

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

## Explosion Proof type

|              |                |             |          |          |
|--------------|----------------|-------------|----------|----------|
| Catalog No.  | IXHHI5-36-184T | Item No.    | Rev. No. | [      ] |
| Project Name |                | Project No. | Quantity | sets     |

| GENERAL SPECIFICATION                          |  |  | PERFORMANCE DATA |  |           |              |
|--|--|--|------------------|--|-----------|--------------|
| Frame Size                                     | 184T   | Rated Output                             | 3.7 kW           |  | 5 HP      |              |
| Type   | XJP  | 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        | 4.88 A   | 6.10 A    | 12.20 A      |
| Insulation Class                               | F  |  | Locked-rotor**   | 800 %  | 800 %     | 800 %        |
| Temp. Rise at full load (by resistance method) |  | Efficiency                               |                  |  |           |              |
| at 1.0 S.F                                     | 80 deg. C  | 50% Load                                 |                  | 85.5 %   |           |              |
| Motor Location                                 | <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor           | 75% Load                                 |                  | 87.5 %   |           |              |
| Altitude                                       | Less than 1,000 meter  | 100% Load                                |                  | 88.5 %   |           |              |
| Relative Humidity                              | Less than 80 %   | Power Factor(p.u)                        |                  |  |           |              |
| Ambient Temp.                                  | 40 deg. C (Max.)   | 50% Load                                 |                  | 0.710  |           |              |
| Duty Type                                      | Continuous ( S1 )  | 75% Load                                 |                  | 0.810  |           |              |
| Service Factor                                 | 1.15   | 100% Load                                |                  | 0.860  |           |              |
| Mounting                                       | B3   | Speed at Full Load                       |                  | 3515 r.p.m   |           |              |
| Bearing  | Type   | Anti-Friction                            |                  | Torque   |           |              |
|  | DE/N-DE  | 6206ZZC3 / 6206ZZC3                      |                  | Full Load  | 7.4 lb.ft |              |
|  | Lubricant  | Grease(Polyrex-EM)                       |                  | Locked-rotor**   | 190 %     |              |
| External Thrust                                | Not applicable   |  | Breakdown**      | 260 %  |           |              |
| Coupling Method                                | <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt | Moment of Inertia (J)                    |                  |  |           |              |
| Shaft Extension                                | Single   | Load(Max.)                               |                  | 6.170 lb.ft2   |           |              |
| Terminal Box                                   | Main   | Cast Iron                                |                  | Motor  |           | 0.166 lb.ft2 |
|  | Aux.   | No                                       |                  | Sound Pressure Level (No-load & mean value at 1m from motor) |           |              |
| Location                                       | Refer to Outline Drawing   |  | 73 dB(A)         |  |           |              |
| Application                                    |  | Vibration                                |                  | 0.0 mm/sec (peak)  |           |              |
| Area classification                            | Hazardous  | Permissible number of consecutive starts |                  | Cold   | 0 times   |              |
| Type of Ex-Protection                          | Class I&II, Division 1   |  |                  | Hot  | 0 times   |              |
| Applicable Standard                            | NEMA MG1, CSA C390, UL674  | Paint                                    | Munsell No.      | 4.0PB5.4/5.5(VL-451)   |           |              |

### ACCESSORIES

\*. W.T.D.(Thermostat, 145°C) : 1EA/Ph.

### SPARE PARTS

### SUBMITTAL DRAWING

|                           |                 |                       |  |
|---------------------------|-----------------|-----------------------|--|
| Outline Dimension Drawing |                 | Motor Weight(Approx.) |  |
| B3                        | LM-U0184B3TL001 | 121 lb.               |  |
|                           |                 |                       |  |
|                           |                 |                       |  |

### REMARK

1. Premium efficiency according to NEMA MG1
2. Inverter Duty @ 1.0 Service Factor & Ambient max 45°C
  - CT 10.5Hz to 60Hz (10:1 CT at 1hour Duty)
  - 10:1 VT (20:1 VT at 50% load)
  - CHP up to 1.5 times base speed, NEMA MG1 Part31
3. Class I, Division 1, Group C&D
  - Temp.Code(Sine wave) : T2C at 40°C Amb./T2B at 55°C Amb.
  - T4 with Winding Temperature Detector
4. Class II, Division 1, Group F&G
  - Temp.Code(Sine wave) : T3B

|            |          |          |          |          |
|------------|----------|----------|----------|----------|
| Date       | DSND     | CHKD     | CHKD     | APPD     |
| 2024-08-08 | 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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| 1   | 2    | 3        | 4       |
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|     |      |          |         |

3.94

1.57

|                                |   |  |                         |                 |                            |                                     |               |
|--------------------------------|---|--|-------------------------|-----------------|----------------------------|-------------------------------------|---------------|
| <b>CROWN TRITON</b>            |   | Premium Efficiency<br>AC 3 Phase Motor |                         | Explosion Proof |                            | UL US LISTED                        |               |
| 5HP                            | 2P  | 230/460V                               | Cat. No. IXHHI5-36-184T |                 | Amb.                       | 40°C                                |               |
| Frame                          | 184T  | Duty                                   | CONT                    | Amps            | 12.2/6.1                   | Type                                | XJP           |
| RPM                            | 3515  | Hertz                                  | 60Hz                    | Encl.           | TEFC                       | Model                               | LATER         |
| Bearing                        | Drive   | 6206ZZC3                               | S.F.                    | 1.15            | on sine wave power         | INS. Class                          | F             |
|                                | Opp.  | 6206ZZC3                               | S.F.                    | 1.00            | on PWM or IGBT power       | HD-F1                               | NEMA Design B |
| Usable at                      | 50Hz 3HP 380V 5.5A 2940rpm S.F.: 1.0 Eff.: 83.2% Code: L  |  |                         |                 |                            |                                     |               |
|                                | 50Hz 3HP 400/415V 5.5/5.6A 2945/2950rpm S.F.: 1.0 Eff.: 83.2/83.2% Code: L/L  |  |                         |                 |                            |                                     |               |
| UL Certified for               | CLASS I, Div. 1, Gr. C & D / CLASS I, Zone 1, Gr. IIA & IIB   |  |                         |                 | Temp. Code                 | T2C at 40°C Amb. / T2B at 55°C Amb. |               |
|                                | 10:1VT(20:1 at 50% load) CT 10.5Hz to base Hz(10:1 1hour duty at lowest RPM)<br>CHP upto 1.5 time base speed, NEMA MG1 part 31. Amb max 45°C for inverter duty. |  |                         |                 | (sine wave)                | T4 With Thermostat                  |               |
| No.                            | -   |  | Date                    | -               |                            | Weight                              | 121 lb        |
| 4M-136031<br>(NEMA 182~215Fr.) |   | Made in Korea H1                       |                         |                 | <b>HD HYUNDAI ELECTRIC</b> |                                     |               |

|         |         |          |            |                            |                               |            |
|---------|---------|----------|------------|----------------------------|-------------------------------|------------|
| APPD BY | S.Y.KIM | UNIT     | INCH       | SUBJECT                    | UL Class I, Division1 (IXHHI) | DWG SIZE   |
| CHKD BY | I.K.KIM | SCALE    | NONE       |                            |                               | A4 ( 1:1 ) |
| CHKD BY | R.G.KIM | PROJEC'N | 3rd Angle  | TITLE<br>NAMEPLATE DRAWING |                               |            |
| DSND BY | S.H.LEE | DATE     | 2024.06.07 |                            |                               |            |



|         |                   |              |    |
|---------|-------------------|--------------|----|
| REF. NO | 4M-136031         | Sheet No.    | of |
| DWG NO  | NP-IXHHI5-36-184T | Revision No. | 0  |



# PERFORMANCE CURVE

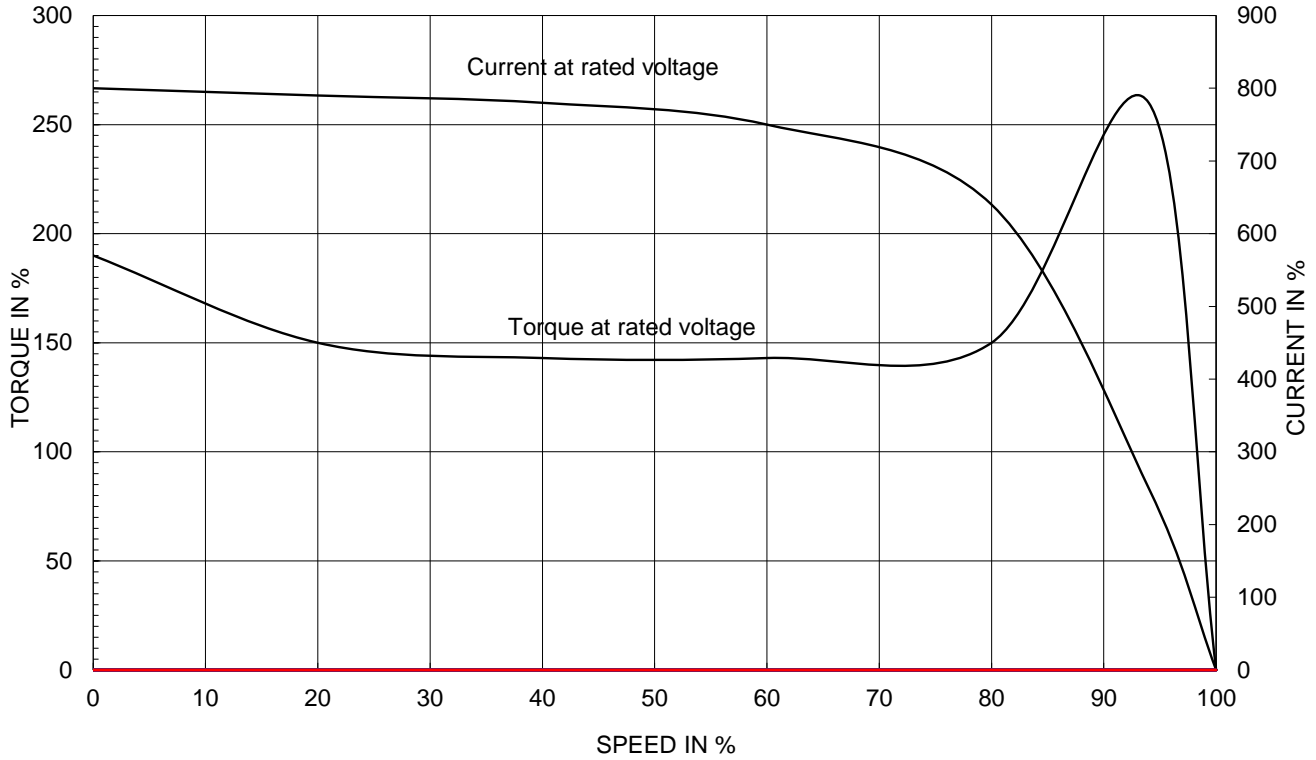
CURVE NO.

PC-IXHHI5-36-184T

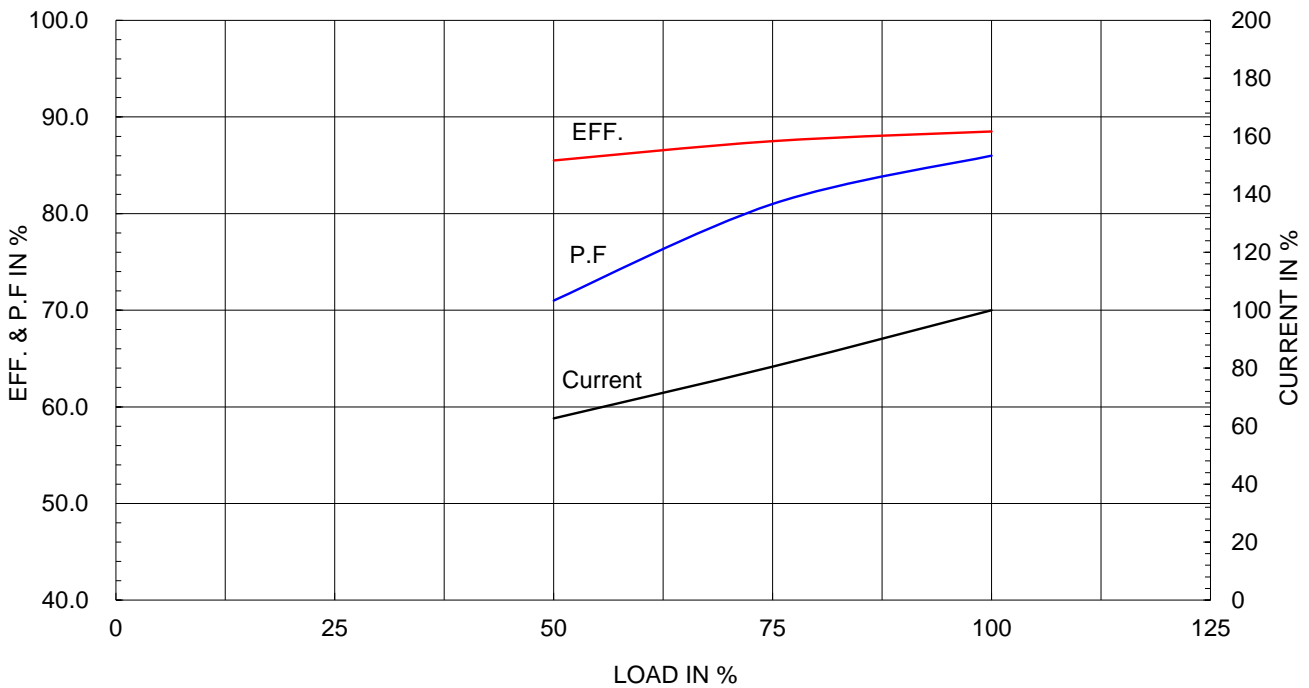
|                               |                          |
|-------------------------------|--------------------------|
| Type :                        | XJP                      |
| Full Load Torque :            | 7.4 lb.ft                |
| Load moment of Inertia (J) :  | 6.170 lb.ft <sup>2</sup> |
| Motor moment of Inertia (J) : | 0.166 lb.ft <sup>2</sup> |

|                      |      |            |
|----------------------|------|------------|
| 3.7kW 5HP            | 2 P  | 60 Hz      |
| Speed at Full Load : |      | 3515 RPM   |
| Rated Voltage        | 575V | 460V 230V  |
| Full Load Current    | 4.9A | 6.1A 12.2A |

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

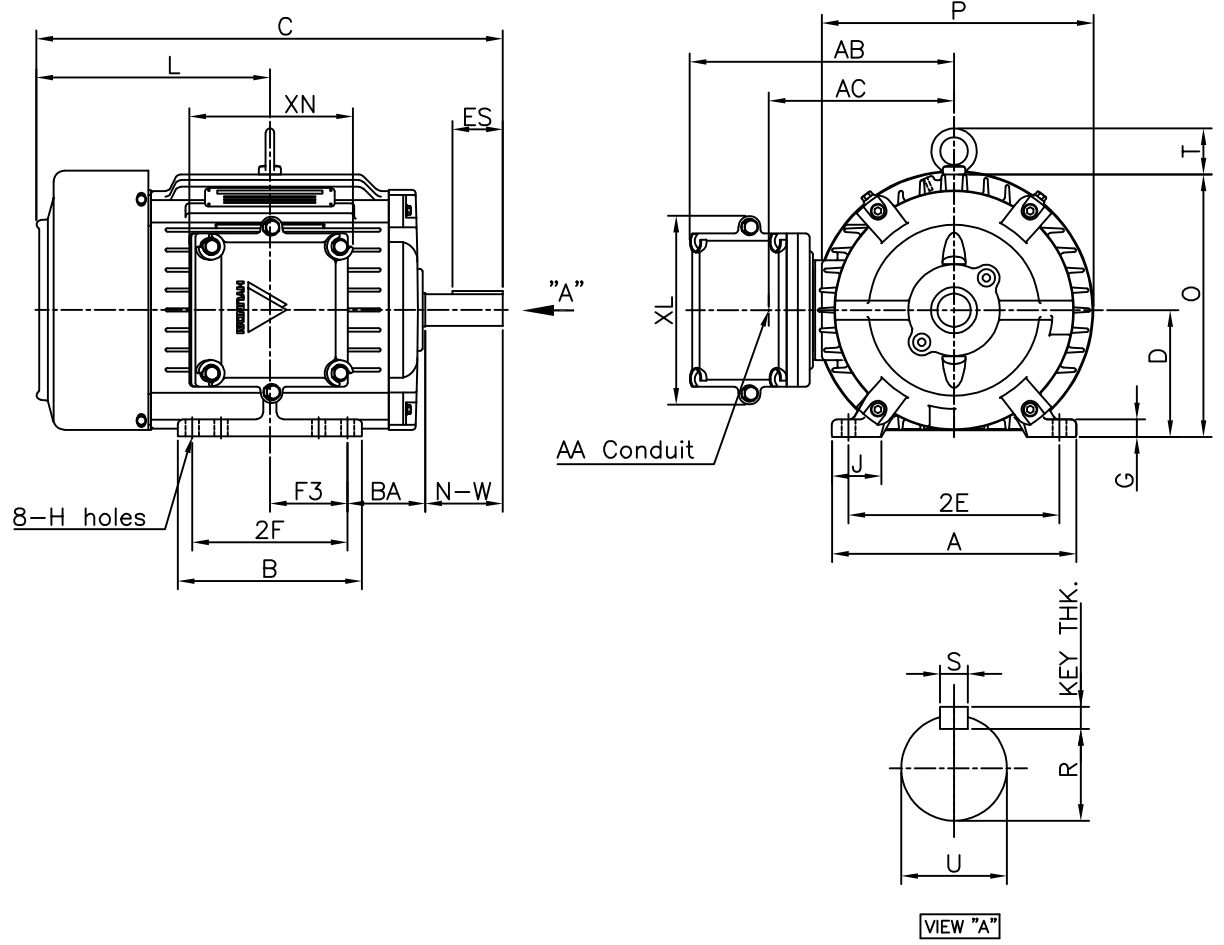


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급주의)

THIS DRAWING IS PROPRIETARY TO HYUNDAI ELECTRIC. NO PART OF THIS DRAWING MAYBE REPRODUCED WITHOUT THE PERMISSION OF HYUNDAI ELECTRIC.

|      |       |     |      |
|------|-------|-----|------|
| 1    | 2     | 3   | 4    |
| ▽    | 50S   | REV | DATE |
| ▽▽   | 12.5S |     |      |
| ▽▽▽  | 3.2S  |     |      |
| ▽▽▽▽ | 0.4S  |     |      |

### Class I Division 1



### DIMENSIONS

| MOUNTING |      |      |      |   |      |      |      |      | CONDUIT BOX |      |      |    |      |      | APPROX. WGT.(lb) |
|----------|------|------|------|---|------|------|------|------|-------------|------|------|----|------|------|------------------|
| A        | B    | 2E   | 2F   | - | F3   | G    | J    | H    | AA          | AB   | AC   | XB | XL   | XN   |                  |
| 8.66     | 6.54 | 7.50 | 5.50 | - | 2.75 | 0.62 | 1.74 | 0.41 | 0.75        | 9.38 | 6.58 | -  | 6.69 | 5.98 | 121              |

| OVERALL |       |      |      |      |      |      |       |      | SHAFT  |      |       | KEY THK. | BEARING   |                |
|---------|-------|------|------|------|------|------|-------|------|--------|------|-------|----------|-----------|----------------|
| BA      | C     | D    | L    | O    | P    | T    | U     | N-W  | KEYWAY |      |       |          | DRIVE END | OPP. DRIVE END |
|         |       |      |      |      |      |      |       |      | R      | ES   | S     |          |           |                |
| 2.75    | 16.55 | 4.50 | 8.29 | 9.32 | 9.64 | 1.63 | 1.125 | 2.75 | 0.986  | 1.78 | 0.250 | 0.250    | 6206ZZC3  | 6206ZZC3       |

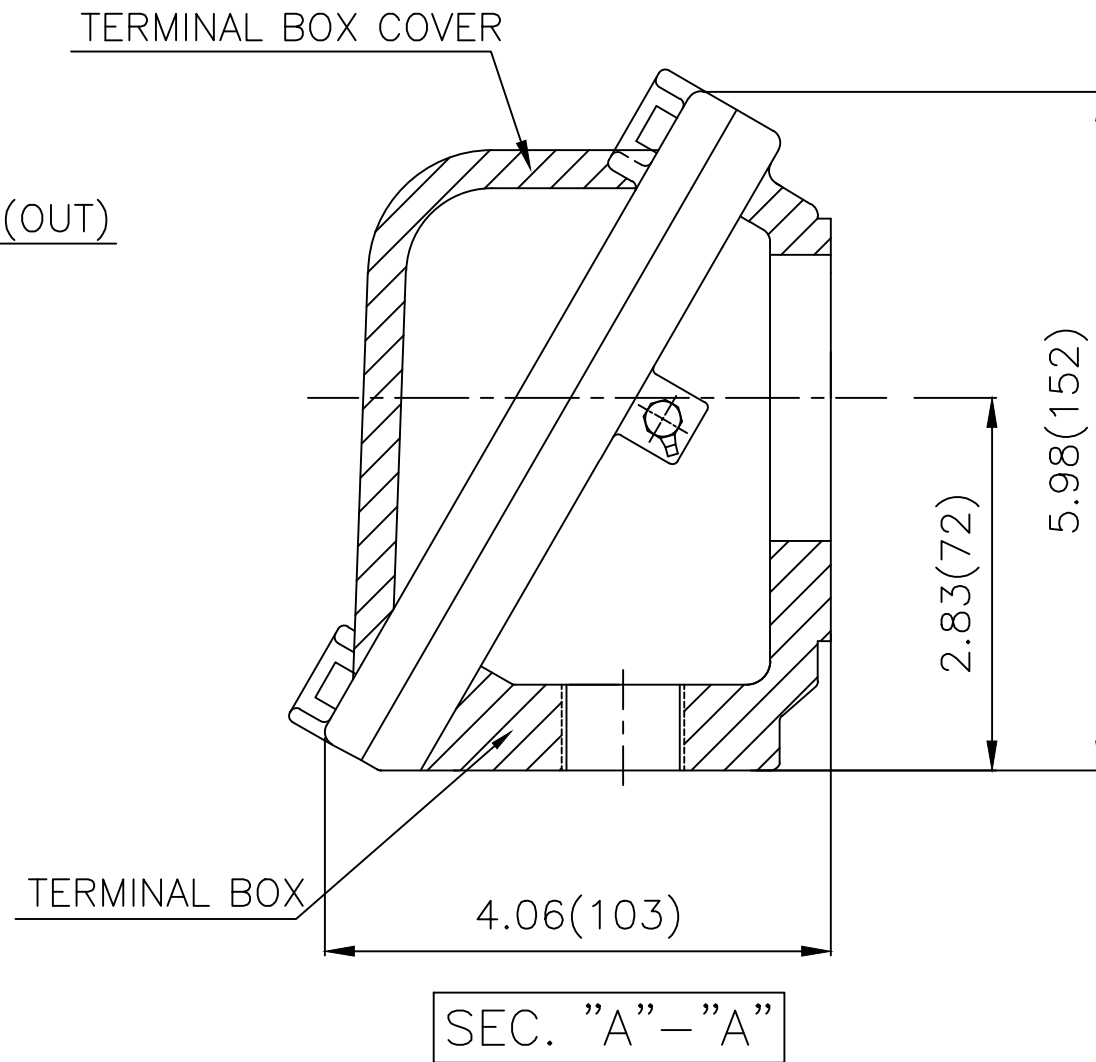
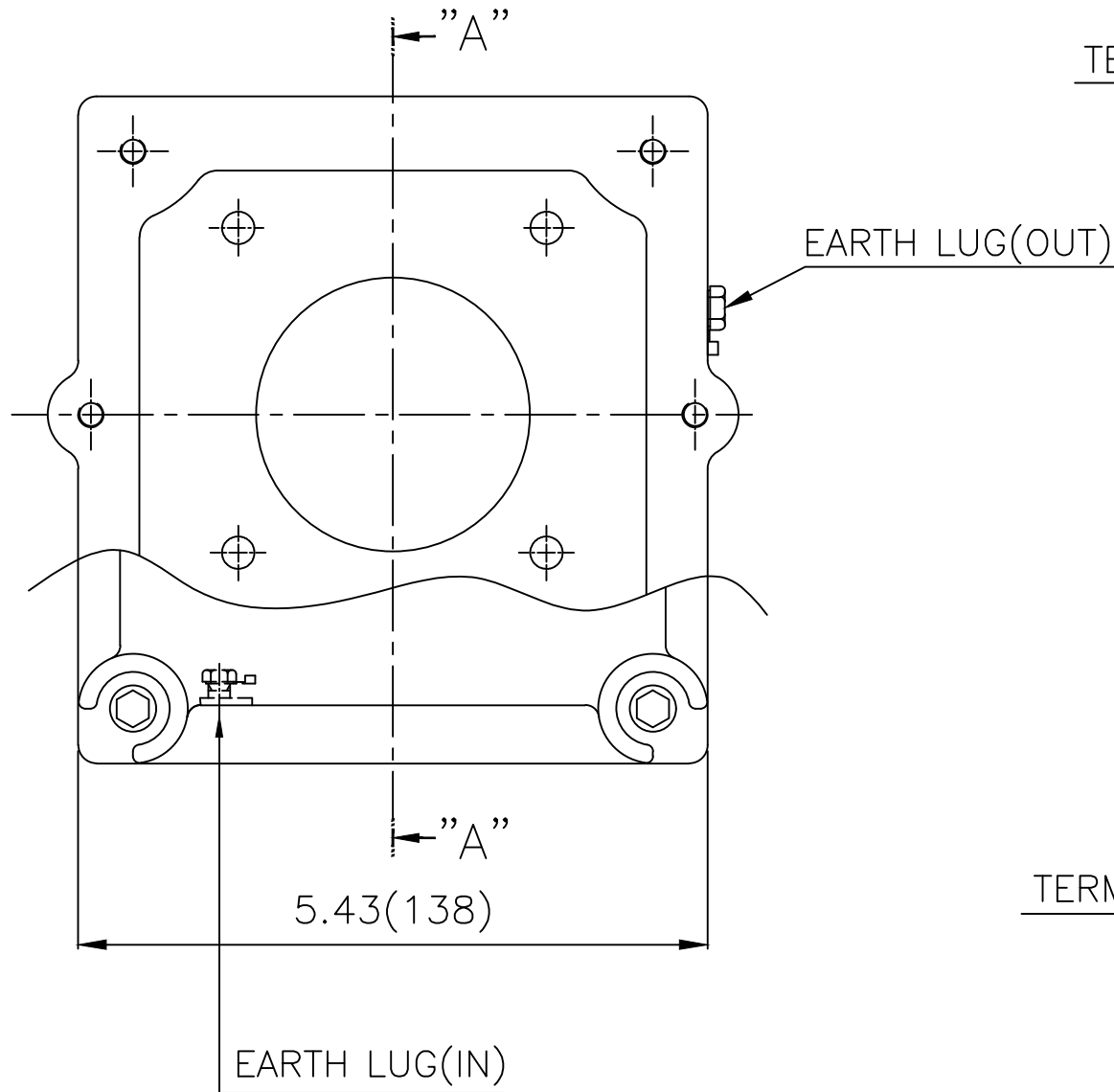
### NOTE

1. Dimension "D" tolerance : +0.00inch - 0.03inch (143T-365T) ; +0.000inch - 0.06inch (404T-449T)
2. Dimension "U" tolerance : +0.000inch - 0.005inch (143T-215T), +0.000inch - 0.001inch (254T-449T)
3. Dimension "R" tolerance : +0.000inch - 0.015inch

|         |          |          |            |         |                 |              |            |
|---------|----------|----------|------------|---------|-----------------|--------------|------------|
| APPD BY | S.Y.KIM  | UNIT     | inch       | SUBJECT | NEMA 184T       | DWG SIZE     | A4 ( 1:7 ) |
| CHKD BY | R.G.KIM  | SCALE    | 1/10       | TITLE   | OUTLINE         | Sheet No.    | of         |
| CHKD BY |          | PROJEC'N | 3rd Angle  |         |                 |              |            |
| DSND BY | J.H.JEON | DATE     | 2021-04-15 |         |                 |              |            |
|         |          |          |            | REF. NO | .               | Sheet No.    | of         |
|         |          |          |            | DWG NO  | LM-U0184B3TL001 | Revision No. | 0          |



# Cls. I Div. 1



|      |       |
|------|-------|
| ▽    | 50S   |
| ▽▽   | 12.5S |
| ▽▽▽  | 3.2S  |
| ▽▽▽▽ | 0.4S  |

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|-----|------|----------|---------|---------|---------|---------|
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| 일반가공공차 |      | 일반제관공차   |      |
|--------|------|----------|------|
| 1-4    | ±0.1 | 6-30     | ±0.5 |
| 4-18   | ±0.2 | 30-120   | ±0.8 |
| 18-63  | ±0.3 | 120-315  | ±1.2 |
| 63-250 | ±0.5 | 315-1000 | ±2.0 |
| 250-   | ±0.8 | 1000-    | ±3.0 |

| Q'TY    | DESCRIPTION | MATERIAL | DIMENSION  | WEIGHT  | PART NO.                    | REMARK       | NO.        |
|---------|-------------|----------|------------|---------|-----------------------------|--------------|------------|
| APPD BY | S.Y.KIM     | UNIT     | lφφh(mm)   | SUBJECT | NEMA FR. 180~210(CAST IRON) | DWG SIZE     | A3 (1:1.5) |
| CHKD BY | R.G.KIM     | SCALE    | 1/1.5      | TITLE   | MAIN TERMINAL BOX ASS'Y     |              |            |
| CHKD BY |             | PROJEC'N | 3rd Angle  | REF. NO |                             | Sheet No.    | of         |
| DSND BY | 김은진         | DATE     | 2023-10-24 | DWG NO  | 3M-248496                   | Revision No. | 0          |

