

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. | IXHHI75-12-405T | Item No. | Rev. No. | [] |
| Project Name | | Project No. | Quantity | sets |

| GENERAL SPECIFICATION | | PERFORMANCE DATA | | | |
|------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------|----------------------|--------|
| Frame Size | 405T | Rated Output | 55 kW 75 HP | | |
| Type | XJP | 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 | 69.6 A | 87.0 A |
| Insulation Class | F | | Locked-rotor** | 680 % | 680 % |
| Temp. Rise at full load (by resistance method) | | Efficiency | | | |
| at 1.0 S.F | 80 deg. C | 50% Load | | 91.5 % | |
| Motor Location | <input type="checkbox"/> Indoor <input type="checkbox"/> Outdoor | 75% Load | | 93.5 % | |
| Altitude | Less than 1,000 meter | 100% Load | | 94.5 % | |
| 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 | B3 | Speed at Full Load | 1185 r.p.m | | |
| Bearing | Type | Anti-Friction | Torque | | |
| | DE/N-DE | NU316 / 6313C3 | Full Load | 327.0 lb.ft | |
| | Lubricant | Grease(Polyrex-EM) | Locked-rotor** | 140 % | |
| 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.) | 2,670.866 lb.ft2 | | |
| Terminal Box | Main | Cast Iron | Motor | 55.310 lb.ft2 | |
| | Aux. | No | Sound Pressure Level (No-load & mean value at 1m from motor) | | |
| | Location | Refer to Outline Drawing | 75 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, 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-U0405B3TL001 | 1830 lb. | |
| | | | |
| | | | |

REMARK

1. Premium efficiency according to NEMA MG1
2. 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
3. Temperature Code
 - . T3 at 40°C Ambient / T2D at 55°C Ambient
 - . T4 with Winding Temperature Detector

| | | | | |
|------------|----------|----------|----------|----------|
| Date | DSND | CHKD | CHKD | APPD |
| 2024-07-14 | S.H. Lee | I.K. Kim | R.G. Kim | S.W. Kim |

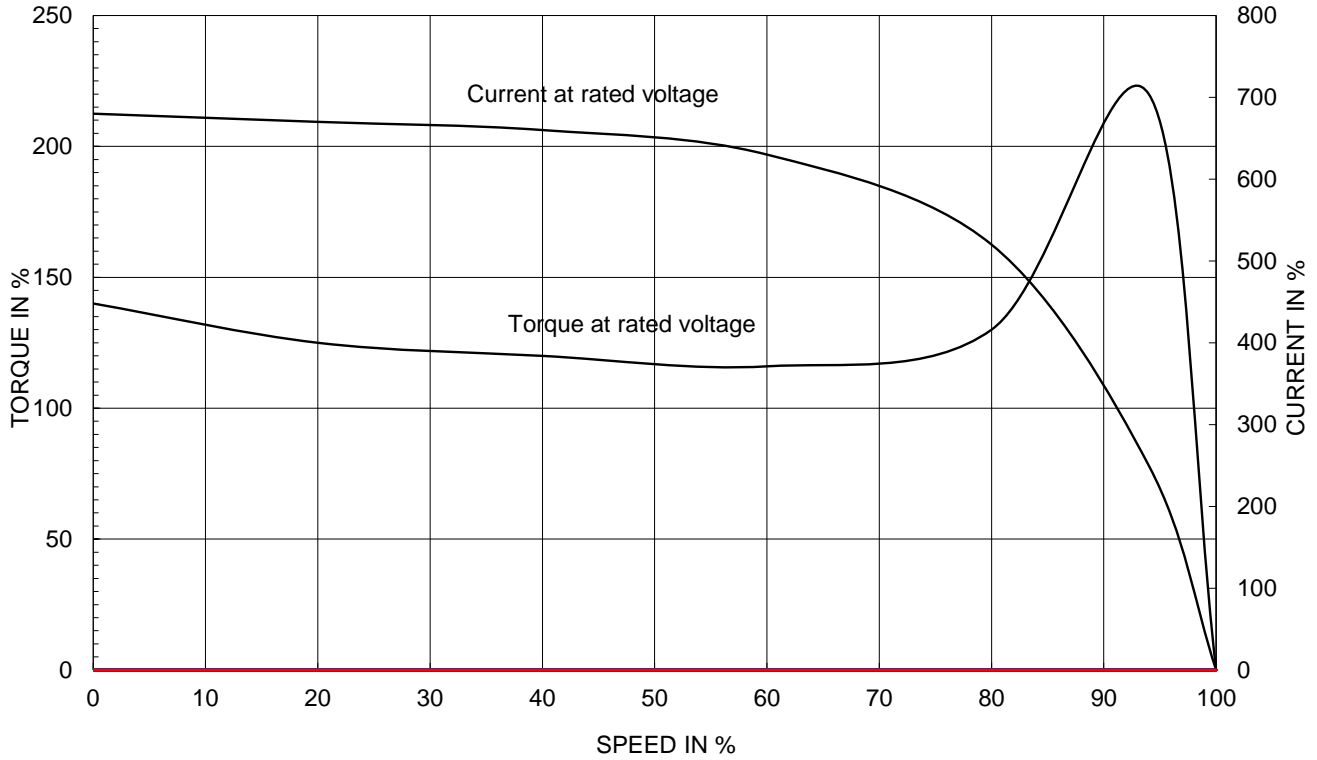
[Note] Others not mentioned in this data sheet shall be in accordance with maker standard.
 Above technical data are only design values and shall be guaranteed with tolerance of applicable standard.
 Inspection and performance test shall be done according to maker standard, if not mentioned.
 * In case 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 | CHKD BY | CHKD BY | APPD BY | | |
| | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>4.72</p> </div> <div style="text-align: center;"> <p>2.36</p> </div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>CROWN TRITON Premium Efficiency AC 3 Phase Motor</p> </div> <div style="text-align: center;"> <p>Explosion Proof</p> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div> | | | | | | | | | |
| 75HP | 6P | 230/460V | Cat. No. | IXHHI75-12-405T | Amps | 173.9/87 | | | |
| Model | LATER | | INS. Class | F HD-F1 | Hertz | 60Hz | | | |
| Type | XJP | Duty | CONT | Code | G | NEMA Nom. Eff. | 94.5% | | |
| Frame | 405T | Encl. | TEFC | S.F. | 1.15 | 3/4 Eff. | 93.5% | | |
| Bearing | Drive | NU316 | S.F. | 1.00 | on sine wave power | NEMA Design | B | | |
| | Opp. | 6313C3 | RPM | 1185 | on PWM or IGBT power | Amb. | 40°C | | |
| Usable at | 50Hz 75HP 380V 105.9A 981rpm S.F.: 1.0 Eff.: 93.3% Code: E | | | | | | | | |
| | 50Hz 75HP 400/415V 101/97.9A 983/984rpm S.F.: 1.0 Eff.: 93.6/93.8% Code: F/G | | | | | | | | |
| UL Certified for | Class I, Div. 1, Group C&D / Class I, Zone 1, Group IIA & IIB | | | | Temp. Code | T3 at 40°C Amb. / T2D at 55°C Amb. | | | |
| | 10:1VT(20:1 at 50% load) 4:1CT(10:1 1hour duty at lowest RPM) | | | | | T4 With Thermostat | | | |
| No. | - | | Date | - | | Weight | 1829.837 | | |
| 4M-136067 (NEMA 320~444Fr.) | | Made in Korea H1 | | | | | | | |
| APPD BY | S.Y.KIM | UNIT | INCH | SUBJECT | UL Class I, Division1 (IXHHI) | | DWG SIZE | | |
| CHKD BY | I.K.KIM | SCALE | NONE | TITLE | | | A4 (1:1) | | |
| CHKD BY | R.G.KIM | PROJEC'N | 3rd Angle | | | | <p>NAMEPLATE DRAWING</p> | | |
| DSND BY | S.H.LEE | DATE | 2024.06.07 | | | | | | |
| | | | | REF. NO | 4M-136067 | Sheet No. of | | | |
| | | | | DWG NO | NP-IXHHI75-12-405T | Revision No. 0 | | | |
| 1 | | 2 | | 3 | | 4 | | | |

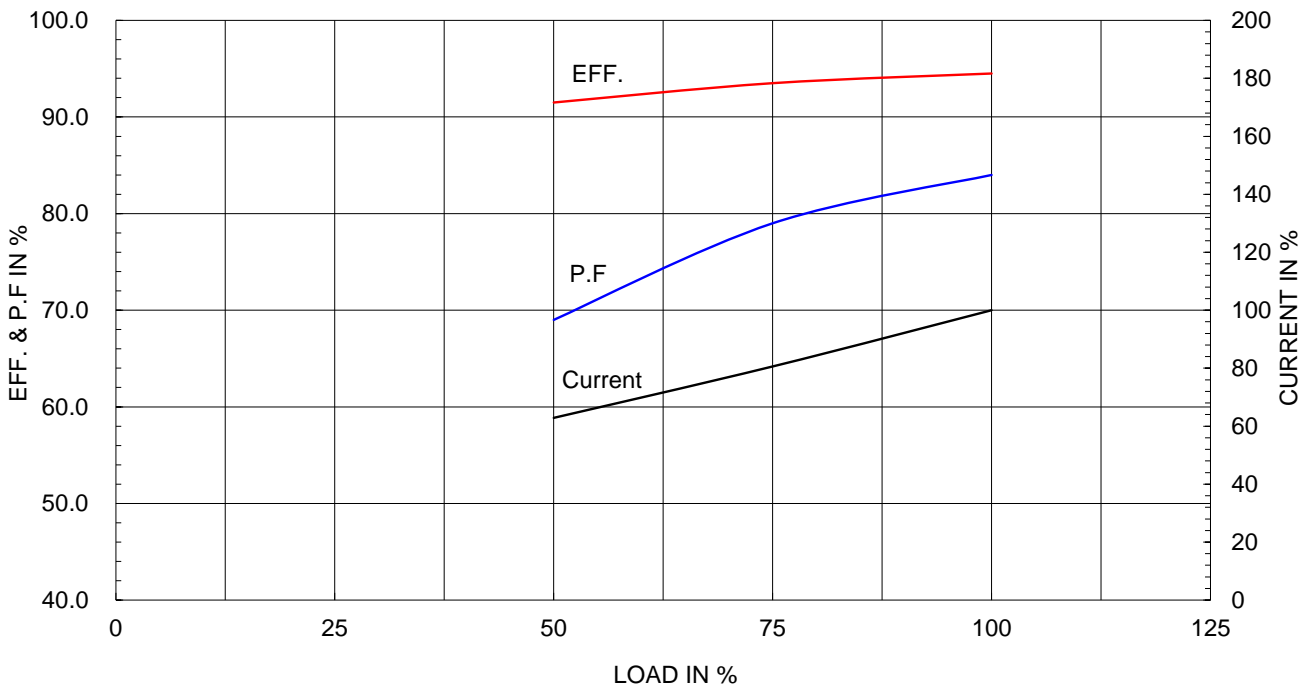
| | | |
|-------------------------------|----------|--------------------|
| Type : | XJP | |
| Full Load Torque : | 327.0 | lb.ft |
| Load moment of Inertia (J) : | 2670.866 | lb.ft ² |
| Motor moment of Inertia (J) : | 55.310 | lb.ft ² |

| | | | |
|----------------------|-------|-------|----------|
| 55kW | 75HP | 6 P | 60 Hz |
| Speed at Full Load : | | | 1185 RPM |
| Rated Voltage | 575V | 460V | 230V |
| Full Load Current | 69.6A | 87.0A | 173.9A |

SPEED VS TORQUE & CURRENT CURVE



OUTPUT VS EFF., P.F & CURRENT CURVE

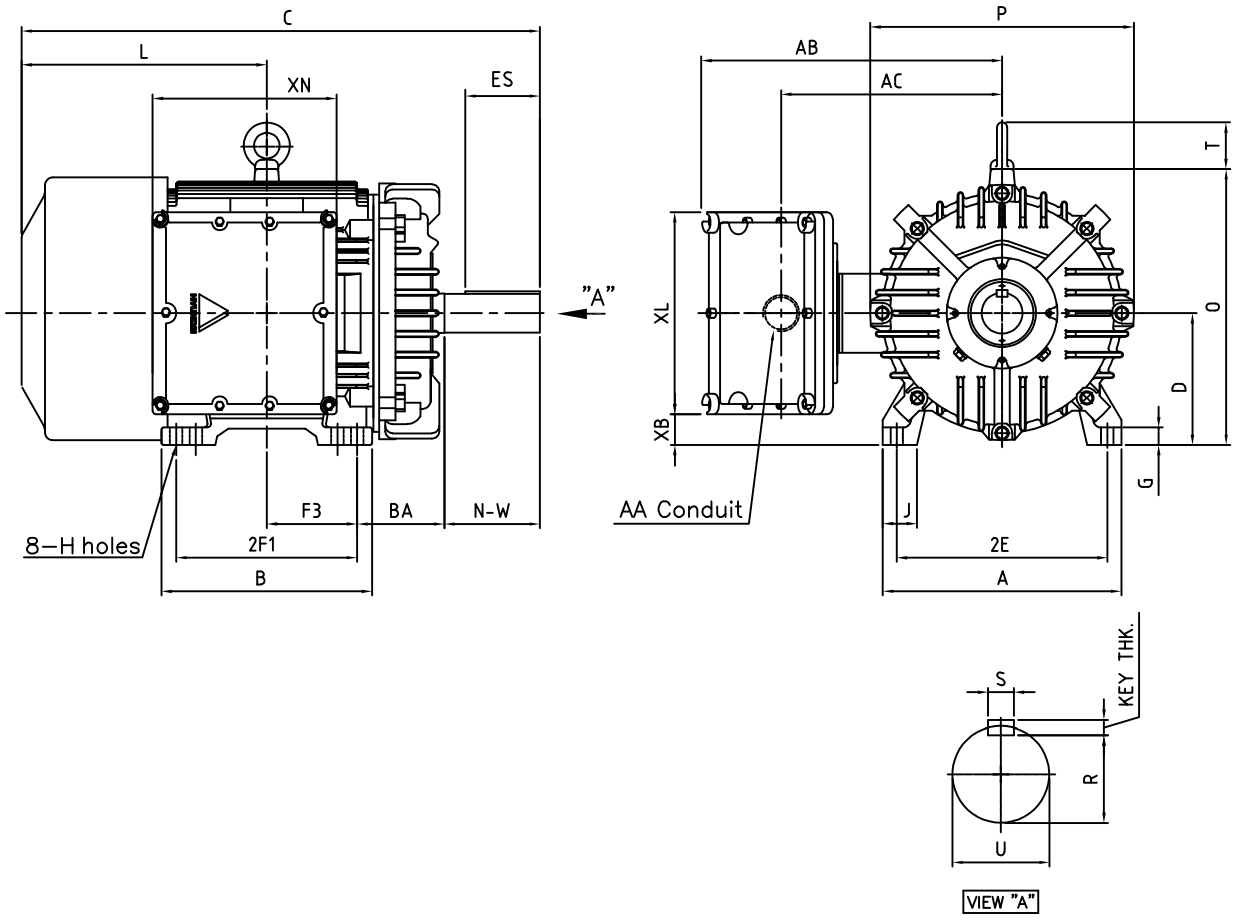


본 도면은 HD현대일렉트릭(주) 재산이며 허가없이 복사할 수 없음 (취급유의)

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

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|------|-------|-----|------|
| 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 | 2F1 | 2F2 | F3 | G | J | H | AA | AB | AC | XB | XL | XN | |
| 18.11 | 15.98 | 16.00 | 13.75 | - | 6.870 | 1.18 | 2.59 | 0.81 | 3.00 | 22.83 | 17.32 | 2.16 | 15.35 | 13.97 | |
| | | | | | | | | | | | | | | | 2P: 1852 or 4P: 1830 or 6P: 1830 |

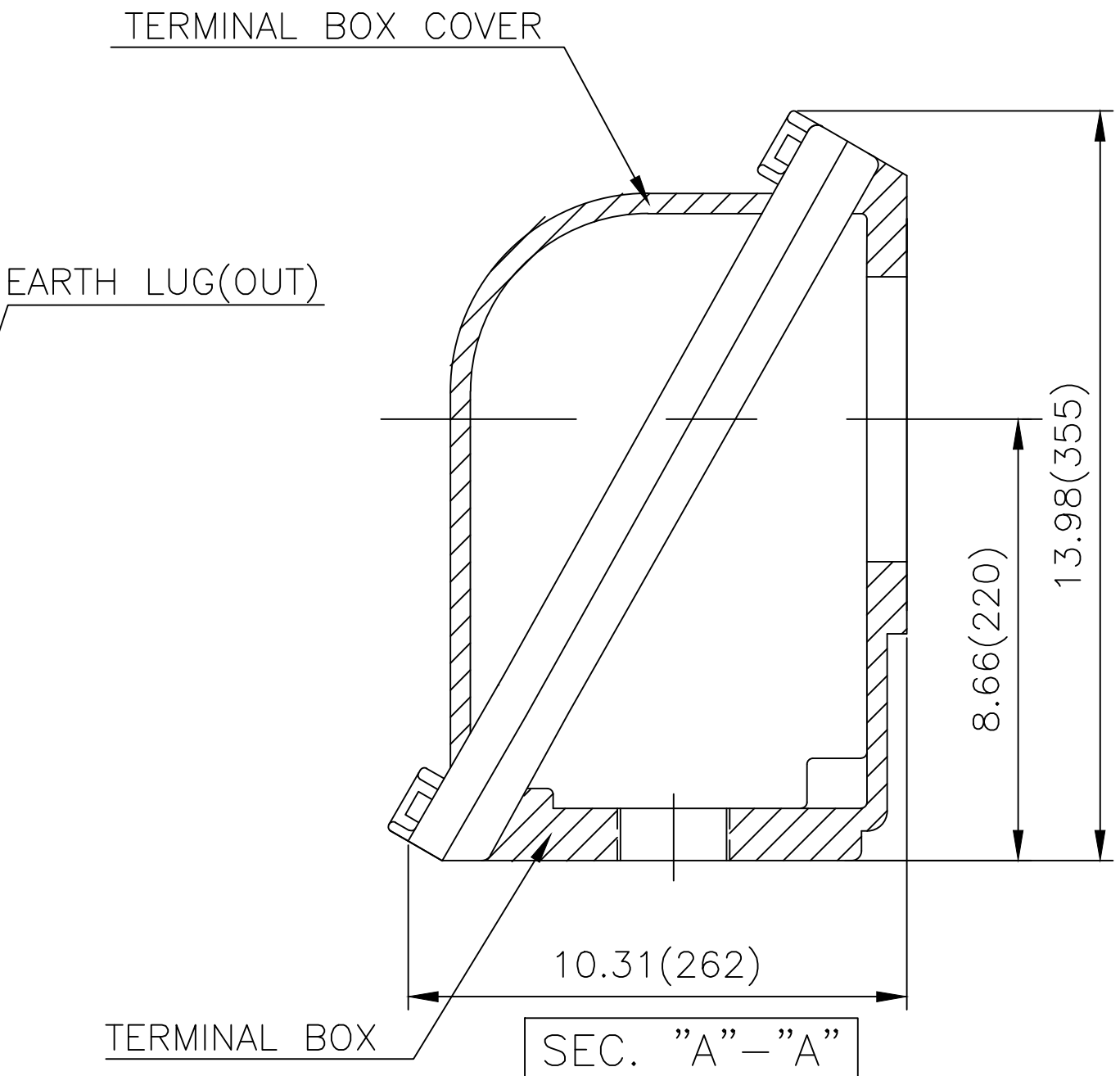
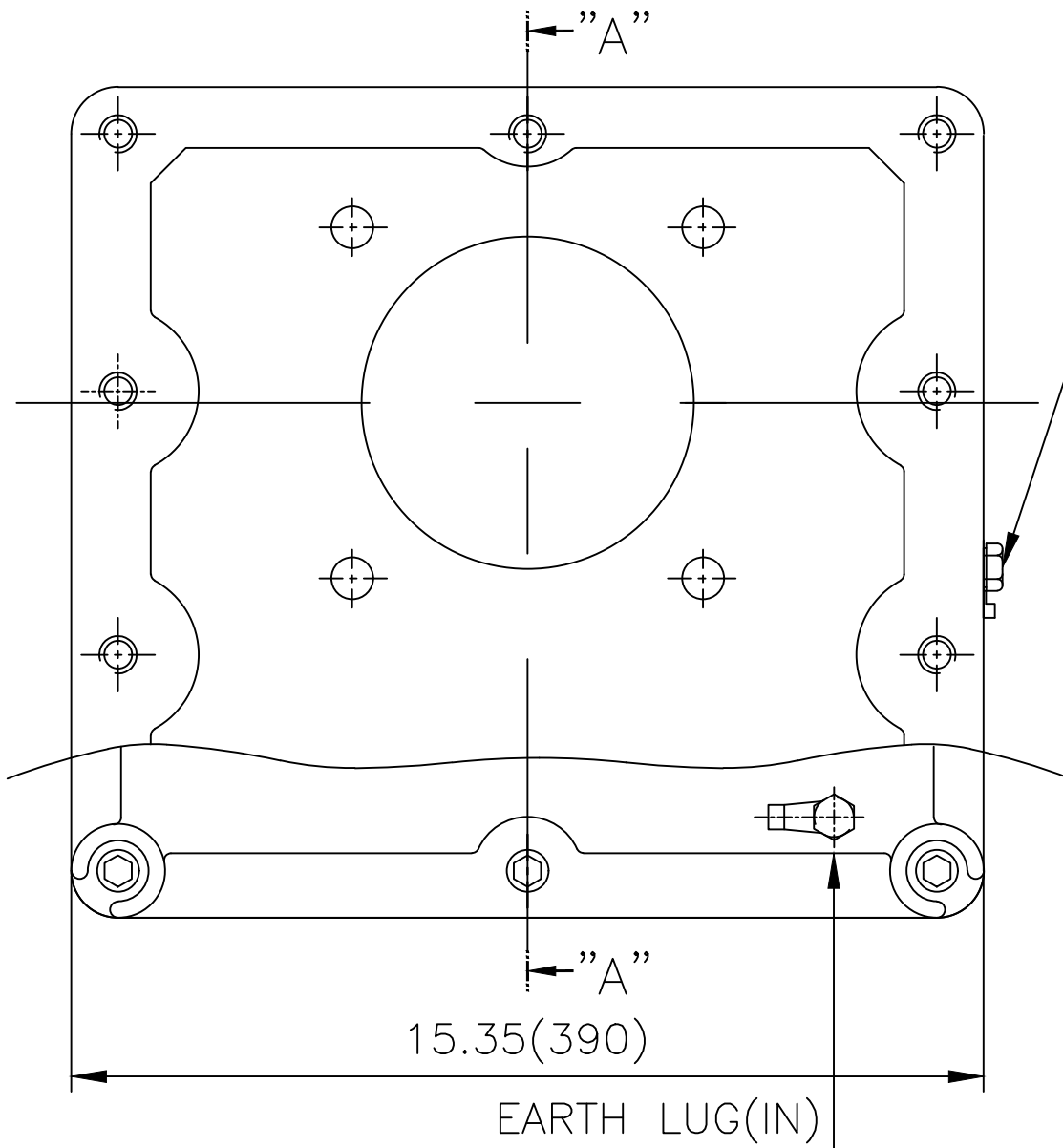
| OVERALL | | | | | | | SHAFT | | | | | KEY | BEARING | |
|---------|-------|-------|-------|-------|-------|------|-------|------|--------|------|-------|-------|--------------------|----------------|
| BA | C | D | L | O | P | T | U | N-W | KEYWAY | | | THK. | DRIVE END | OPP. DRIVE END |
| | | | | | | | | | R | ES | S | | | |
| 6.62 | 39.33 | 10.00 | 18.60 | 20.94 | 20.00 | 3.55 | 2.875 | 7.25 | 2.450 | 5.65 | 0.750 | 0.750 | NU316 or 6316C3 | 6313C3 |

NOTE

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

| | | | | | | | |
|---------|----------|----------|------------|---------|-----------------|--------------|----|
| APPD BY | S.Y.KIM | UNIT | inch | SUBJECT | 405T | DWG SIZE | |
| CHKD BY | R.G.KIM | SCALE | 1/15 | TITLE | OUTLINE | A4 (1:15) | |
| CHKD BY | | PROJEC'N | 3rd Angle | | | | |
| DSND BY | J.H.JEON | DATE | 2021-04-19 | | | | |
| | | | | REF. NO | | Sheet No. | of |
| | | | | DWG NO | LM-U0405B3TL001 | 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. 400~440(CAST IRON) | DWG SIZE | A3 (1:3) |
| CHKD BY | R.G.KIM | SCALE | 1/3 | TITLE | MAIN TERMINAL BOX ASS'Y | | |
| CHKD BY | | PROJEC'N | 3rd Angle | REF. NO | | Sheet No. | of |
| DSND BY | 김은진 | DATE | 2023-11-08 | DWG NO | 3M-248636 | Revision No. | 0 |

