

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.  | IXHHI30-18-286T | Item No.    |  | Rev. No. | [ ]  |
| Project Name |                 | Project No. |  | Quantity | sets |

| GENERAL SPECIFICATION                          |  |                    | PERFORMANCE DATA   |                |                      |        |
|--|--|--------------------|--|----------------|----------------------|--------|
| Frame Size                                     | 286T   |                    | Rated Output   | 22 kW          |                      | 30 HP  |
| Type   | XJP  |                    | 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      | 29.1 A               | 36.4 A |
| Insulation Class                               | F  |                    |  | Locked-rotor** | 740 %                | 740 %  |
| Temp. Rise at full load (by resistance method) |  |                    | Efficiency   |                |                      |        |
| at 1.0 S.F                                     |  |                    | 80 deg. C  |                |                      |        |
| Motor Location                                 | <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor           |                    | 50% Load   |                | 90.6 %               |        |
| Altitude                                       | Less than 1,000 meter  |                    | 75% Load   |                | 92.6 %               |        |
| Relative Humidity                              | Less than 80 %   |                    | 100% Load  |                | 93.6 %               |        |
| Ambient Temp.                                  | 40 deg. C (Max.)   |                    | Power Factor(p.u)  |                |                      |        |
| Duty Type                                      | Continuous ( S1 )  |                    | 50% Load   |                | 0.660                |        |
| Service Factor                                 | 1.15   |                    | 75% Load   |                | 0.760                |        |
| Mounting                                       | B3   |                    | 100% Load  |                | 0.810                |        |
| Bearing  | Type   | Anti-Friction      | Speed at Full Load   |                |                      |        |
|  | DE/N-DE  | 6310ZC3 / 6310ZC3  | 1775 r.p.m   |                |                      |        |
|  | Lubricant  | Grease(Polyrex-EM) | Torque   |                |                      |        |
| External Thrust                                | Not applicable   |                    | Full Load  |                | 87.3 lb.ft           |        |
| Coupling Method                                | <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt |                    | Locked-rotor**   |                | 170 %                |        |
| Shaft Extension                                | Single   |                    | Breakdown**  |                | 220 %                |        |
| Terminal Box                                   | Main   | Cast Iron          | Moment of Inertia (J)  |                |                      |        |
|  | Aux.   | No                 | Load(Max.)   |                | 160.272 lb.ft2       |        |
| Location                                       | Refer to Outline Drawing   |                    | Motor  |                | 5.578 lb.ft2         |        |
|  |  |                    | Sound Pressure Level (No-load & mean value at 1m from motor) |                |                      |        |
| Application                                    |  |                    | 77 dB(A)   |                |                      |        |
| Area classification                            | Hazardous  |                    | Vibration  |                |                      |        |
| Type of Ex-Protection                          | Class I&II, Division 1   |                    | 0.0 mm/sec (peak)  |                |                      |        |
| Applicable Standard                            | NEMA MG1, CSA C390, UL674  |                    | Permissible number of consecutive starts                     |                | Cold 0 times         |        |
|  |  |                    | Hot  |                | 0 times              |        |
|  |  |                    | 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-U0286B3TL001 | 480 lb.               |  |

### REMARK

- Premium efficiency according to NEMA MG1
- Inverter Duty @ 1.0 Service Factor & Ambient max 45°C
  - 4:1 CT (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
- Class I, Division 1, Group C&D
  - Temp.Code(Sine wave) : T2D at 40°C Amb./T2C at 55°C Amb. T4 with Winding Temperature Detector
- 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.


|     |      |          |         |
|-----|------|----------|---------|
| 1   | 2    | 3        | 4       |
| REV | DATE | CONTENTS | REVD BY |
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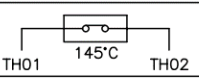
**CROWN TRITON**  
Premium Efficiency AC 3 Phase Motor

**Explosion Proof**









|                  |   |          |                          |                               |   |  |
|------------------|---|----------|--------------------------|-------------------------------|---|--|
| 30HP             | 4P  | 230/460V | Cat. No. IXHHI30-18-286T | Amps                          | 72.8/36.4   |  |
| Model            | LATER   |          | INS. Class F HD-F1       | Hertz                         | 60Hz  |  |
| Type             | XJP   | Duty     | CONT                     | Code                          | J   |  |
| Frame            | 286T  | Encl.    | TEFC                     | S.F. 1.15                     | on sine wave power  |  |
| Bearing          | Drive   | 6310ZC3  | S.F. 1.00                | on PWM or IGBT power          | 3/4 Eff. 92.6%  |  |
|                  | Opp.  | 6310ZC3  | RPM                      | 1775                          | NEMA Design B Torque  |  |
| Usable at        | 50Hz 25HP 380V 42.4A 1475rpm S.F.: 1.0 Eff.: 91.2% Code: J                      |          |                          |                               |   |  |
|                  | 50Hz 25HP 400/415V 42.3/43.1A 1480/1480rpm S.F.: 1.0 Eff.: 91.2/91.2% Code: K/L |          |                          |                               |   |  |
| UL Certified for | Class I, Div. 1, Group C&D / Class I, Zone 1, Group II A & II B                 |          |                          | Temp. Code T4 With Thermostat | T2D at 40°C Amb. / T2C at 55°C Amb.   |  |
|                  | 10:1VT(20:1 at 50% load) 4:1CT(10:1 1hour duty at lowest RPM)                   |          |                          |                               |  |  |
| No.              | -   |          | Date                     | -                             |   |  |
|                  |   |          | Weight                   | 480 lb                        |   |  |

4M-136066  
(NEMA 250~280Fr.)

Made in Korea H1



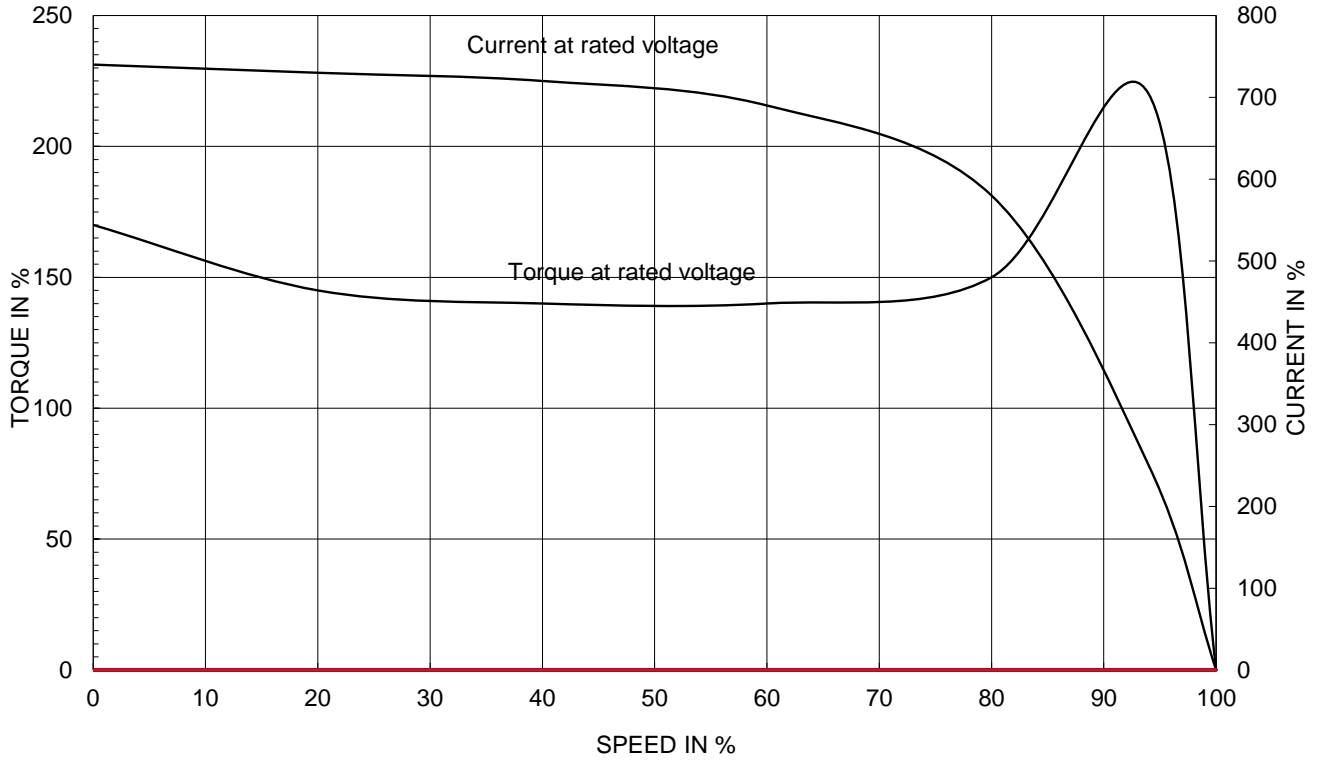
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|   |         |          |            |                                   |                               |                |
|---|---------|----------|------------|-----------------------------------|-------------------------------|----------------|
| 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><b>NAMEPLATE DRAWING</b> |                               |                |
| DSND BY   | S.H.LEE | DATE     | 2024.06.07 |                                   |                               |                |
|  |         |          |            | REF. NO                           | 4M-136066                     | Sheet No. of   |
|   |         |          |            | DWG NO                            | NP-IXHHI30-18-286T            | Revision No. 0 |

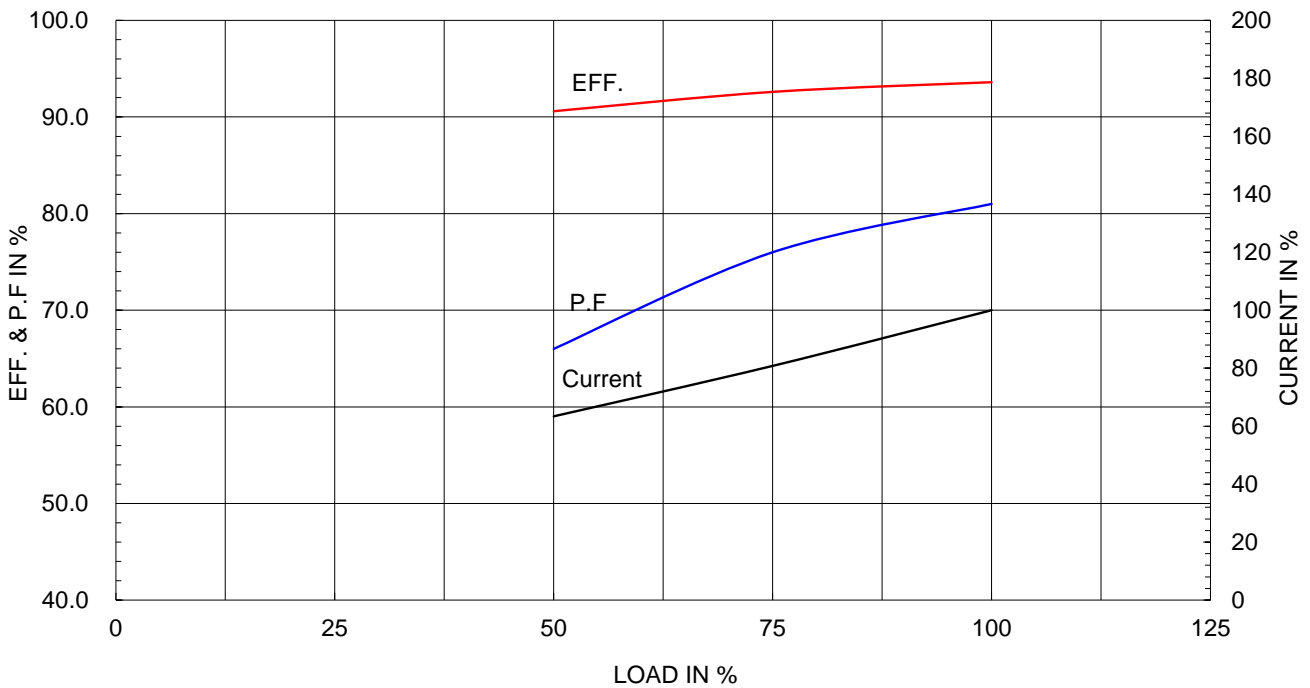
|                               |                |
|-------------------------------|----------------|
| Type :                        | XJP            |
| Full Load Torque :            | 87.3 lb.ft     |
| Load moment of Inertia (J) :  | 160.272 lb.ft2 |
| Motor moment of Inertia (J) : | 5.578 lb.ft2   |

|                      |       |       |          |
|----------------------|-------|-------|----------|
| 22kW                 | 30HP  | 4 P   | 60 Hz    |
| Speed at Full Load : |       |       | 1775 RPM |
| Rated Voltage        | 575V  | 460V  | 230V     |
| Full Load Current    | 29.1A | 36.4A | 72.8A    |

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

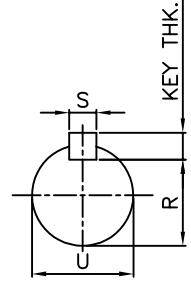
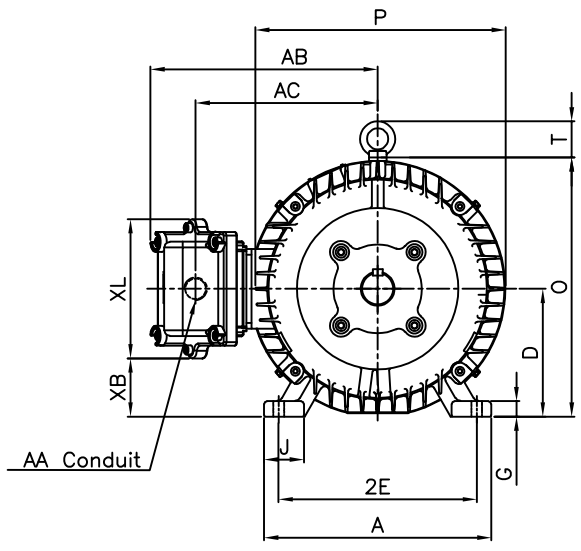
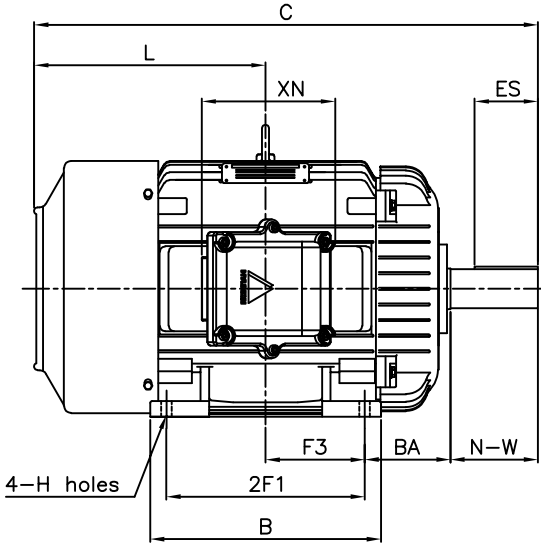


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (최급유위)

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

## Class I Division 1



VIEW "A"

### DIMENSIONS

| MOUNTING |       |       |       |     |      |      |      |      | CONDUIT BOX |       |       |      |      |      | APPROX. WGT.(LB) |
|----------|-------|-------|-------|-----|------|------|------|------|-------------|-------|-------|------|------|------|------------------|
| A        | B     | 2E    | 2F1   | 2F2 | F3   | G    | J    | H    | AA          | AB    | AC    | XB   | XL   | XN   |                  |
| 12.60    | 12.68 | 11.00 | 11.00 | -   | 5.50 | 0.78 | 2.20 | 0.53 | 1.50        | 12.60 | 10.10 | 3.14 | 7.72 | 7.32 | 286T             |
|          |       |       |       |     |      |      |      |      |             |       |       |      |      |      | 480              |

| OVERALL |       |      |       |       |       |      | SHAFT |      |        |      |       | KEY THK. | BEARING   |                |
|---------|-------|------|-------|-------|-------|------|-------|------|--------|------|-------|----------|-----------|----------------|
| BA      | C     | D    | L     | O     | P     | T    | U     | N-W  | KEYWAY |      |       |          | DRIVE END | OPP. DRIVE END |
|         |       |      |       |       |       |      |       |      | R      | ES   | S     |          |           |                |
| 4.75    | 27.71 | 7.00 | 12.84 | 14.28 | 14.19 | 2.01 | 1.875 | 4.62 | 1.591  | 3.28 | 0.500 | 0.500    | 6310ZC3   | 6310ZC3        |

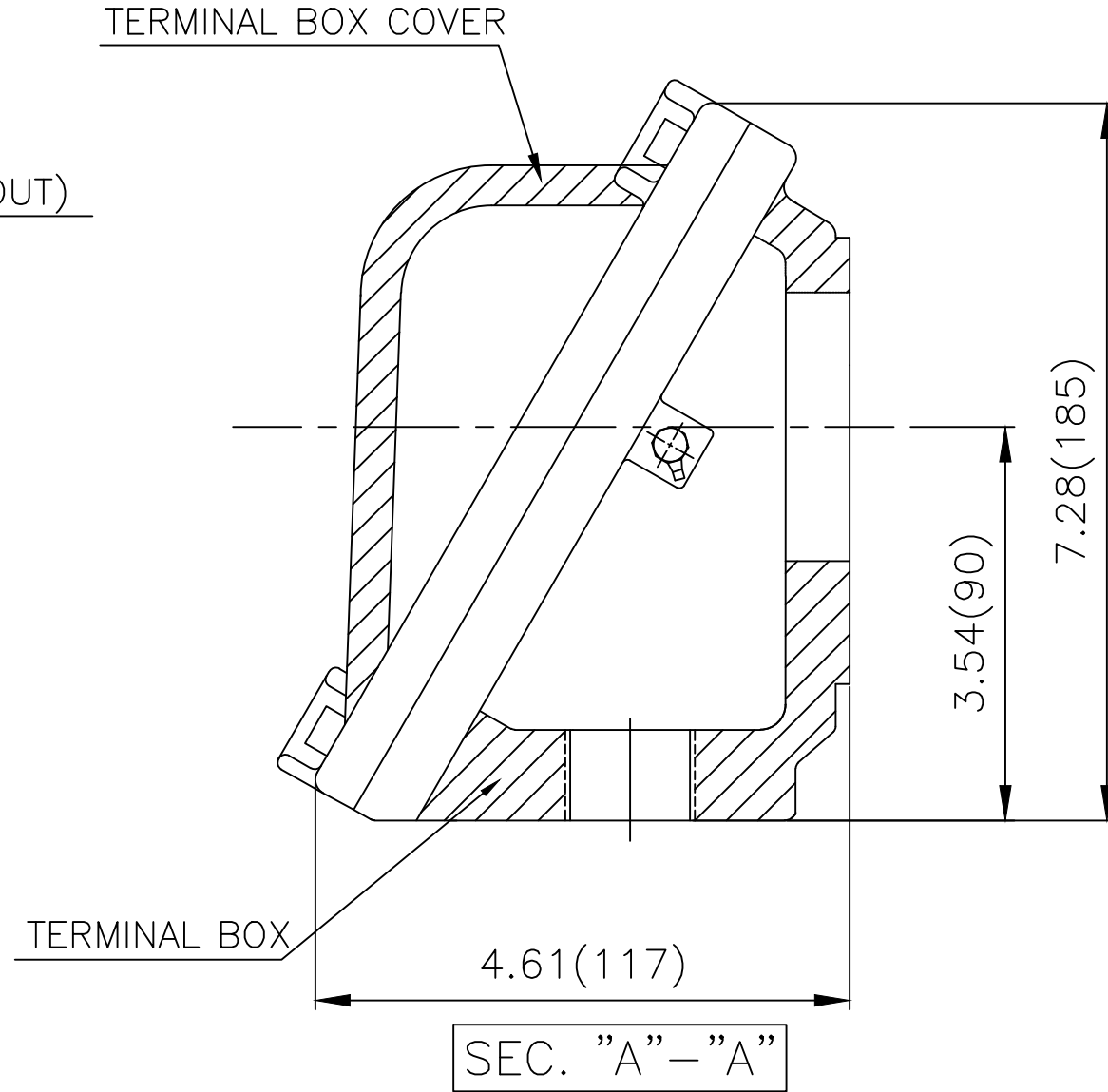
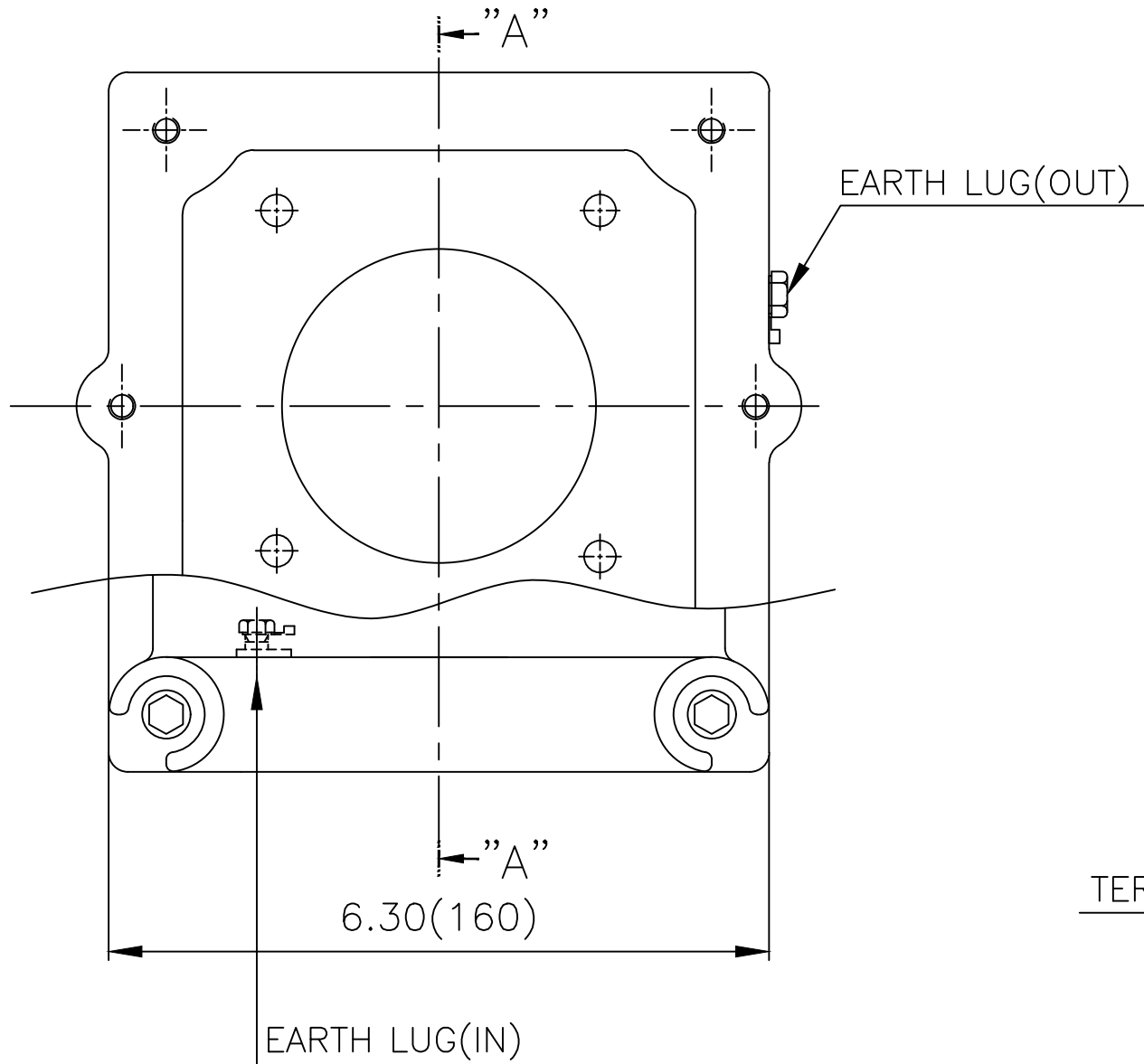
### NOTE

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 286T       | DWG SIZE     |    |
| CHKD BY | R.G.KIM  | SCALE    | 1/10       | TITLE   | OUTLINE         | A4 ( 1:11 )  |    |
| CHKD BY |          | PROJEC'N | 3rd Angle  |         |                 |              |    |
| DSND BY | J.H.JEON | DATE     | 2021-04-15 |         |                 |              |    |
|         |          |          |            | REF. NO |                 | Sheet No.    | of |
|         |          |          |            | DWG NO  | LM-U0286B3TL001 | Revision No. | 0  |



# Cls. I Div. 1



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

| REV | DATE | CONTENTS | REVD BY | CHKD BY | CHKD BY | APPD BY |
|-----|------|----------|---------|---------|---------|---------|
|     |      |          |         |         |         |         |

| 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     | inch(mm)   | SUBJECT | NEMA FR. 250~280(CAST IRON) |              | DWG SIZE   |
| CHKD BY | R.G.KIM     | SCALE    | 1/1.5      | TITLE   | MAIN TERMINAL BOX ASS'Y     |              | A3 (1:1.5) |
| CHKD BY |             | PROJEC'N | 3rd Angle  | REF. NO |                             | Sheet No.    | of         |
| DSND BY | 김은진         | DATE     | 2023-11-08 | DWG NO  | 3M-248637                   | Revision No. | 0          |

