HD HYUNDAI ELECTRIC

Essential for Today
Potential for Tomorrow

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.	HSDE600-36-5812S-IBSHSP	Item No.		Rev. No.	[ ]
Project Name		Project No.		Quantity	sets

GENERAL SPECIFICATION

Frame Size		5812S
Type		HNE6
Enclosure(Protection)		Totally Enclosed / IP55
Method of Cooling		IC411(FC)
Rated Frequency		60 Hz
Number of Phases		3
Insulation Class		F
Temp. Rise at full load (by resistance method)		
	at 1.0 S.F	80 deg. C
Motor Location		☐ Indoor ☐ Outdoor
Altitude		Less than 1,000 meter
Relative Humidity		Less than 80 %
Ambient Temp.		40 deg. C (Max.)
Duty Type		Continuous (S1)
Service Factor		1.15
Mounting		B3
Bearing	Type	Anti-Friction
	DE/N-DE	6316C3 / 6316C3-INS.
	Lubricant	Grease(Polyrex-EM)
External Thrust		Not applicable
Coupling Method		☑ Direct ☐ V-belt
Shaft Extension		Single
Terminal Box	Main	Steel
	Aux.	Yes
	Location	Refer to Outline Drawing
Application		
Area classification		Hazardous
Type of Ex-Protection		Class I, Division 2
Applicable Standard		NEMA MG1, CSA C390

PERFORMANCE DATA

Rated Output		450 kW		600 HP
Number of Poles		2		
Rotor Type		Squirrel Cage		
Starting Method*		D.O.L		
Rated Voltage		575 V	460 V	230 V
Current	Full Load	529.9 A	662.4 A	1324.9 A
	Locked-rotor**	710 %	710 %	710 %
Efficiency				
	50% Load	92.8 %		
	75% Load	94.8 %		
	100% Load	95.8 %		
Power Factor(p.u)				
	50% Load	0.740		
	75% Load	0.840		
	100% Load	0.890		
Speed at Full Load		3570 r.p.m		
Torque				
	Full Load	888.02 lb.ft		
	Locked-rotor**	150 %		
	Breakdown**	250 %		
Moment of Inertia (J)				
	Load(Max.)	453.394 lb.ft2		
	Motor	121.840 lb.ft2		
Sound Pressure Level (No-load & mean value at 1m from motor)		89 dB(A)		
Vibration		3.8 mm/sec (peak)		
Permissible number of consecutive starts		Cold 2 times		
		Hot 1 time		
Paint	Munsell No.	4.0PB5.4/5.5(VL-451)		

ACCESSORIES

*. Space Heater : 1EA/Motor

SUBMITTAL DRAWING

Outline Dimension Drawing	\ Motor Weight(Approx.)	
B3	LM-T5812B3CE001	6730 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
   -. 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. Uni-directional CCW viewed from drive end.
7. Temp. code : T3A(180°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.

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

▣ MAIN NAMEPLATE

4.72

2.36

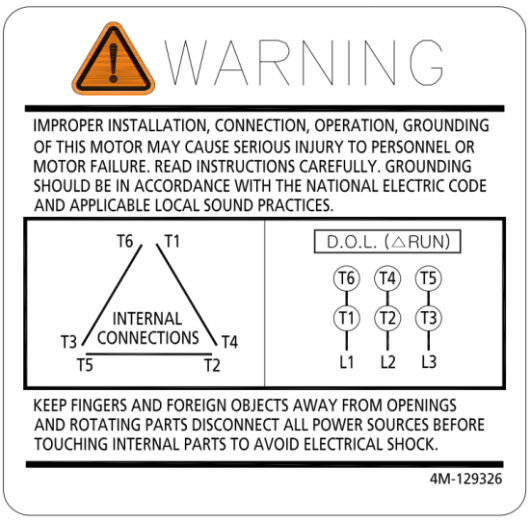
CROWN TRITON
Premium Efficiency AC 3 Phase Motor

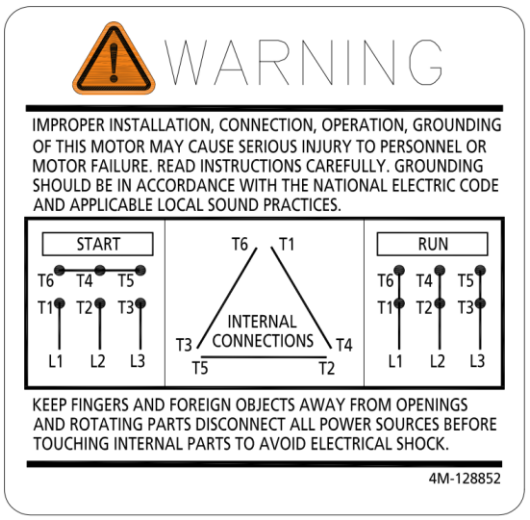
600HP 2P 460V				Cat. No.	HSDE600-36-5812S-IBSHSP		
Model	LATER			INS. Class	F	Amps	662.4A
Type	HNE6	Duty	CONT	Code G	Amb. 40°C	Hertz	60Hz
Frame	5812S	Encl.	TEFC	S.F. 1.15	RPM 3570	NEMA Nom. Eff.	95.8%
Bearing	Drive 6316C3			S.F.1.00 (2:1 C.T., 10:1 V.T., NEMA-MG1 Part31)		3/4 Eff.	94.8%
	Opp. 6316C3-INS.					NEMA Design	B Torque
Usable at	50Hz 475HP 380V 639.8A 2970rpm S.F.: 1.15 Eff.: 95.8% Code: H						
	50Hz 475HP 400/415V 614.8/599.4A 2972/2975rpm S.F.: 1.15 Eff.: 95.8/95.8% Code: H/J						
CSA Certified for	CLASS I, Div. 2, Gr. A, B, C & D			Temp. Code (sine wave)		Frame	580FR
						Maximum Amb. 50°C	T3A (180°C)
No. -				Date -		Weight	6730 lb

4M-136358 Made in Korea H1 HD HYUNDAI ELECTRIC

▣ WIRING DIAGRAM

D.O.L (INVERTER & SOFT STARTER)	WYE-DELTA (Y-D)





APPD BY	S.Y.KIM	UNIT	INCH
CHKD BY	I.K.KIM	SCALE	NONE
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	S.H.LEE	DATE	2024.06.07

HD HYUNDAI ELECTRIC

SUBJECT	CSA Class I, Division2 Severe Duty (HSDE ,5812)	DWG SIZE	A4 (1:1)
TITLE	NAMEPLATE DRAWING		
REF. NO	4M-136358 / 4M-129326	Sheet No.	of
DWG NO	NP-HSDE600-36-5812S-IBSHSP	Revision No.	0

HYUNDAI ELECTRIC

PERFORMANCE CURVE

CURVE NO.

PC-HSDE600-36-5812S-IBSHSP

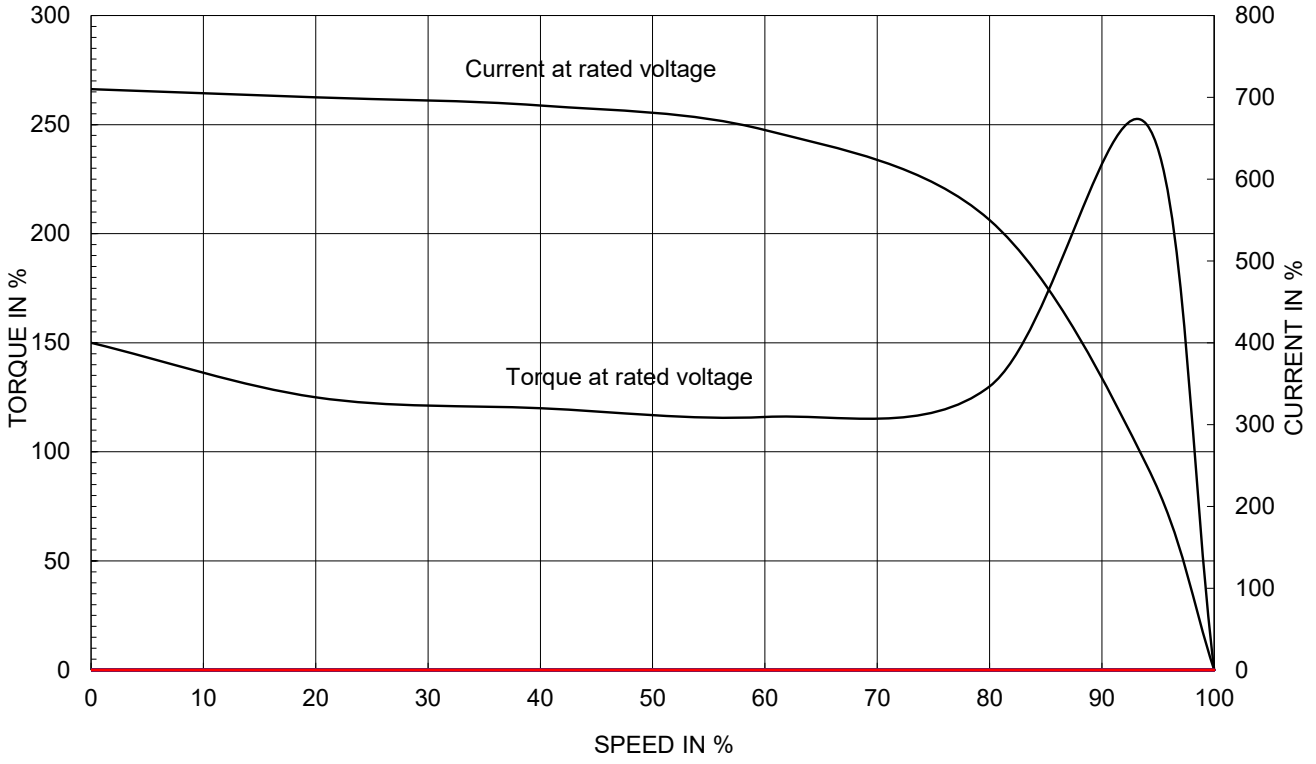
Type :	HNE6	
Full Load Torque :	888.02	lb.ft
Load moment of Inertia (J) :	453.394	lb.ft2
Motor moment of Inertia (J) :	121.840	lb.ft2

450kW 600HP 2 P 60 Hz

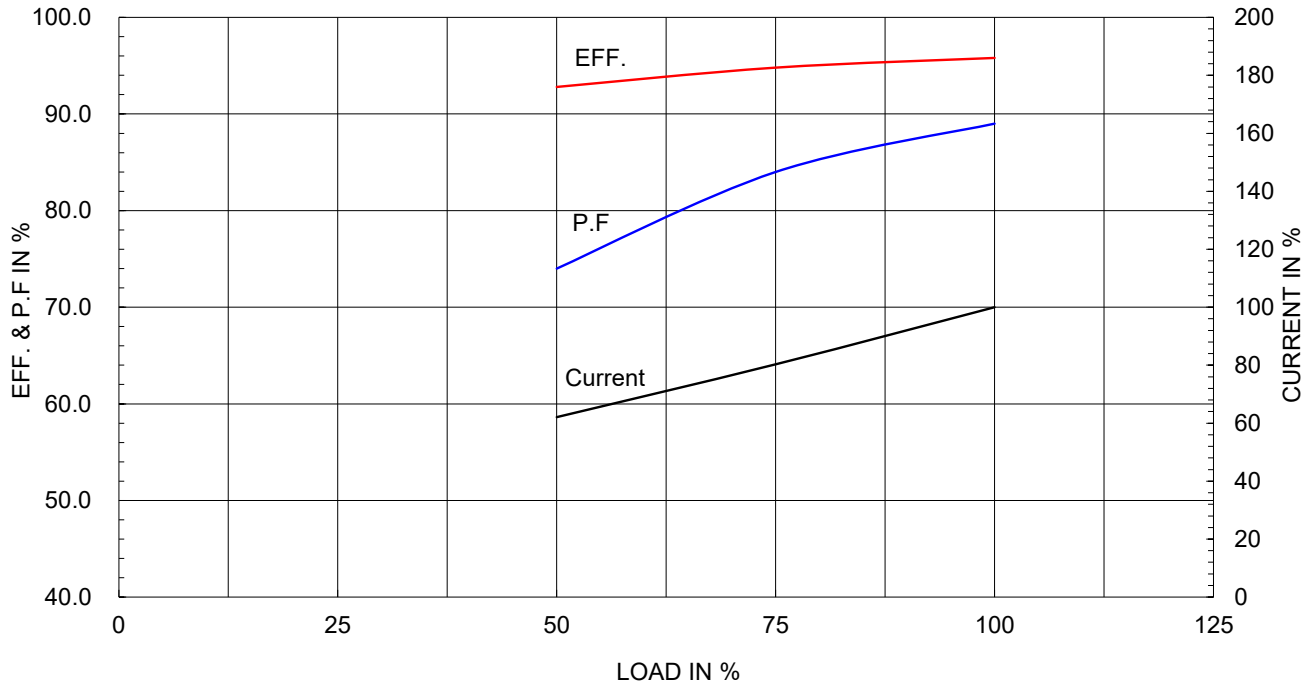
Speed at Full Load : 3570 RPM

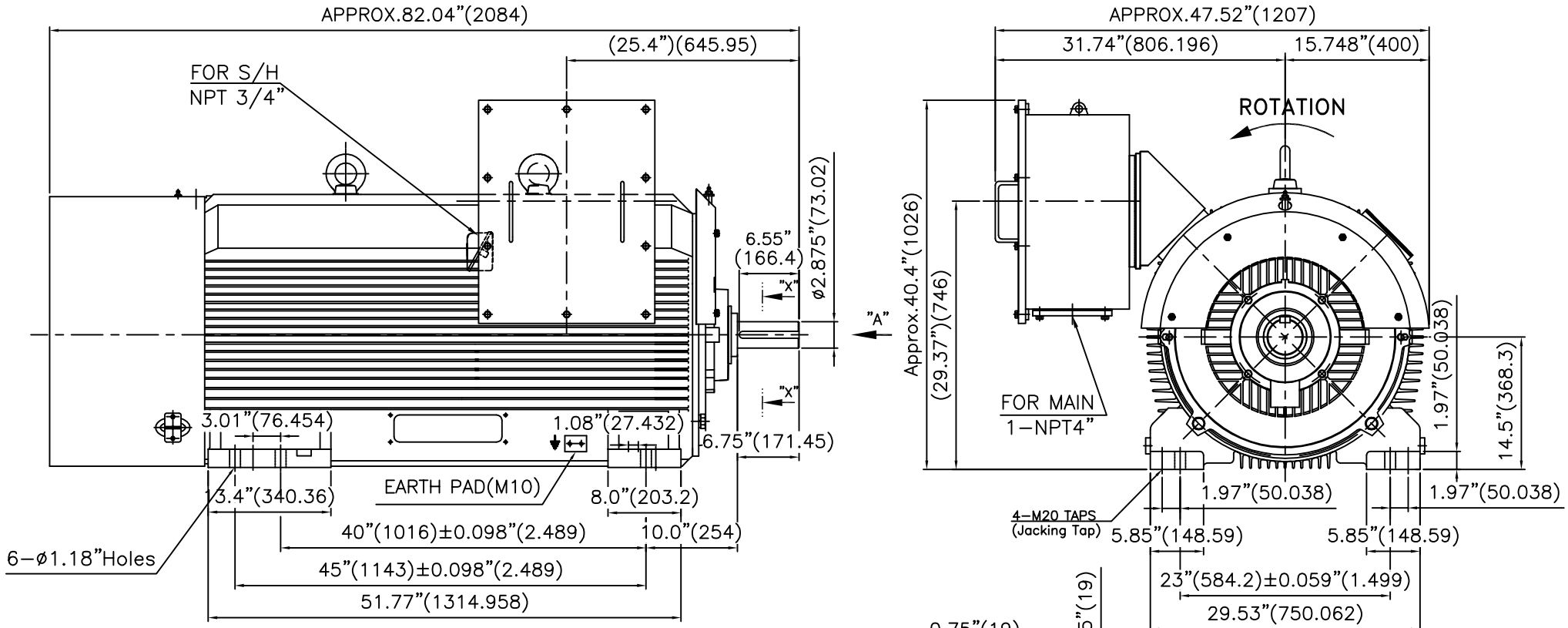
Rated Voltage	575V	460V	230V
Full Load Current	529.9A	662.4A	1324.9A

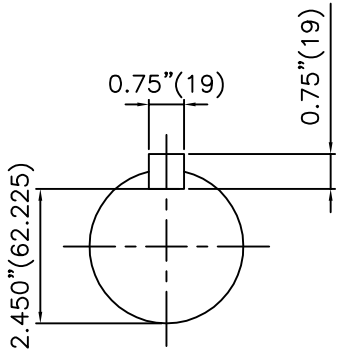
SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE







VIEW "A"

SECTION "X-X"

TECHNICAL INFORMATION

1) BEARING & LUBRICANT LIST

BEARING		Drive End	Non-Drive End
Bearing Type		6316C3	6316C3
Lubricant Type		GREASE	GREASE
Grease Type		Mobil(Polyrex-EM)	Mobil(Polyrex-EM)
Initial Charge Quantity		200 g	200 g
Mark-Up	Quantity	33 g	33 g
	Interval	2 MONTHS	2 MONTHS

2) TOLERANCE :

CENTER HEIGHT	14.5	+0.000 -0.060
SHAFT DIAMETER	ø2.875	+0.000 -0.001
KEYWAY WIDTH	0.75	+0.003 -0.000

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

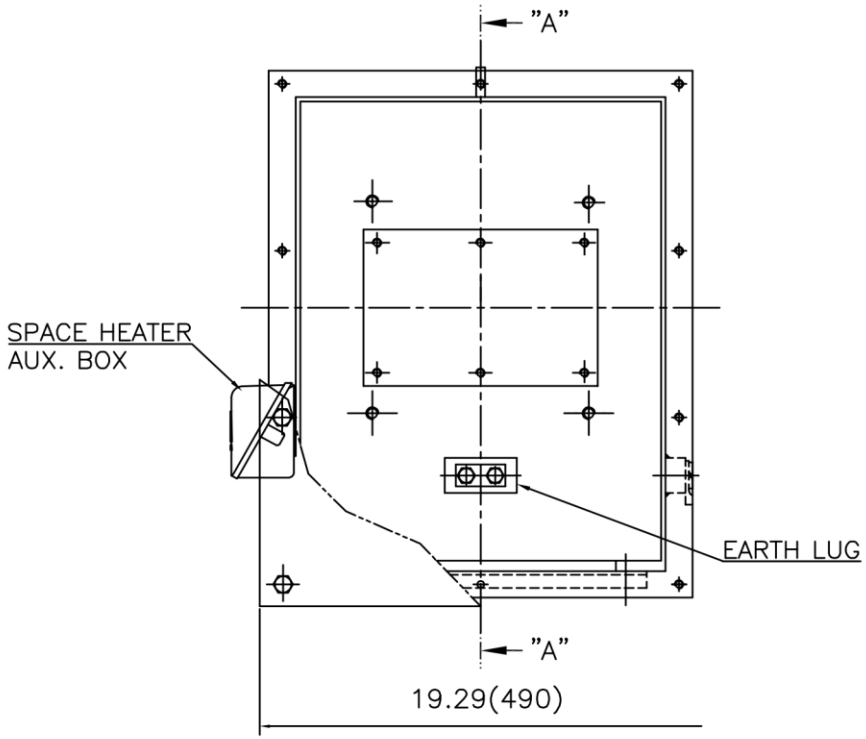
Q'TY	DESCRIPTION	MATERIAL	DIMENSION	WEIGHT	PART NO.	REMARK

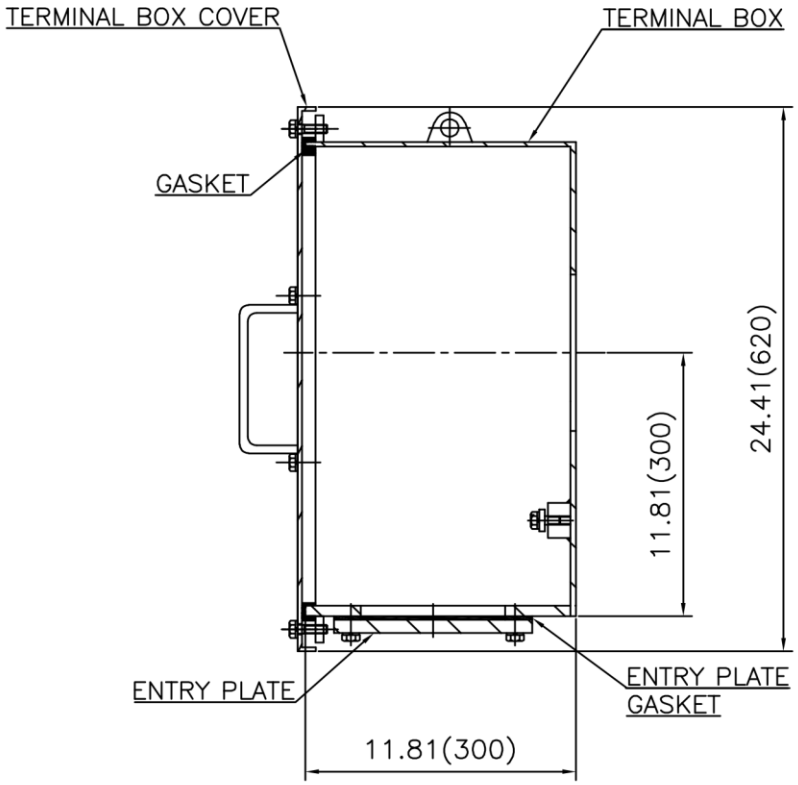
APPD BY	S.K.HAN	UNIT	INCH(MM)
CHKD BY	S.Y.KIM	SCALE	1/12
CHKD BY	R.G.KIM	PROJEC'N	3각법(3rd Angle)
DSND BY	M.S.HA	DATE	2019.05.16

HD HYUNDAI ELECTRIC

SUBJECT	Fr.5812-2P
TITLE	OUTLINE
REF. NO	Sheet No. of
DWG NO	LM-T5812B3CE001 Revision No.

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)
CHKD BY		SCALE	1/6
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	배슬희	DATE	2023-10-25

HD HYUNDAI ELECTRIC

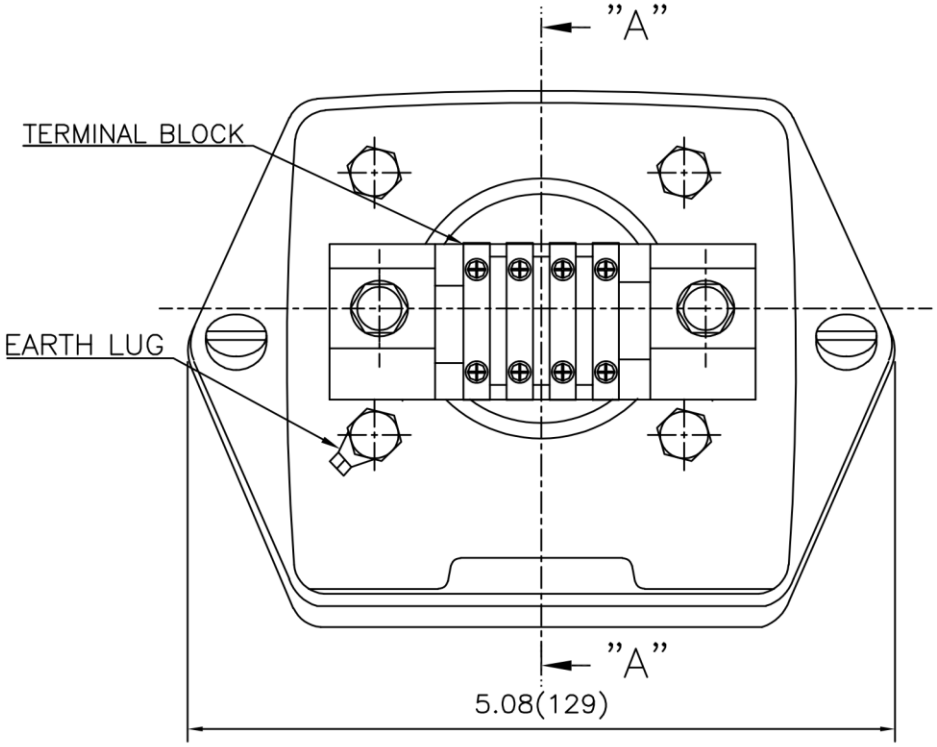
SUBJECT	FR.580 (STEEL)		DWG SIZE A3 (1:6)
TITLE	MAIN TERMINAL BOX ASS'Y		
REF. NO			Sheet No. of
DWG NO	3M-248512		Revision No. 0

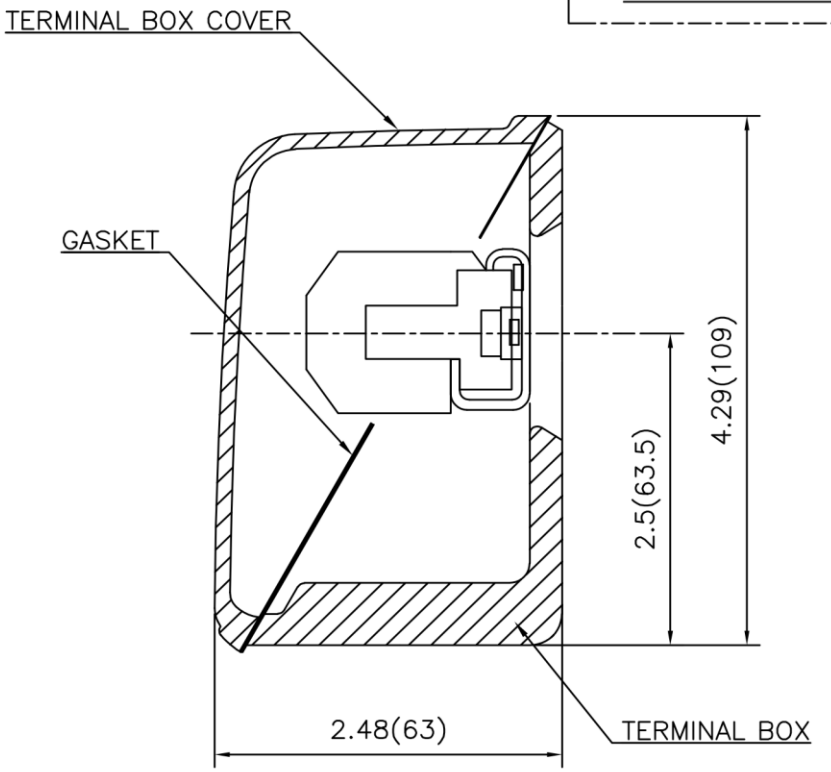
Cls. I&II, Div. 2
IEEE 841

Space Heater

NOTE

1) SH11, SH12 ; Space Heater





SEC. "A"–"A"

REV	DATE	CONTENTS	REVD BY	CHKD BY	CHKD BY	APPD BY

APPD BY	S.Y.KIM	UNIT	inch(mm)
CHKD BY		SCALE	1/1
CHKD BY	R.G.KIM	PROJEC'N	3rd Angle
DSND BY	배승희	DATE	2024-01-18

HD HYUNDAI ELECTRIC

SUBJECT	FR.180 (CAST IRON)		DWG SIZE A3 (1:1.1)
TITLE	SUB. TERMINAL BOX ASS'Y		
REF. NO		Sheet No.	of
DWG NO	3M-165278	Revision No.	0