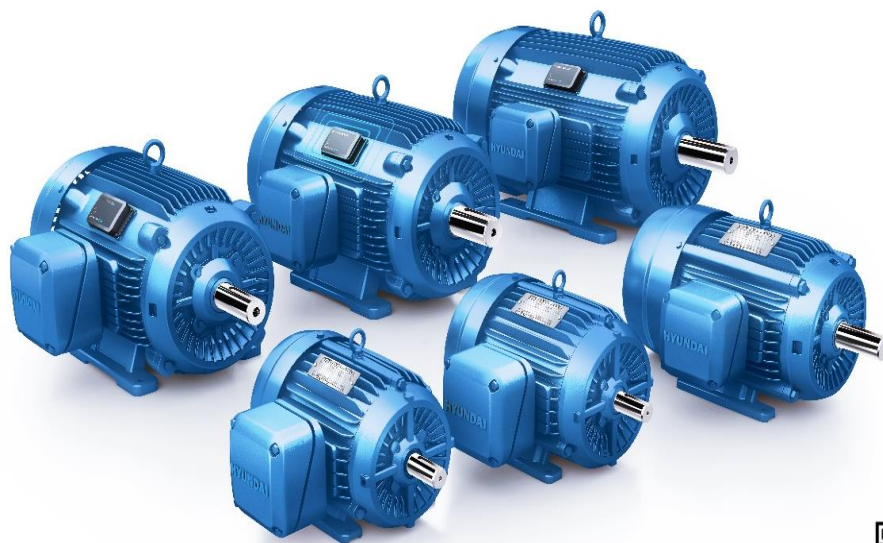


Customer :  
Project Name :  
Project No. :  
Revision No. :

# SPECIFICATION for INDUCTION MOTOR



| 0   |      | For Bidding |             |            |             |
|-----|------|-------------|-------------|------------|-------------|
| No. | DATE | DESCRIPTION | PREPARED BY | CHECKED BY | APPROVED BY |

# AC INDUCTION MOTOR DATA SHEET

|                                                |                                                                            |                          |                                                                                                          |                         |                  |          |          |
|------------------------------------------------|----------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------|-------------------------|------------------|----------|----------|
| Catalog No.                                    | HES50-36-200M/L                                                            | Item No.                 |                                                                                                          |                         | Rev. No.         | [      ] |          |
| Project Name                                   |                                                                            | Project No.              |                                                                                                          |                         | Quantity         | sets     |          |
| <b>GENERAL SPECIFICATION</b>                   |                                                                            |                          |                                                                                                          | <b>PERFORMANCE DATA</b> |                  |          |          |
| Frame Size                                     | 200L                                                                       |                          | Rated Output                                                                                             | 37 kW                   |                  | 50 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                                                                                            |                         | 460 V            |          |          |
| Number of Phases                               | 3                                                                          |                          | Current                                                                                                  | Full Load               | 55.5 A           |          |          |
| Insulation Class                               | F                                                                          |                          |                                                                                                          | Locked-rotor**          | 850 %            |          |          |
| 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 90.0 %                                                                                          |                         |                  |          |          |
| Altitude                                       | Less than 1,000 meter                                                      |                          | 75% Load 92.0 %                                                                                          |                         |                  |          |          |
| Relative Humidity                              | Less than 80 %                                                             |                          | 100% Load 93.0 %                                                                                         |                         |                  |          |          |
| Ambient Temp.                                  | 40 deg. C (Max.)                                                           |                          | Power Factor(p.u)                                                                                        |                         |                  |          |          |
| Duty Type                                      | Continuous ( S1 )                                                          |                          | 50% Load 0.750                                                                                           |                         |                  |          |          |
| Service Factor                                 | 1.15                                                                       |                          | 75% Load 0.850                                                                                           |                         |                  |          |          |
| Mounting                                       | B3                                                                         |                          | 100% Load 0.900                                                                                          |                         |                  |          |          |
| Bearing                                        | Type                                                                       | Anti-Friction            | Speed at Full Load                                                                                       |                         | 3560 r.p.m       |          |          |
|                                                | DE/N-DE                                                                    | 6212ZC3 / 6212ZC3        | Torque                                                                                                   |                         |                  |          |          |
|                                                | Lubricant                                                                  | Grease(Polyrex-EM)       | Full Load                                                                                                |                         | 73.22 lb.ft      |          |          |
| External Thrust                                | Not applicable                                                             |                          | Locked-rotor**                                                                                           |                         | 150 %            |          |          |
| Coupling Method                                | <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-belt |                          | Breakdown**                                                                                              |                         | 250 %            |          |          |
| Shaft Extension                                | Single                                                                     |                          | Moment of Inertia (J)                                                                                    |                         |                  |          |          |
| Terminal                                       | Main                                                                       | Cast Iron                | Load(Max.)                                                                                               |                         | 49.240 lb.ft2    |          |          |
| Box                                            | Aux.                                                                       | No                       | Motor                                                                                                    |                         | 4.271 lb.ft2     |          |          |
|                                                | Location                                                                   | Refer to Outline Drawing | Sound Pressure Level (No-load & mean value at 1m from motor)                                             |                         |                  |          |          |
| Application                                    |                                                                            |                          |                                                                                                          |                         | 82 dB(A)         |          |          |
| Area classification                            | Hazardous                                                                  |                          | Vibration                                                                                                |                         | 2.8 mm/s (r.m.s) |          |          |
| Type of Ex-Protection                          | Class I&II, Division 2                                                     |                          | Permissible number of consecutive starts                                                                 |                         | Cold 3 times     |          |          |
| Applicable Standard                            | IEC, CSA C390                                                              |                          |                                                                                                          |                         | Hot 2 times      |          |          |
|                                                |                                                                            |                          | Paint                                                                                                    | PANTONE                 | PANTONE279C      |          |          |
| <b>ACCESSORIES</b>                             |                                                                            |                          | <b>SUBMITTAL DRAWING</b>                                                                                 |                         |                  |          |          |
|                                                |                                                                            |                          | Outline Dimension Drawing \ Motor Weight(Approx.)                                                        |                         |                  |          |          |
|                                                |                                                                            |                          | B3                                                                                                       | LM-T1205B3CTV09         | 555 lb.          |          |          |
|                                                |                                                                            |                          |                                                                                                          |                         |                  |          |          |
|                                                |                                                                            |                          |                                                                                                          |                         |                  |          |          |
| <b>SPARE PARTS</b>                             |                                                                            |                          | <b>REMARK</b>                                                                                            |                         |                  |          |          |
|                                                |                                                                            |                          | 1. IE3 (Premium efficiency) according to IEC60034-30-1                                                   |                         |                  |          |          |
|                                                |                                                                            |                          | 2. Inverter Duty @ 1.0 Service Factor & F Temperature rise                                               |                         |                  |          |          |
|                                                |                                                                            |                          | -. 10:1 VT (20:1 VT at 50% load)                                                                         |                         |                  |          |          |
|                                                |                                                                            |                          | -. 10:1 CT (1 hour duty, 4:1 continuous)                                                                 |                         |                  |          |          |
|                                                |                                                                            |                          | -. CHP up to 1.5 times base speed, NEMA MG1 Part31                                                       |                         |                  |          |          |
|                                                |                                                                            |                          | 3. CSA Certification                                                                                     |                         |                  |          |          |
|                                                |                                                                            |                          | -. Class I, Division 2, Group A, B, C & D                                                                |                         |                  |          |          |
|                                                |                                                                            |                          | -. Class II, Division 2 Group E, F & G (Group E : up to 200Fr.)                                          |                         |                  |          |          |
|                                                |                                                                            |                          | 4. Service Factor 1.15 and Temperature rise B are applicable under the condition of sine wave power.     |                         |                  |          |          |
|                                                |                                                                            |                          | 5. Service Factor 1.25 is applicable to motors of 100HP or less with temperature rise F & Non-Hazardous. |                         |                  |          |          |
|                                                |                                                                            |                          | 6. Temp. code : T3C(160°C) at sine wave                                                                  |                         |                  |          |          |
|                                                |                                                                            |                          | Date                                                                                                     | DSND                    | CHKD             | CHKD     | APPD     |
|                                                |                                                                            |                          | 2025-09-19                                                                                               | 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.

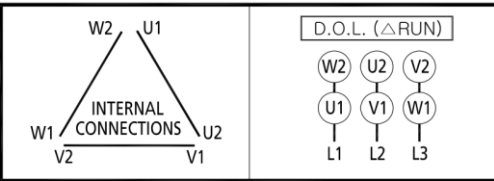
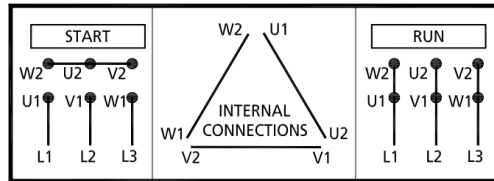
MAIN NAMEPLATE

4.72

2.36

|                                                                                                                                                                                                                                                                                                                                                                        |                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>CROWN TRITON G2</b> IEC     |                                                       |
| Premium Efficiency AC 3 Phase Motor Metric                                                                                                                                                                                                                                            |                                                       |
| 37kW (50HP) 2P 460V                                                                                                                                                                                                                                                                                                                                                    | Encl. IP55(TEFC) Cat. No. HES50-36-200M/L             |
| UL Model HLS20LSR188V                                                                                                                                                                                                                                                                                                                                                  | S.F. 1.15 Amps 55.5A                                  |
| Frame 200L Duty S1(CONT)                                                                                                                                                                                                                                                                                                                                               | INS. Class F HD-F1 Hertz 60Hz                         |
| UL Type HLS                                                                                                                                                                                                                                                                                                                                                            | Code J NEMA Design B Torque Eff. 93.0% 3/4 Eff. 92.0% |
| Bearing Drive 6212ZC3                                                                                                                                                                                                                                                                                                                                                  | Amb. 40°C RPM 3560 P.F. 0.900                         |
| Opp. 6212ZC3                                                                                                                                                                                                                                                                                                                                                           | S.F.1.00(10:1 C.T., 20:1 V.T., NEMA-MG1 Part31)       |
| Usable at 50Hz 50HP 380V 66.4A 2960rpm S.F.: 1.15 Eff.: 93.7% Code: J                                                                                                                                                                                                                                                                                                  |                                                       |
| 50Hz 50HP 400/415V 63.8/62.2A 2960/2960rpm S.F.: 1.15 Eff.: 93.7/93.7% Code: H/J                                                                                                                                                                                                                                                                                       |                                                       |
| CSA Model TPO3718920LH004A10JT300001 Type PJP Temp. Code (sine wave)                                                                                                                                                                                                                                                                                                   | Frame 71~200FR 225~250FR 280FR                        |
| Certified for CLASS I, Div. 2, Gr. A, B, C & D CLASS II, Div. 2 Gr. E, F & G (Gr. E: Up to 200FR)                                                                                                                                                                                                                                                                      | Amb. 40°C T3C (160°C) T3B (165°C) T3A (180°C)         |
|                                                                                                                                                                                                                                                                                                                                                                        | Amb. 55°C T3A (180°C) T3A (180°C) T3 (200°C)          |
| No. - Date -                                                                                                                                                                                                                                                                                                                                                           | Weight 255 kg (555 lb)                                |
| 4M-133043 IEC60034-1 IEC 60034-30-1(IE3)                                                                                                                                                                                                                                                                                                                               |                                                       |
| Made in Vietnam H4 Designed By HYUNDAI, Korea                                                                                                                                                                                                                                       |                                                       |

WIRING DIAGRAM

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>D.O.L<br/>(INVERTER &amp; SOFT STARTER)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>WYE-DELTA<br/>(Y-D)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|  <b>WARNING</b><br>IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES.<br><br>KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK.<br>4M-137622 |  <b>WARNING</b><br>IMPROPER INSTALLATION, CONNECTION, OPERATION, GROUNDING OF THIS MOTOR MAY CAUSE SERIOUS INJURY TO PERSONNEL OR MOTOR FAILURE. READ INSTRUCTIONS CAREFULLY. GROUNDING SHOULD BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL SOUND PRACTICES.<br><br>KEEP FINGERS AND FOREIGN OBJECTS AWAY FROM OPENINGS AND ROTATING PARTS DISCONNECT ALL POWER SOURCES BEFORE TOUCHING INTERNAL PARTS TO AVOID ELECTRICAL SHOCK.<br>4M-130346 |

|                                                                                     |                    |                                                           |                     |
|-------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------|---------------------|
| APPD BY S.Y.KIM                                                                     | UNIT INCH          | SUBJECT CSA Class I, Division2 Severe Duty (IEC, 160-280) | DWG SIZE A4 ( 1:1 ) |
| CHKD BY I.K.KIM                                                                     | SCALE NONE         | NAMEPLATE DRAWING                                         |                     |
| CHKD BY R.G.KIM                                                                     | PROJEC'N 3rd Angle |                                                           |                     |
| DSND BY S.H.LEE                                                                     | DATE 2024.06.07    |                                                           |                     |
|  |                    | REF. NO 4M-133043 / 4M-137622                             | Sheet No. of        |
|                                                                                     |                    | DWG NO NP-HES50-36-200M/L                                 | Revision No. 0      |

Type : PJP

37kW 50HP 2 P 60 Hz

Full Load Torque : 73.22 lb.ft

Speed at Full Load : 3560 RPM

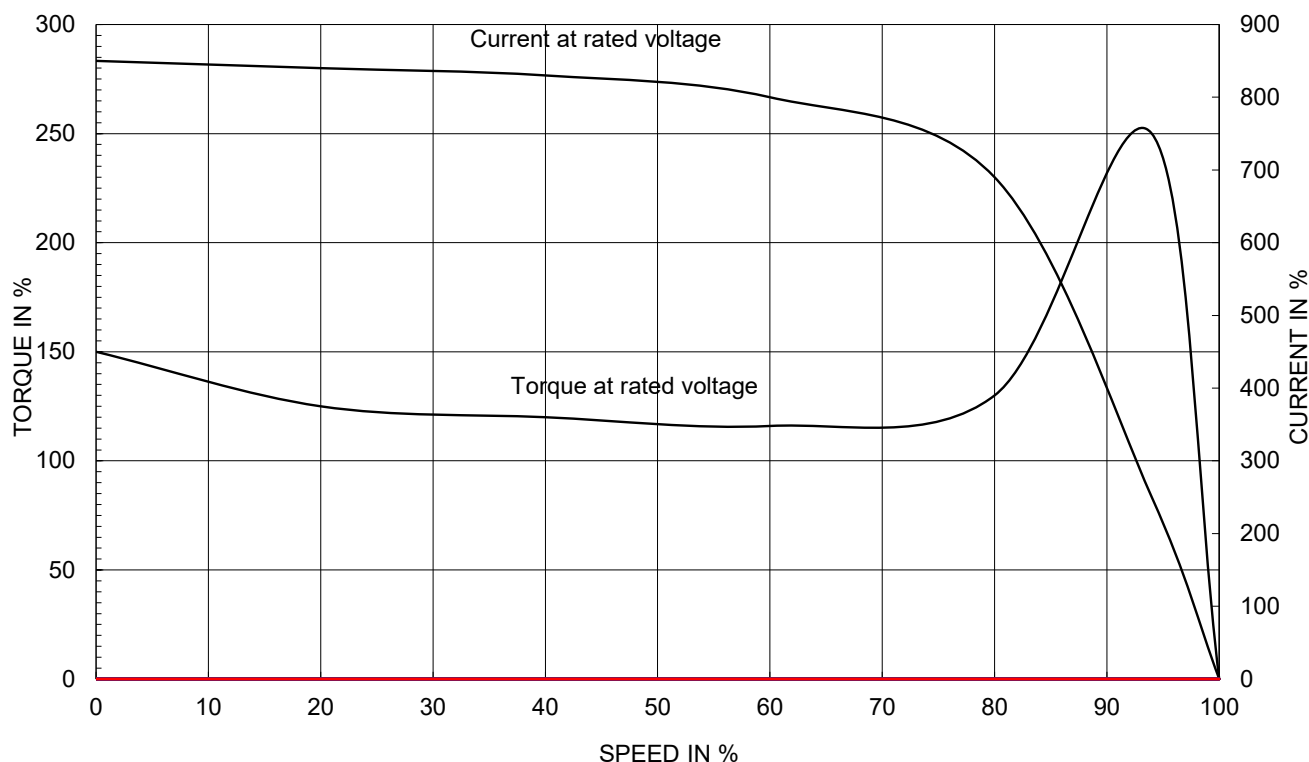
Load moment of Inertia (J) : 49.240 lb.ft2

Rated Voltage 460V

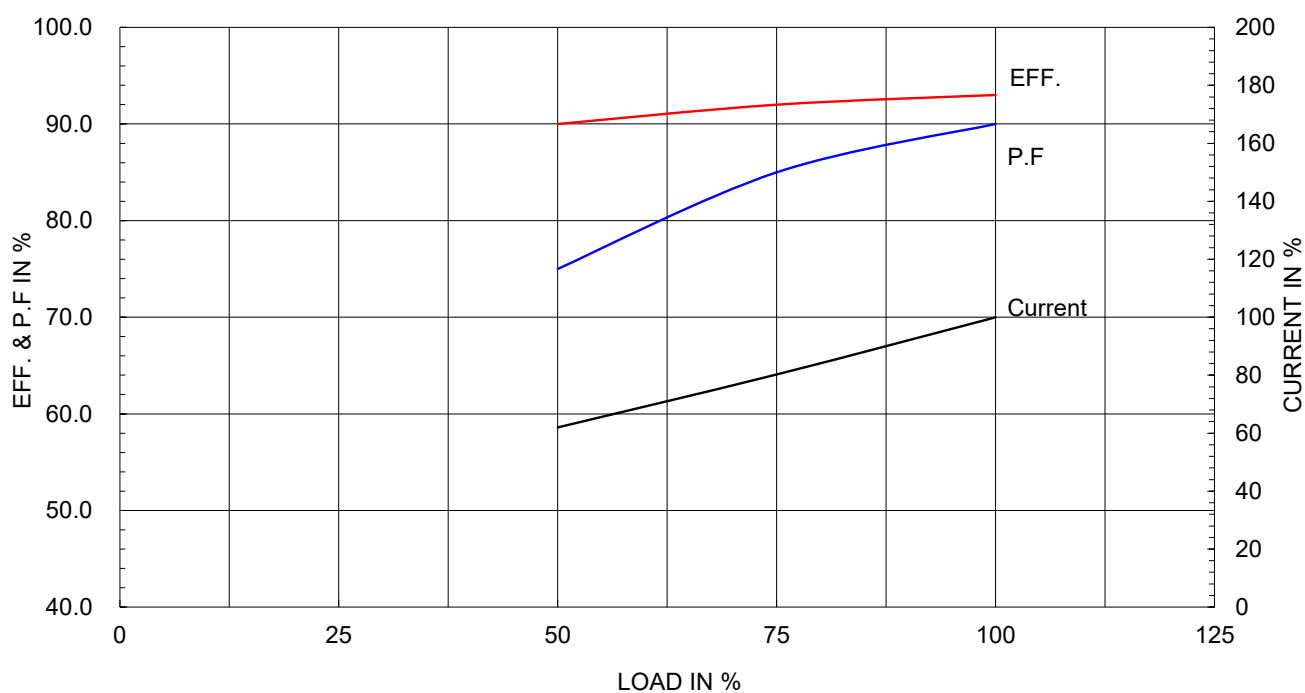
Motor moment of Inertia (J) : 4.271 lb.ft2

Full Load Current 55.5A

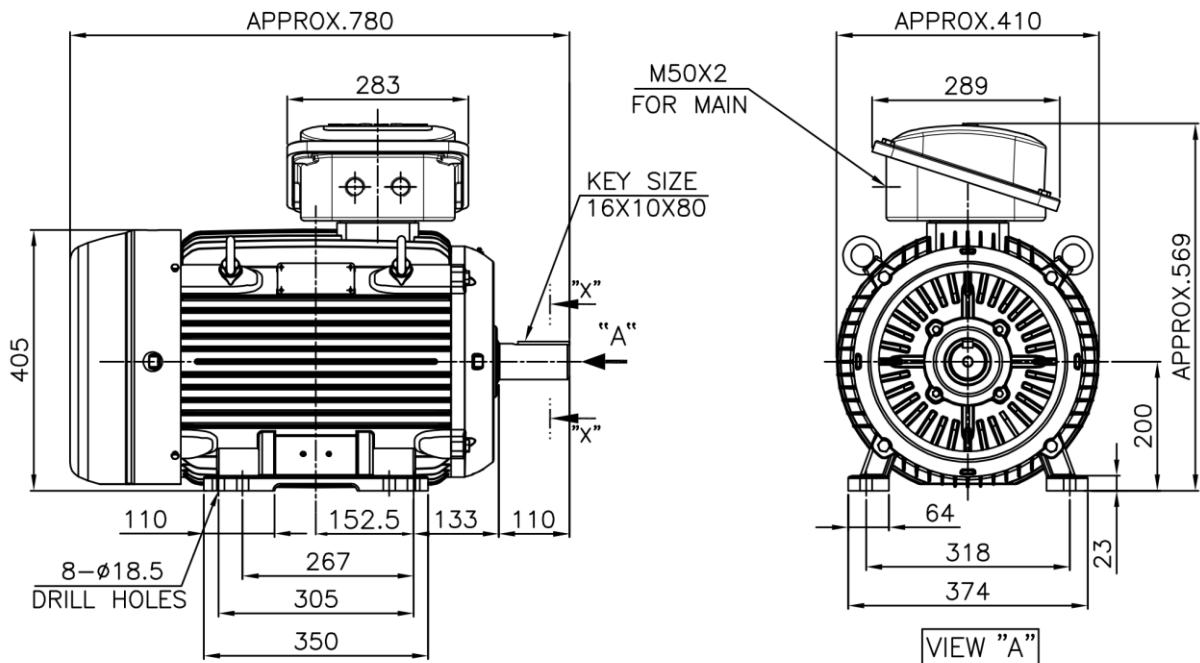
## SPEED VS TORQUE & CURRENT CURVE



## OUTPUT VS EFF., P.F & CURRENT CURVE



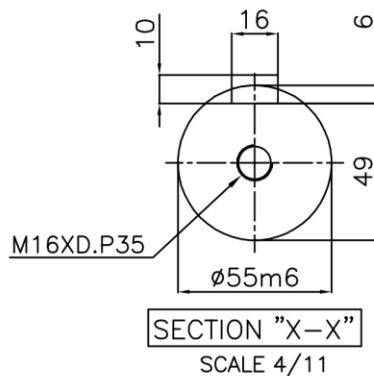
| 1    | 2     | 3   | 4    |          |
|------|-------|-----|------|----------|
| ▽    | 50S   | REV | DATE | CONTENTS |
| ▽▽   | 12.5S |     |      | REVD BY  |
| ▽▽▽  | 3.2S  |     |      | CHKD BY  |
| ▽▽▽▽ | 0.4S  |     |      | CHKD BY  |
|      |       |     |      | APPD BY  |



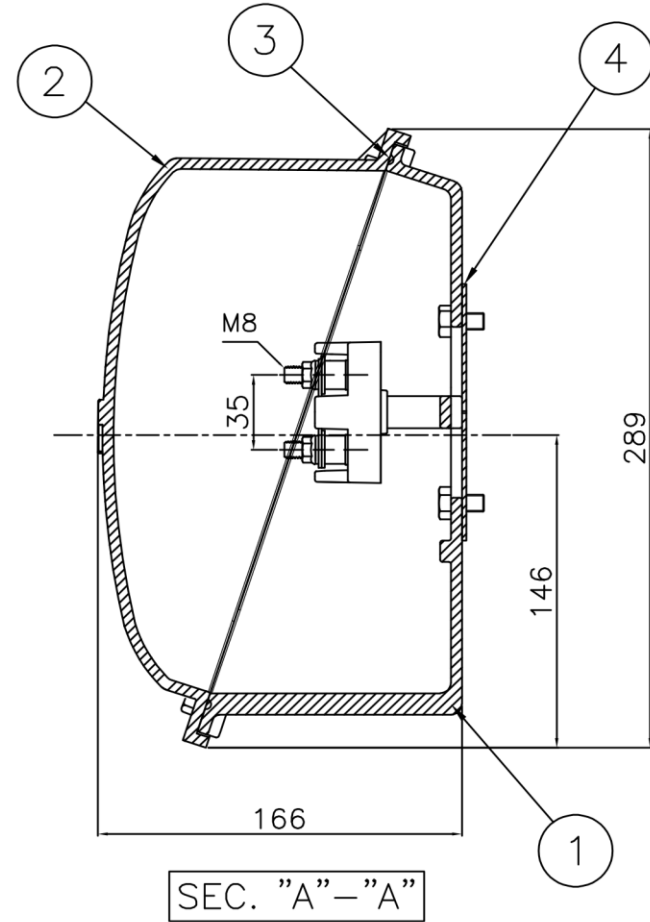
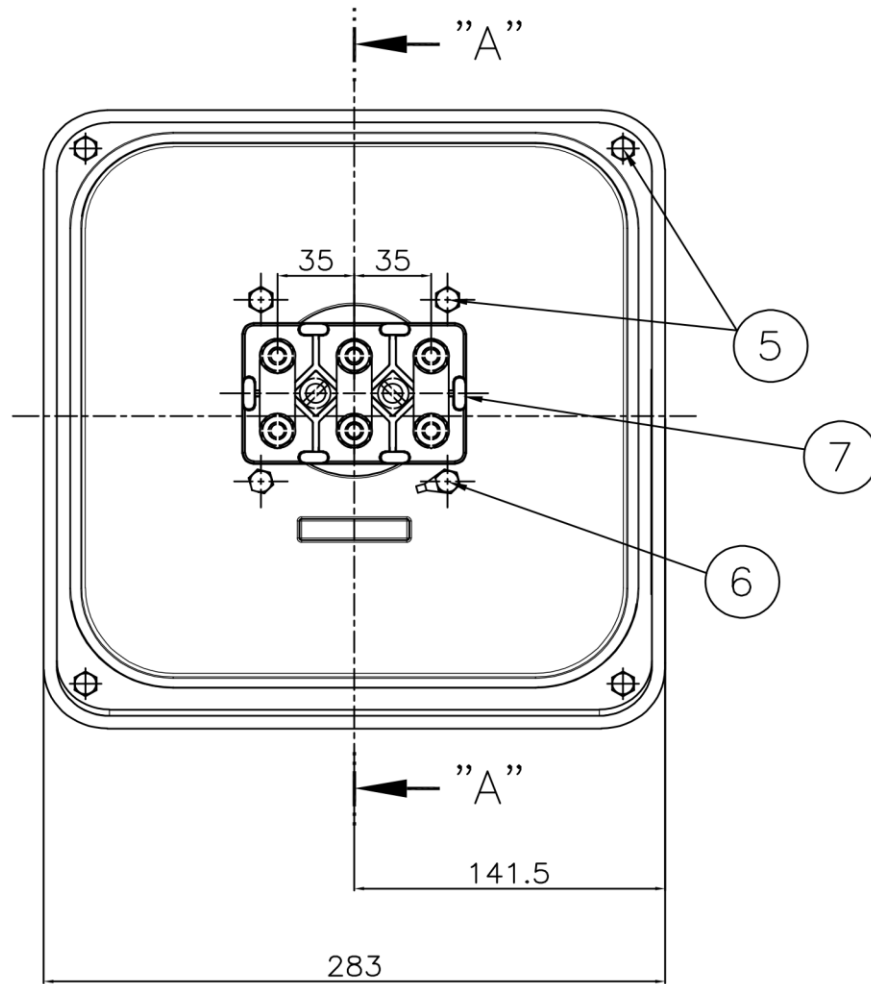
### NOTE

#### 1. TOLERANCE :

|                |             |                                                          |
|----------------|-------------|----------------------------------------------------------|
| CENTER HEIGHT  | 200         | $\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$        |
| BASE HOLES     | $\phi$ 18.5 | $\begin{smallmatrix} +0.52 \\ 0 \end{smallmatrix}$       |
| SHAFT DIAMETER | $\phi$ 55   | $\begin{smallmatrix} +0.030 \\ +0.011 \end{smallmatrix}$ |
| KEYWAY WIDTH   | 16          | $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$      |
| KEYWAY DEPTH   | 6           | $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$        |
| KEY WIDTH      | 16          | $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$      |
| KEY HEIGHT     | 10          | $\begin{smallmatrix} 0 \\ -0.090 \end{smallmatrix}$      |



|         |         |          |            |         |                        |                |
|---------|---------|----------|------------|---------|------------------------|----------------|
| APPD BY | S.Y.KIM | UNIT     | mm         | SUBJECT | IEC 200M/L (Dual hole) | DWG SIZE       |
| CHKD BY | I.K.KIM | SCALE    | 1/10       |         |                        | A4 ( )         |
| CHKD BY | —       | PROJEC'N | 3rd Angle  | TITLE   | Outline                |                |
| DSND BY | E.J.KIM | DATE     | 2023.10.18 |         |                        |                |
|         |         |          |            | REF. NO | Sheet No. of           |                |
|         |         |          |            | DWG NO  | LM-T1205B3CTV09        | Revision No. 0 |



| 1       | TERMINAL BLOCK        | STD      | M8         |         |                                 |              |     |          | 7 |
|---------|-----------------------|----------|------------|---------|---------------------------------|--------------|-----|----------|---|
| 1       | GROUND TERMINAL LUG   | CU       | --         |         |                                 |              |     |          | 6 |
| 8       | BOX+FRAME HEX BOLT    | S45C     | M8         |         |                                 |              |     |          | 5 |
| 1       | BOX GASKET            | NBR      | --         |         |                                 |              |     |          | 4 |
| 1       | COVER GASKET (O-RING) | NBR      | --         |         |                                 |              |     |          | 3 |
| 1       | CONDUIT BOX COVER     | CAST     | --         |         |                                 |              |     |          | 2 |
| 1       | CONDUIT BOX           | CAST     | --         |         |                                 |              |     |          | 1 |
| Q'TY    | DESCRIPTION           | MATERIAL | DIMENSION  | WEIGHT  | PART NO.                        | REMARK       | NO. |          |   |
| APPD BY | S.Y.KIM               | UNIT     | mm         | SUBJECT | FR.200-225 (CAST IRON, T-BLOCK) |              |     | DWG SIZE |   |
| CHKD BY | I.K.KIM               | SCALE    | 1/2.5      | TITLE   | TERMINAL BOX ASS'Y              |              |     |          |   |
| CHKD BY | -                     | PROJEC'N | 3rd Angle  | REF. NO |                                 | Sheet No.    | of  |          |   |
| DSND BY | 주유림                   | DATE     | 2021-12-17 | DWG NO  | 3M-241785(T)                    | Revision No. | 0   |          |   |

| 일반가공공차 |      | 일반계관공차   |      |
|--------|------|----------|------|
| 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 |

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

| REV | DATE | CONTENTS | REV'D BY | CHK'D BY | CHK'D BY | APPD BY |
|-----|------|----------|----------|----------|----------|---------|
| 1   |      |          |          |          |          |         |