

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

IEEE841 TYPE

| | | | | | |
|--------------|------------------------------|-------------|--|----------|------|
| Catalog No. | IEEE400-36-L449TS-IBBRSRSHSP | Item No. | | Rev. No. | [] |
| Project Name | | Project No. | | Quantity | sets |

| GENERAL SPECIFICATION | | | PERFORMANCE DATA | | | |
|--|--|----------------------|--|----------------|----------------------------|-----------------|
| Frame Size | L449TS | | Rated Output | 300 kW 400 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 | 349.4 A | 436.7 A 873.4 A |
| Insulation Class | F | | | Locked-rotor** | 680 % | 680 % 680 % |
| 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 | | 0.750 | |
| Duty Type | Continuous (S1) | | 75% Load | | 0.850 | |
| Service Factor | 1.15 | | 100% Load | | 0.900 | |
| Mounting | B3 | | Speed at Full Load | 3570 r.p.m | | |
| Bearing | Type | Anti-Friction | Torque | | | |
| | DE/N-DE | 6315C3 / 6315C3-INS. | Full Load | 592.0 lb.ft | | |
| | Lubricant | Grease(Polyrex-EM) | Locked-rotor** | 145 % | | |
| External Thrust | Not applicable | | Breakdown** | 240 % | | |
| Coupling Method | <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt | | Moment of Inertia (J) | | | |
| Shaft Extension | Single | | Load(Max.) | 315.000 lb.ft2 | | |
| Terminal Box | Main | Cast Iron | Motor | 60.755 lb.ft2 | | |
| | Aux. | Yes | Sound Pressure Level (No-load & mean value at 1m from motor) | | | |
| Location | Refer to Outline Drawing | | | | 87 dB(A) | |
| Application | | | Vibration | | | |
| Area classification | Hazardous | | | | 3.8 mm/sec (peak) | |
| Type of Ex-Protection | Class I&II, Division 2 | | Permissible number of consecutive starts | | Cold 2 times Hot 1 time | |
| Applicable Standard | IEEE841, NEMA MG1, CSA C390 | | Paint | Munsell No. | 7.5BG6/1.5 | |

| 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 |

| SPARE PARTS | |
|-------------|---------------------------------|
| 1. | Spare Axial Fan (C.W Direction) |

| SUBMITTAL DRAWING | | | |
|---------------------------|-----------------|-----------------------|--|
| Outline Dimension Drawing | | Motor Weight(Approx.) | |
| B3 | LM-I044XB3C7001 | 3820 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. Uni-directional CCW viewed from drive end. | | | | |

| Date | DSND | CHKD | CHKD | APPD |
|------------|---------|----------|----------|----------|
| 2024-09-22 | E.J.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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4.72

2.36

CROWN TRITON
Premium Efficiency AC 3 Phase Motor

| | | |
|-------------------|---|--|
| 400HP 2P 460V | Cat. No. IEE400-36-L449TS-IBBRSRSHSP | |
| Model LATER | INS. Class F | Amps 436.7 |
| Type PJP | Duty CONT | Code G |
| Frame L449TS | Encl. TEFC | Amb. 40°C |
| | S.F. 1.15 | RPM 3570 |
| | | Hertz 60Hz |
| | | NEMA Nom. Eff. 95.8% |
| Bearing | Drive 6315C3 | S.F.1.00 (10:1 C.T., 20:1 V.T., NEMA-MG1 Part31) |
| | Opp. 6315C3-INS. | NEMA Design B |
| Usable at | 50Hz 335HP 380V 440.54A 2970rpm S.F.: 1.0 Eff.: 95.8% Code: G | |
| | 50Hz 335HP 400/415V 423.22/407.88A 2972/2975rpm S.F.: 1.0 Eff.: 95.8/95.81% Code: H/H | |
| 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 3820 lb |

IEEE Std 841-2021 MARINE DUTY IEE45
 4M-136054 Made in Korea H1

| | | | | | | |
|---------|---------|----------|------------|--------------------------|-----------------------------------|-----------------------|
| APPD BY | S.Y.KIM | UNIT | INCH | SUBJECT | CSA Class I, Division2 IEE45 (XL) | 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-136054 | Sheet No. of |
| | | | | DWG NO | NP-IEE400-36-L449TS-IBBRSRSHSP | Revision No. 0 |



PERFORMANCE CURVE

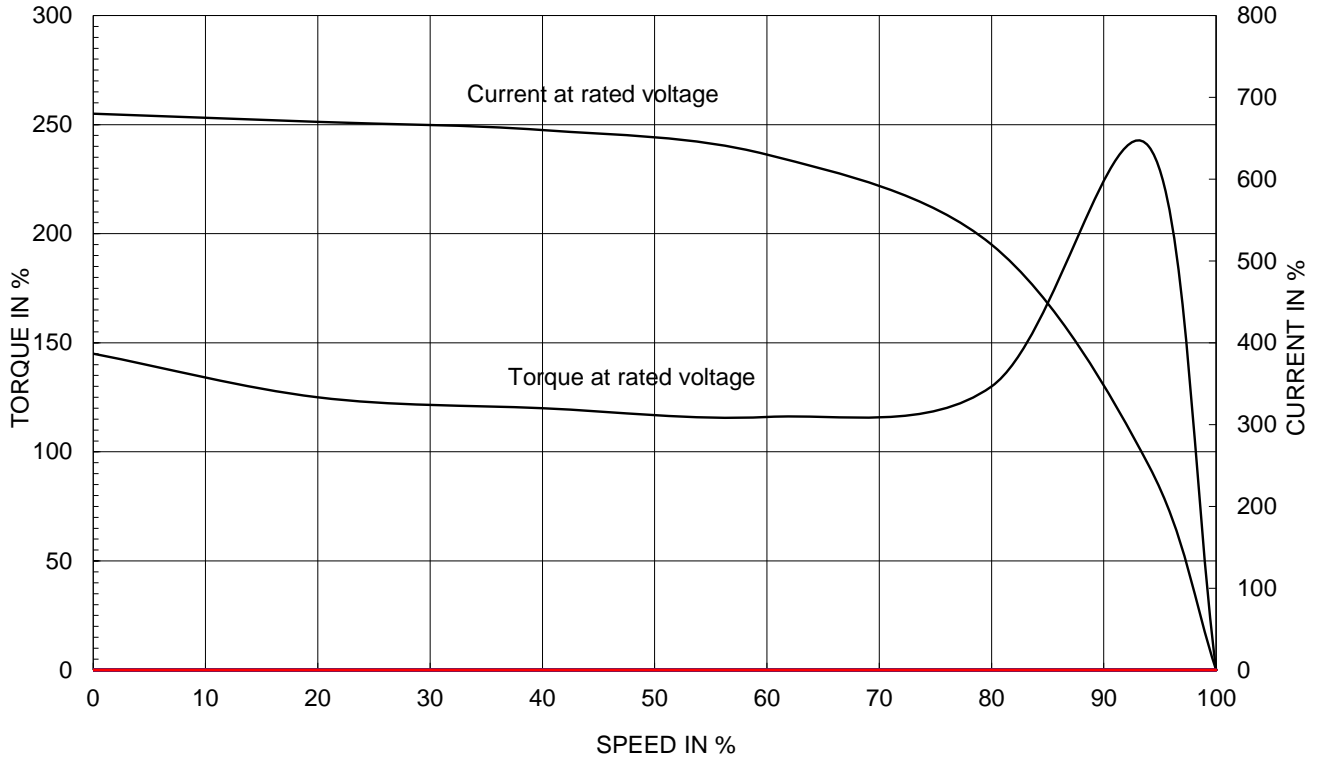
CURVE NO.

PC-IEEE400-36-L449TS-IBBRSRSHSP

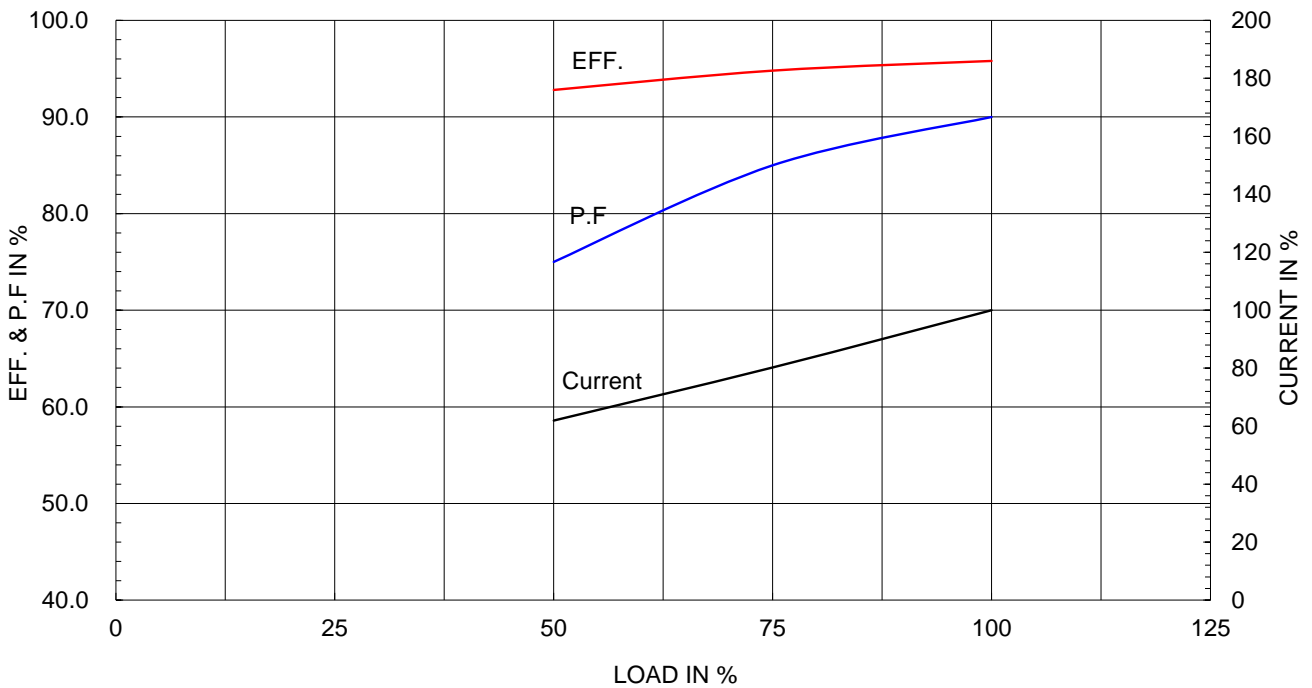
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|-------------------------------|----------------|
| Type : | PJP |
| Full Load Torque : | 592.0 lb.ft |
| Load moment of Inertia (J) : | 315.000 lb.ft2 |
| Motor moment of Inertia (J) : | 60.755 lb.ft2 |

| | | |
|-------------------------------|--------|---------------|
| 300kW 400HP | 2 P | 60 Hz |
| Speed at Full Load : 3570 RPM | | |
| Rated Voltage | 575V | 460V 230V |
| Full Load Current | 349.4A | 436.7A 873.4A |

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

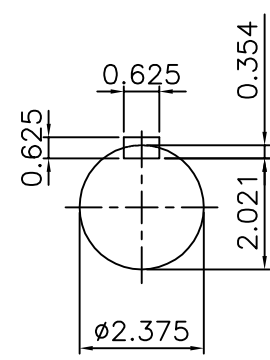
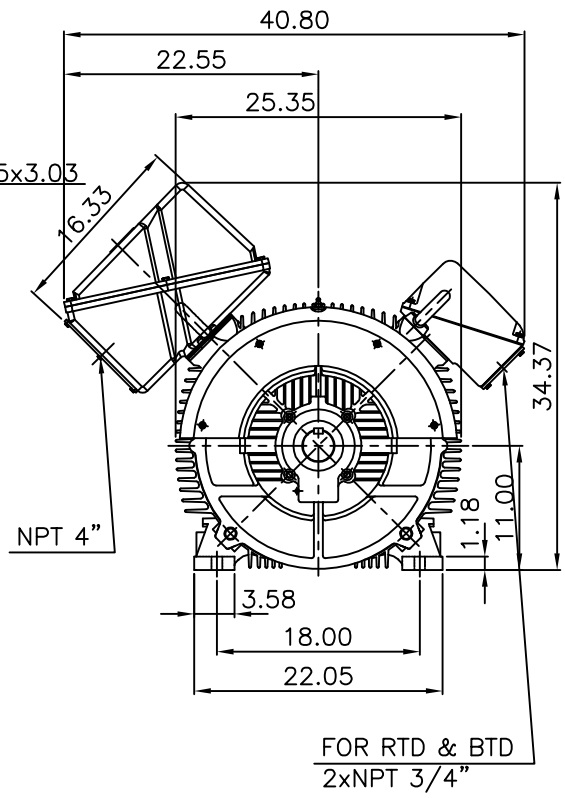
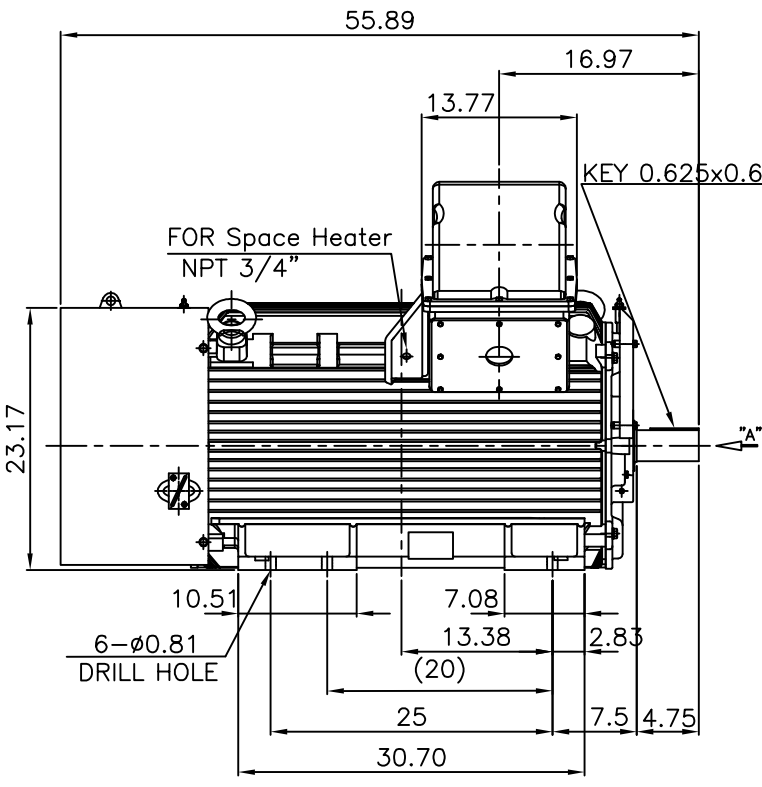


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| ▽ | 50S | REV | DATE | CONTENTS | REVD BY | CHKD BY | CHKD BY | APPD BY |
| ▽▽ | 12.5S | | | | | | | |
| ▽▽▽ | 3.2S | | | | | | | |
| ▽▽▽▽ | 0.4S | | | | | | | |

IEEE841



VIEW "A"

NOTE

1.TOLERANCE :

| | | | |
|----------------|--------|--------|--------|
| CENTER HEIGHT | 11 | +0.000 | -0.060 |
| SHAFT DIAMETER | ø2.375 | +0.000 | -0.001 |
| KEYWAY WIDTH | 0.625 | +0.002 | -0.000 |

| | | | | | | | |
|---------|---------|----------|----------------|---------|-----------------|--------------|-----------|
| APPD BY | S.Y.KIM | UNIT | INCH | SUBJECT | Fr.L449TS | DWG SIZE | A4 (1:18) |
| CHKD BY | O.J.KIM | SCALE | 1/18 | TITLE | OUTLINE | | |
| CHKD BY | R.G.KIM | PROJEC'N | 3각법(3rd Angle) | REF. NO | | Sheet No. | of |
| DSND BY | H.K.LEE | DATE | 2021-04-27 | DWG NO | LM-I044XB3C7001 | Revision No. | 0 |

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| 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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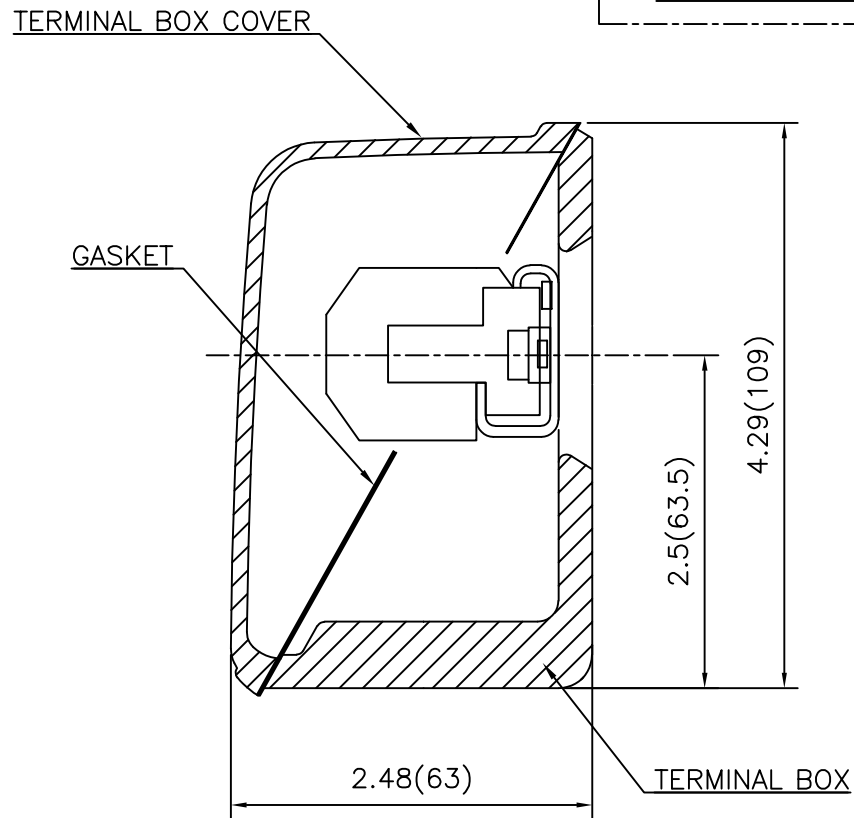
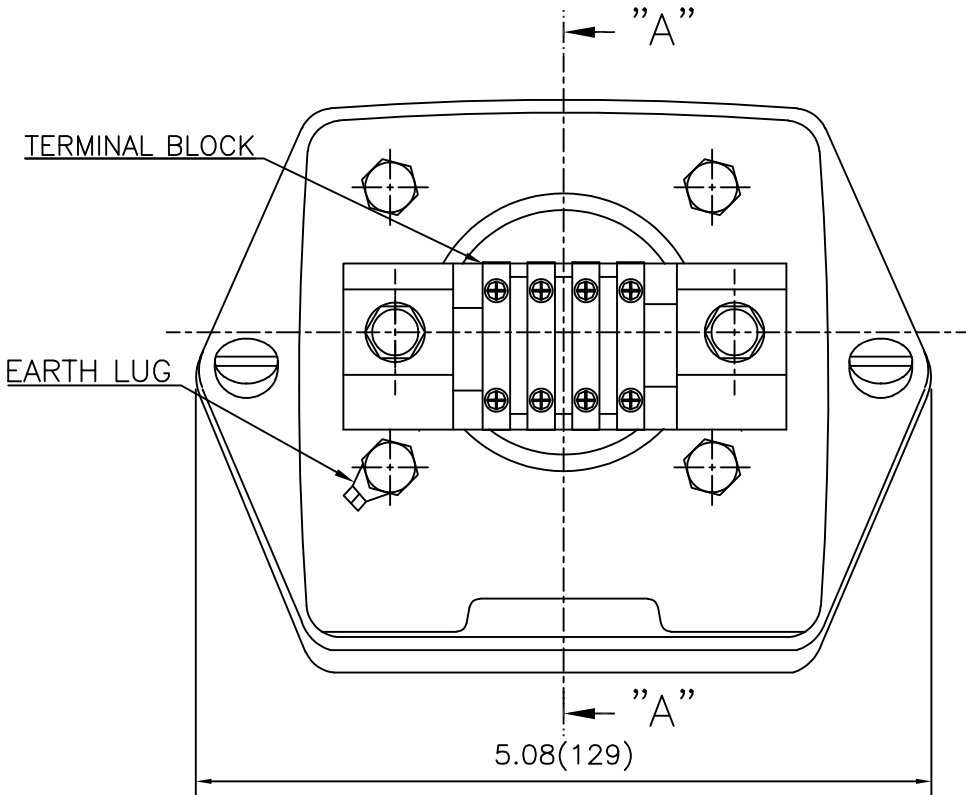
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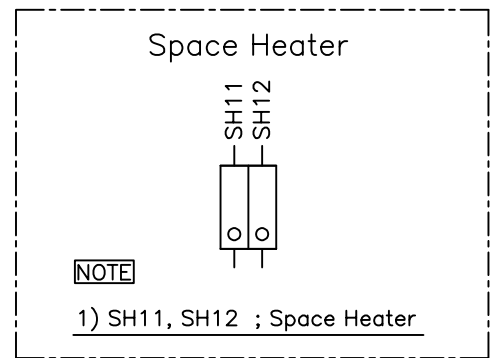
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| APPD BY | S.Y.KIM | UNIT | inch(mm) | SUBJECT | FR.360 (CAST IRON) | DWG SIZE | A3 (1:2.2) |
| CHKD BY | | SCALE | 1/1 | TITLE | AUX. TERMINAL BOX ASS'Y | REF. NO | Sheet No. of |
| CHKD BY | R.G.KIM | PROJEC'N | 3rd Angle | DWG NO | | 3M-165277 | Revision No. |
| DSND BY | 박승희 | DATE | 2024-01-18 | | | | |

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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 | 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-165278 | Revision No. 0 |