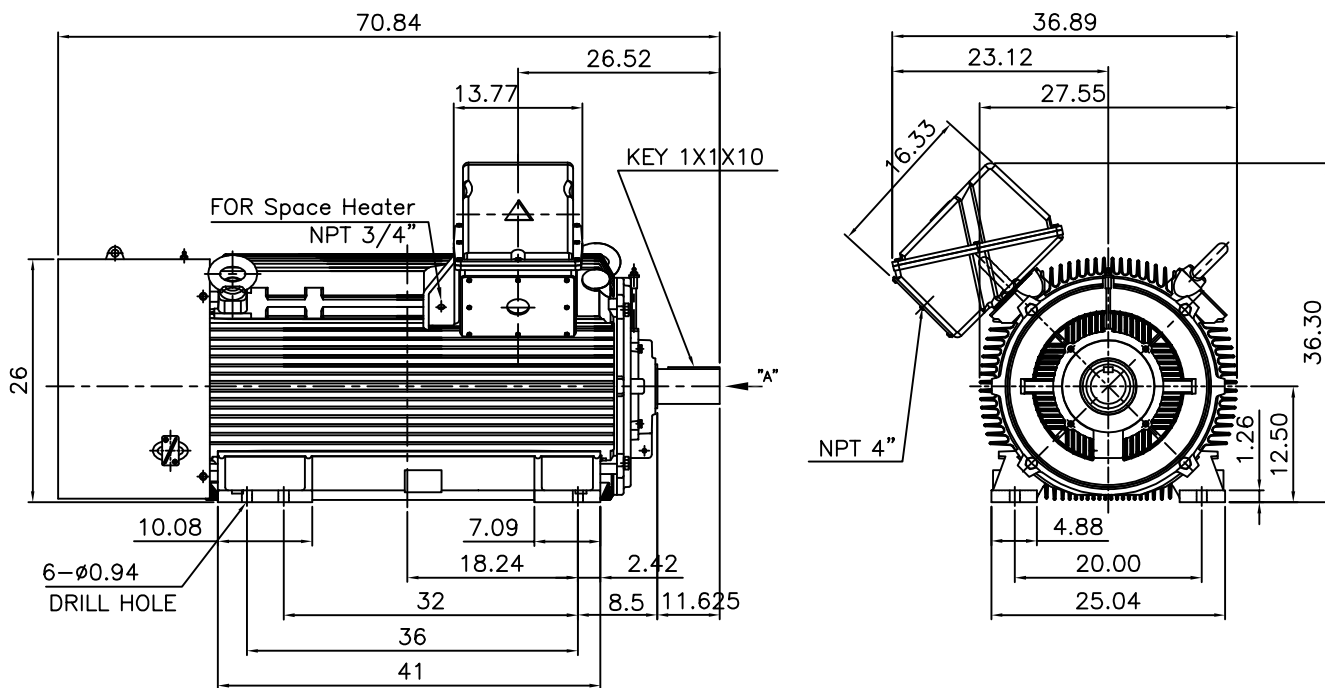
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE



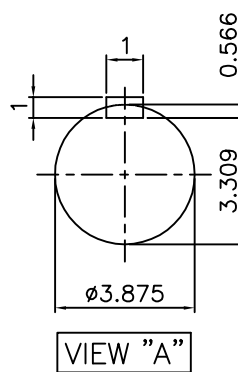
▽	50S	REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY
▽▽	12.5S							
▽▽▽	3.2S							
▽▽▽▽	0.4S							



NOTE

1.TOLERANCE :

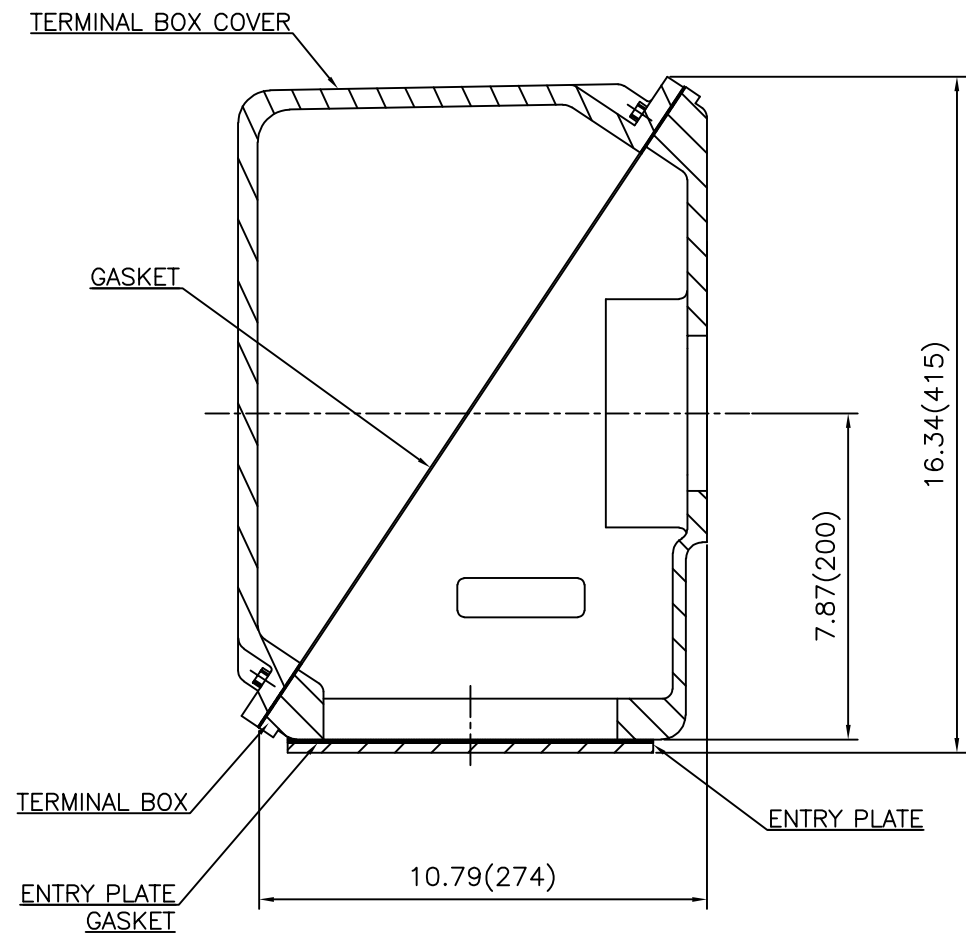
CENTER HEIGHT	12.5	+0.000	-0.060
SHAFT DIAMETER	ø3.875	+0.000	-0.001
KEYWAY WIDTH	1	+0.003	-0.000



VIEW "A"

APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5010/5011T	DWG SIZE	A4 (1:20)
CHKD BY	O.J.KIM	SCALE	1/20	TITLE	CAST IRON T-BOX OUTLINE		
CHKD BY	R.G.KIM	PROJEC'N	3각법 (3rd Angle)				
DSND BY	H.K.LEE	DATE	2021-04-27	REF. NO		Sheet No.	of
				DWG NO	LM-T0511B3PE001	Revision No.	0

**Cls. I&II, Div. 2
IEEE 841**

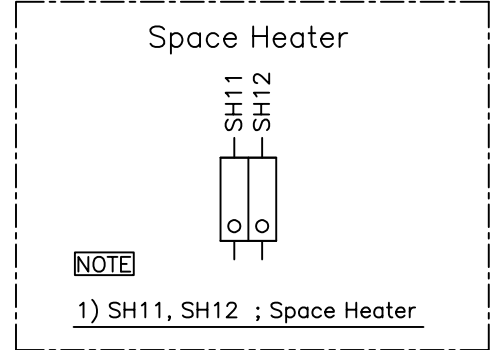
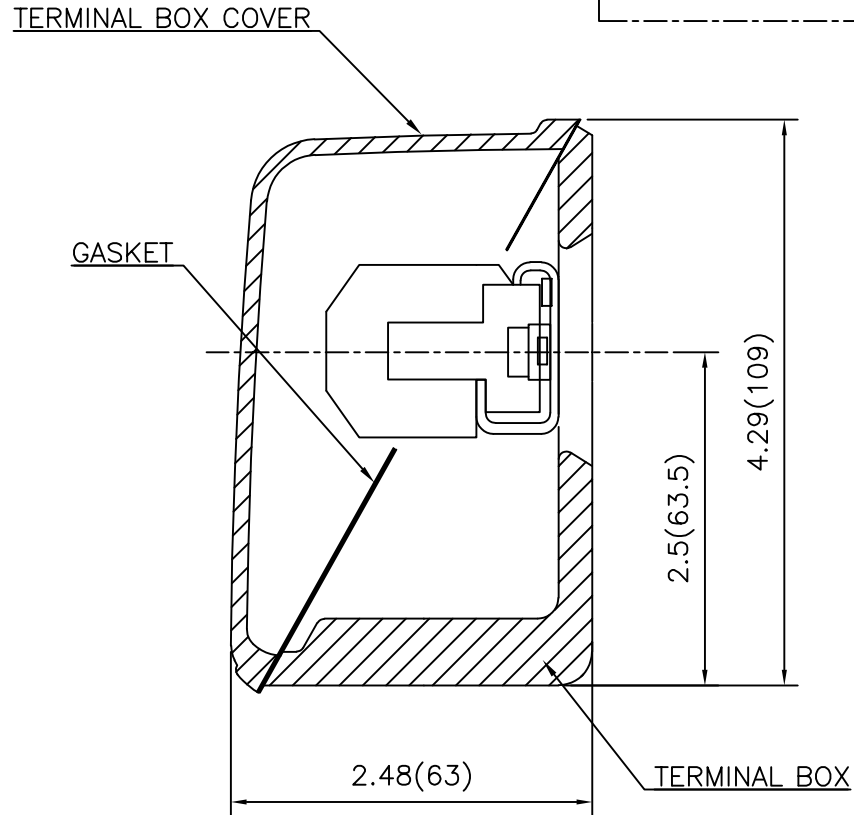
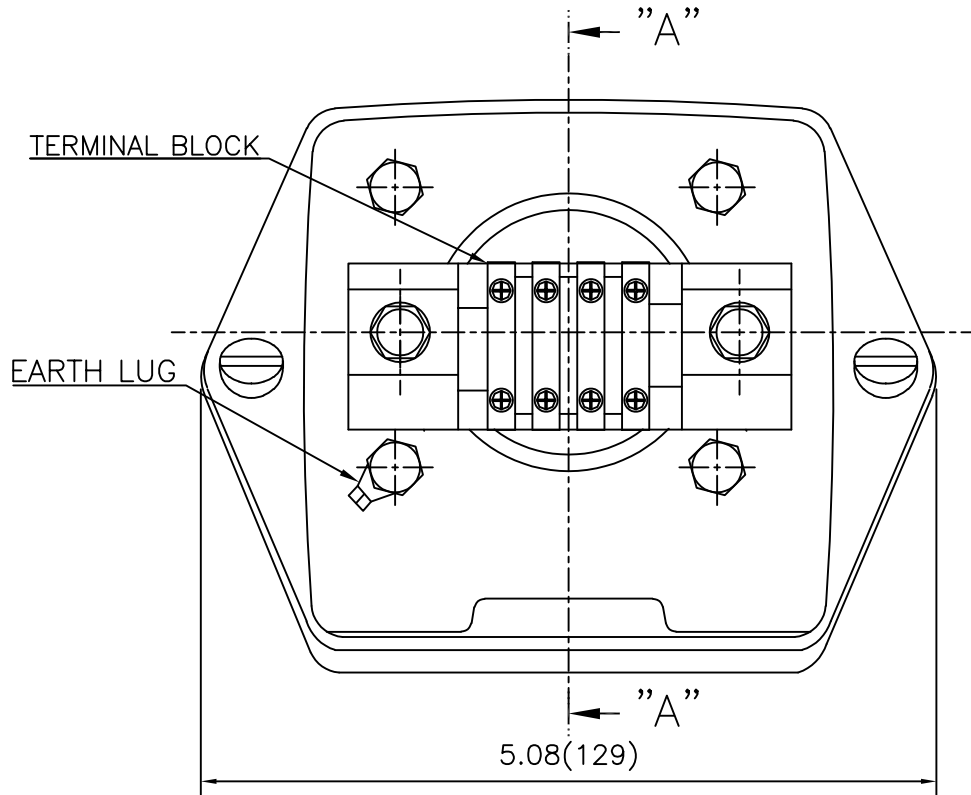


SEC. "A" - "A"

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	A3 (1:3.5)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	최승희	DATE	2023-10-19			
				REF. NO		Sheet No. of
				DWG NO	3M-248452	Revision No. 0

**Cls. I&II, Div. 2
IEEE 841**



REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

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	A3 (1:1.1)
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