

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.		HSDE500-12-5011C-IBSH		Item No.		Rev. No. []			
Project Name		Project No.		Quantity		sets			
GENERAL SPECIFICATION				PERFORMANCE DATA					
Frame Size		5011C		Rated Output		375 kW 500 HP			
Type		PJP		Number of Poles		6			
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 467.9 A 584.9 A 1,169.8 A			
Insulation Class		F		Locked-rotor**		675 % 675 % 675 %			
Temp. Rise at full load (by resistance method)				Efficiency					
at 1.0 S.F		80 deg. C		50% Load		92.8 %			
Motor Location		<input type="checkbox"/> Indoor <input type="checkbox"/> 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		0.690			
Duty Type		Continuous (S1)		75% Load		0.790			
Service Factor		1.15		100% Load		0.840			
Mounting		B35		Speed at Full Load		1185 r.p.m			
Bearing		Type		Anti-Friction		Torque			
		DE/N-DE		6324C3 / 6320C3-INS.		Full Load			
		Lubricant		Grease(Polyrex-EM)		Locked-rotor**			
External Thrust		Not applicable		Breakdown**		220 %			
Coupling Method		<input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt		Moment of Inertia (J)					
Shaft Extension		Single		Load(Max.)		4,666.000 lb.ft2			
Terminal Box		Main		Motor		272.448 lb.ft2			
		Aux.		Yes		Sound Pressure Level (No-load & mean value at 1m from motor)			
Location		Refer to Outline Drawing				84 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				SUBMITTAL DRAWING					
*. Space Heater : 1EA/Motor				Outline Dimension Drawing \ Motor Weight(Approx.)					
				B35		LM-T0511C4PE001		4990 lb.	
SPARE PARTS				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			
2024-09-10		S.H. Lee		I.K. Kim		R.G. Kim			
						APPD			
						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.

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

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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 6P 460V	Cat. No. HSDE500-12-5011C-IBSH	
Model LATER	INS. Class F	Amps 584.9
Type PJP	Duty CONT	Code G
Frame 5011C	Encl. TEFC	Amb. 40°C
	S.F. 1.15	RPM 1185
		NEMA Nom. Eff. 95.8%
Bearing	Drive 6324C3	S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)
	Opp. 6320C3-INS.	3/4 Eff. 94.8%
		NEMA Design B Torque
Usable at	50Hz 420HP 380V 594.73A 985rpm S.F.: 1.0 Eff.: 95.8% Code: G	
	50Hz 420HP 400/415V 515.87/571.74A 986/987rpm S.F.: 1.0 Eff.: 95.8/95.81% Code: G/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 (sine wave)	Frame L440FR - 500FR
		Amb. 40°C T3 (200°C)
		Amb. 55°C T3 (200°C)
No. -	Date -	Weight 4990 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	NAMEPLATE DRAWING		
DSND BY	S.H.LEE	DATE	2024.06.07			
				REF. NO	4M-136053	Sheet No. of
				DWG NO	NP-HSDE500-12-5011C-IBSH	Revision No. 0

1 2 3 4



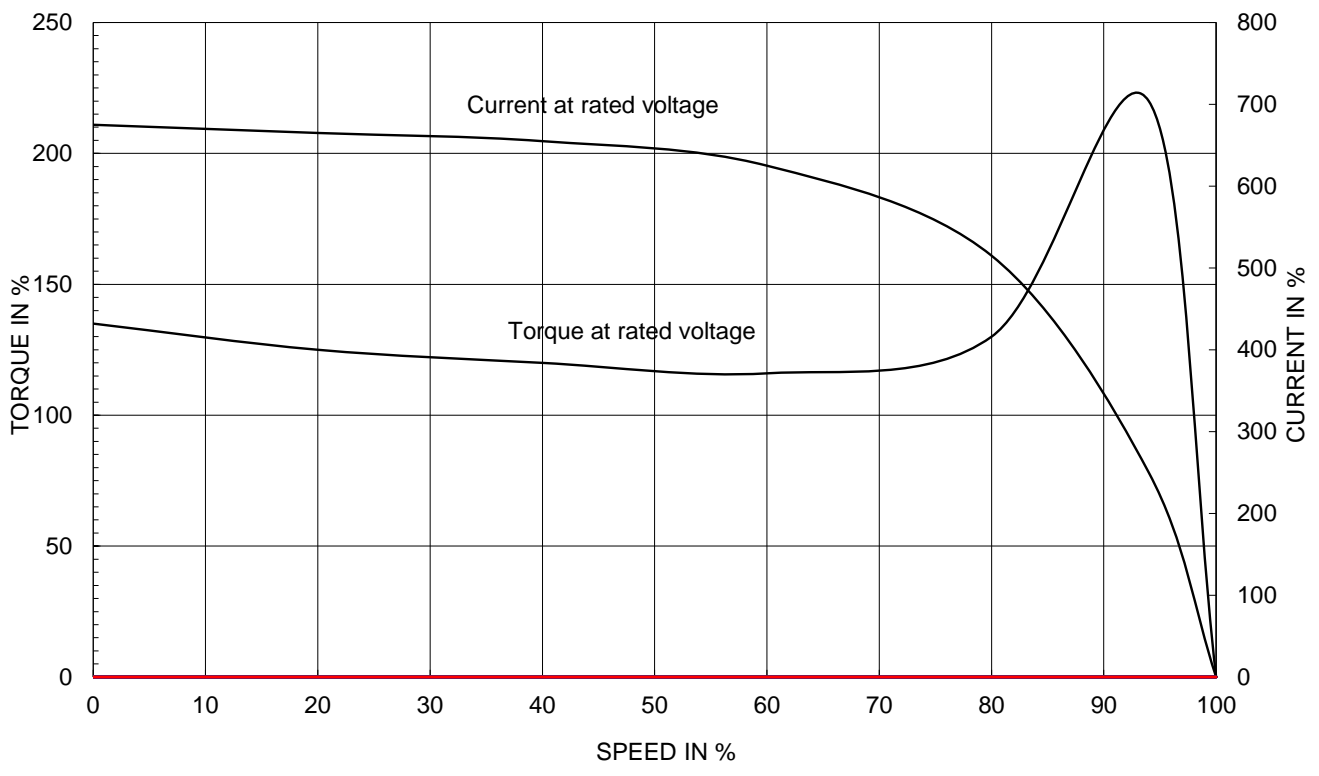
PERFORMANCE CURVE

CURVE NO.
PC-HSDE500-12-5011C-IBSH

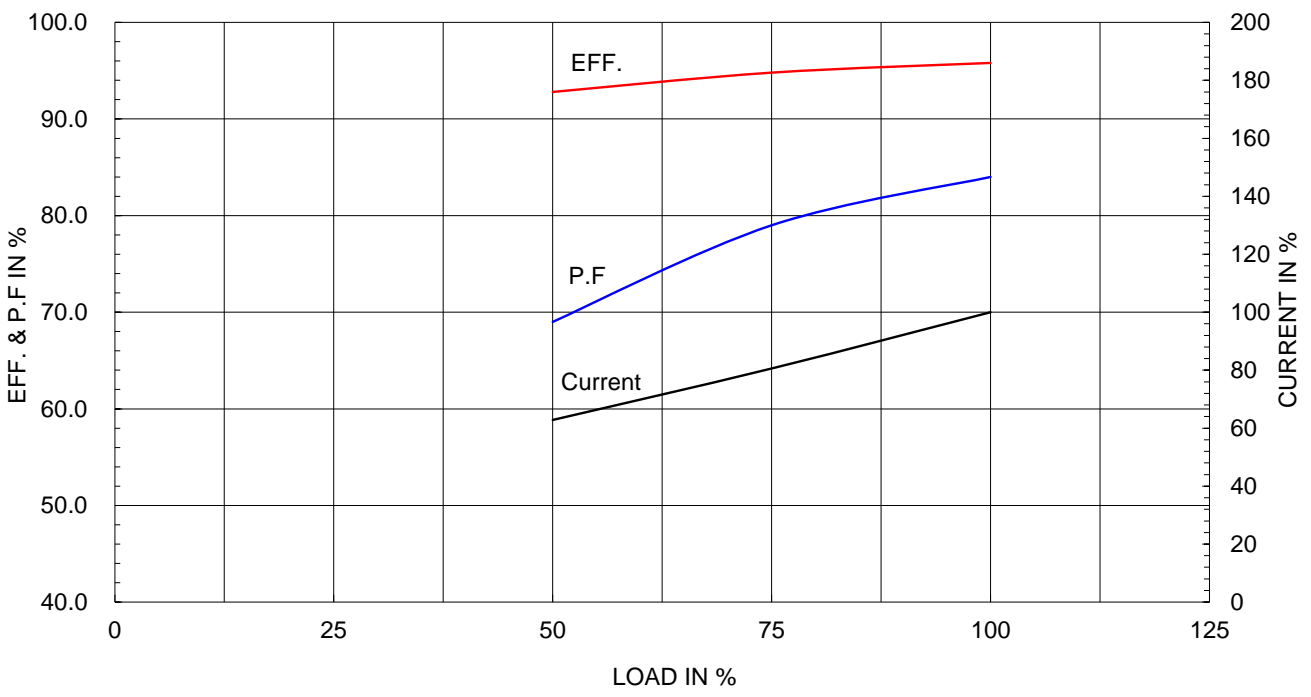
Type :	PJP
Full Load Torque :	2229.4 lb.ft
Load moment of Inertia (J) :	4666.000 lb.ft ²
Motor moment of Inertia (J) :	272.448 lb.ft ²

375kW 500HP	6 P	60 Hz
Speed at Full Load :		1185 RPM
Rated Voltage	575V	460V 230V
Full Load Current	467.9A	584.9A 1169.8A

SPEED VS TORQUE & CURRENT CURVE



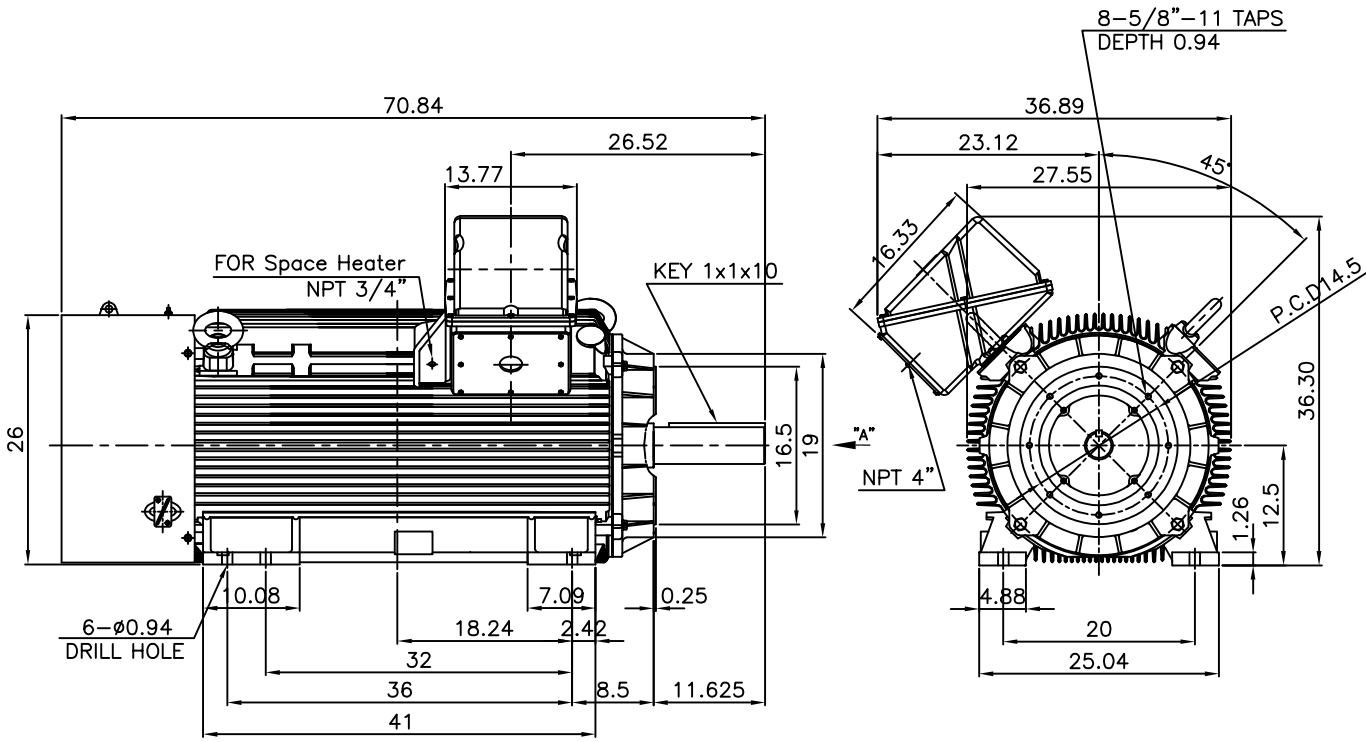
OUTPUT VS EFF., P.F & CURRENT CURVE



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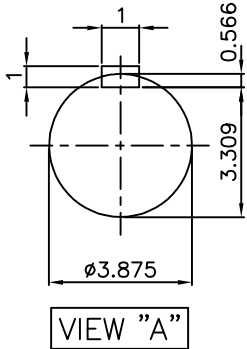
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▽▽▽	3.2S							
▽▽▽▽	0.4S							



NOTE

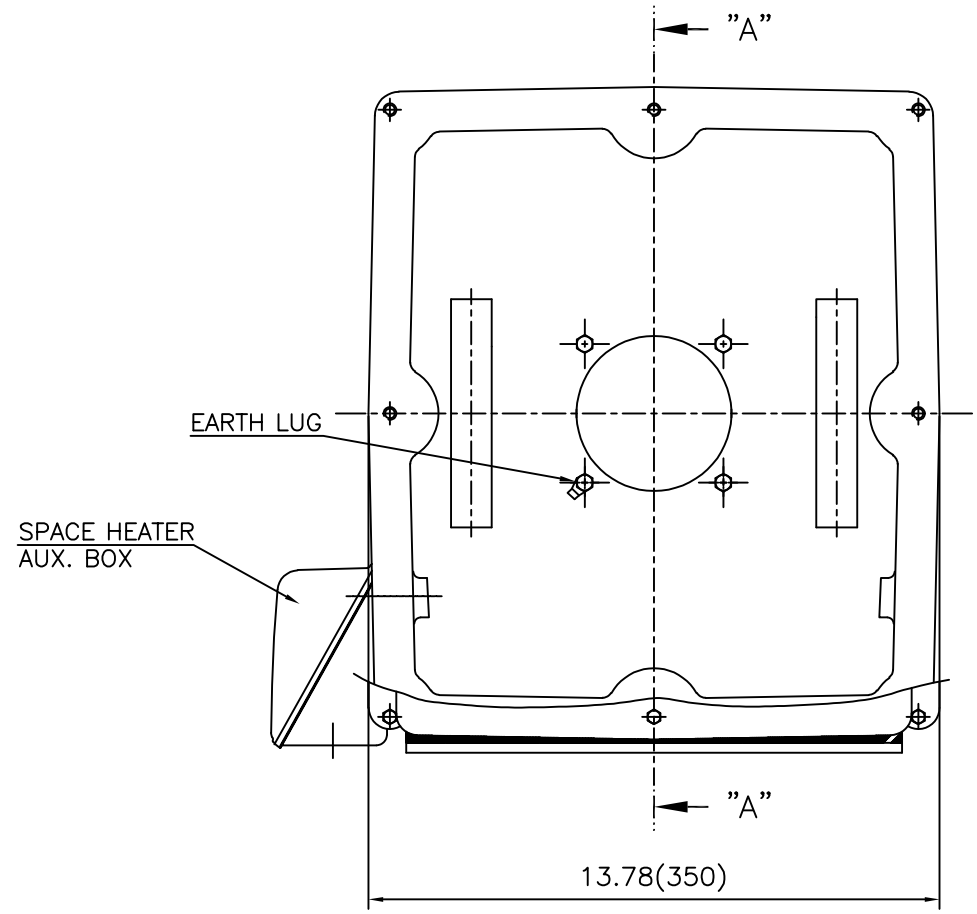
1.TOLERANCE :

CENTER HEIGHT	12.5	+0.000	-0.060
RABBET DIAMETER	ø16.5	+0.000	-0.005
SHAFT DIAMETER	ø3.875	+0.000	-0.001
KEYWAY WIDTH	1	+0.003	-0.000



APPD BY	S.Y.KIM	UNIT	INCH	SUBJECT	Fr.5010/5011C	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-T0511C4PE001	Revision No. 0

**Cls. I&II, Div. 2
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SEC. "A" - "A"

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

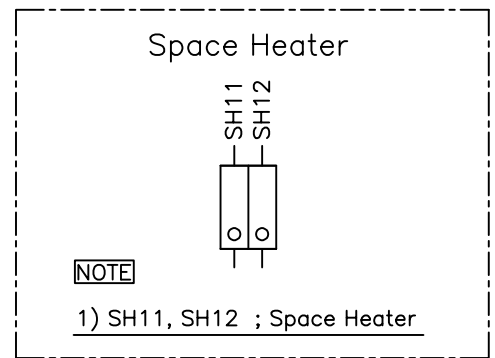
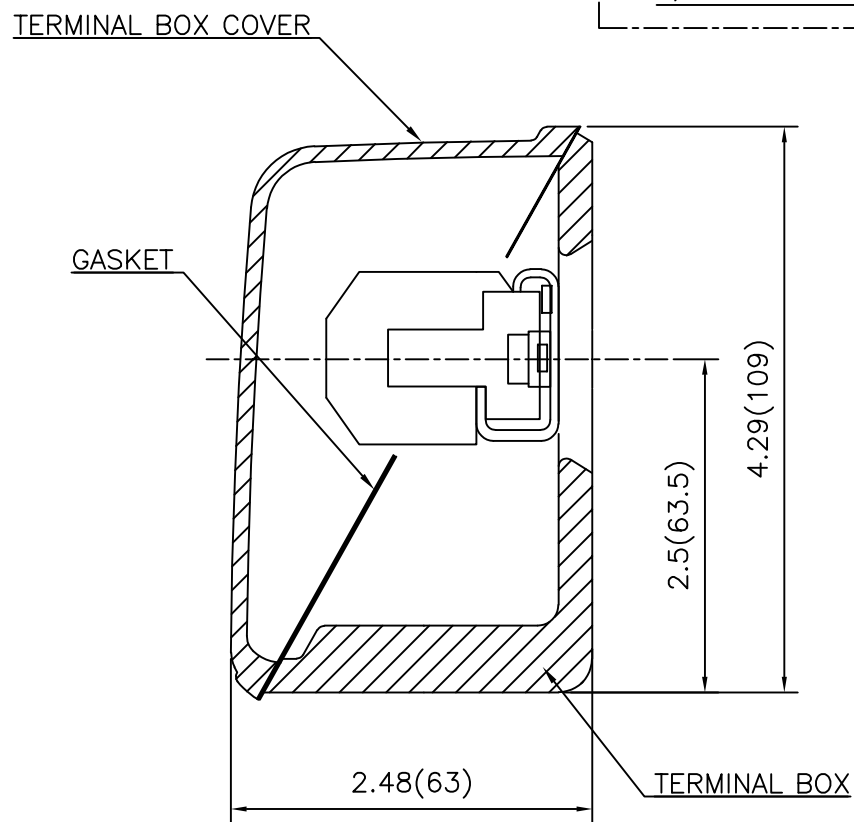
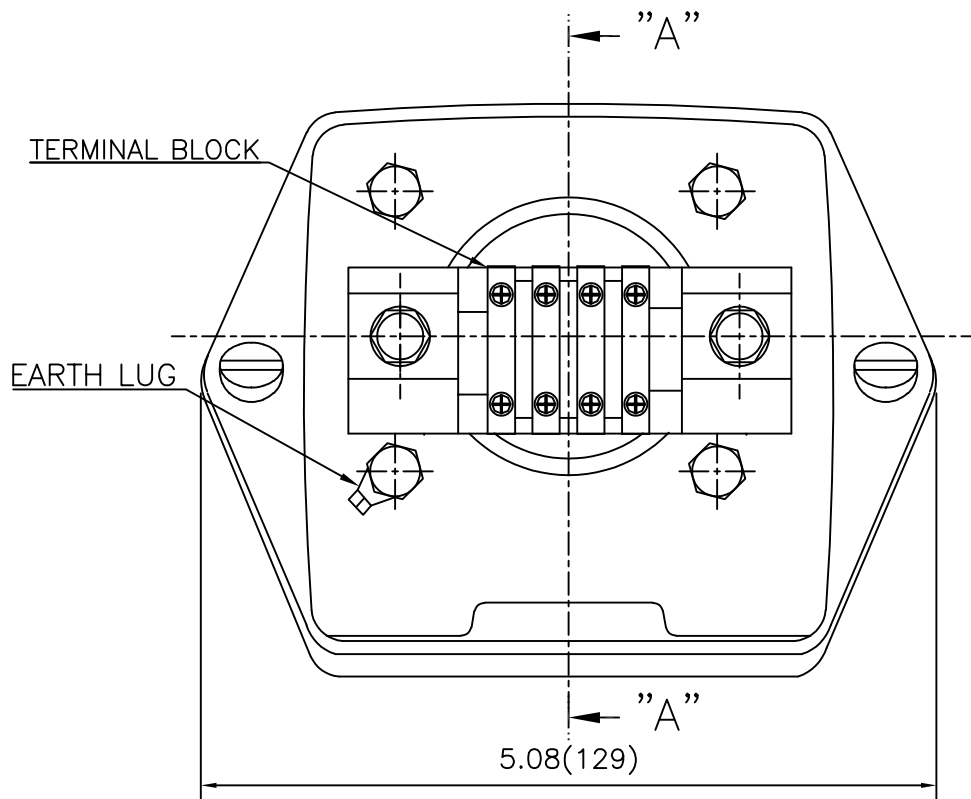
APPD BY	S.Y.KIM	UNIT	inch(mm)	SUBJECT	FR. L440 (CAST IRON)	DWG SIZE
CHKD BY		SCALE	1/3.5	TITLE	MAIN TERMINAL BOX ASS'Y	A3 (1:3.5)
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle			
DSND BY	최승희	DATE	2023-10-19			
				REF. NO		Sheet No. of
				DWG NO	3M-248452	Revision No. 0

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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.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