

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

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# SPECIFICATION for INDUCTION MOTOR



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

# AC INDUCTION MOTOR DATA SHEET

|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------|------|------|
| Model No.or RFQ No.                            |                                                                                             | Item No.                                                                        |                                                                                                                      | Rev. No. [      ]                                                      |               |      |      |
| Project Name                                   |                                                                                             | Project No.                                                                     |                                                                                                                      | Quantity      sets                                                     |               |      |      |
| <b>GENERAL SPECIFICATION</b>                   |                                                                                             |                                                                                 | <b>PERFORMANCE DATA</b>                                                                                              |                                                                        |               |      |      |
| Frame Size                                     | 160M                                                                                        |                                                                                 | Rated Output                                                                                                         | 11 kW      15.0 HP                                                     |               |      |      |
| Type                                           | HLP-11/2                                                                                    |                                                                                 | Number of Poles                                                                                                      | 2                                                                      |               |      |      |
| Enclosure(Protection)                          | Totally Enclosed / IP55                                                                     |                                                                                 | Rotor Type                                                                                                           | Squirrel Cage                                                          |               |      |      |
| Method of Cooling                              | IC411(FC)                                                                                   |                                                                                 | Starting Method*                                                                                                     | <input checked="" type="checkbox"/> D.O.L <input type="checkbox"/> Y-Δ |               |      |      |
| Rated Frequency                                | 60 Hz                                                                                       |                                                                                 | Rated Voltage                                                                                                        | 440 V                                                                  |               |      |      |
| Number of Phases                               | 3                                                                                           |                                                                                 | Current                                                                                                              | Full Load                                                              | 17.8 A        |      |      |
| Insulation Class                               | <input checked="" type="checkbox"/> F <input type="checkbox"/> B <input type="checkbox"/> H |                                                                                 | Locked-rotor**                                                                                                       | 895 %                                                                  |               |      |      |
| Temp. Rise at full load (by resistance method) |                                                                                             |                                                                                 | Efficiency                                                                                                           |                                                                        |               |      |      |
| at 1.0 S.F      80 deg. C                      |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
| Motor Location                                 | <input checked="" type="checkbox"/> Indoor <input type="checkbox"/> Outdoor                 |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
| Altitude                                       | Less than 1000 meter                                                                        |                                                                                 | 100% Load      91.0 %                                                                                                |                                                                        |               |      |      |
| Relative Humidity                              | Less than 80 %                                                                              |                                                                                 | Power Factor(p.u)                                                                                                    |                                                                        |               |      |      |
| Ambient Temp.                                  | 40 deg. C (Max.)                                                                            |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
| Duty Type                                      | Continuous (S1)                                                                             |                                                                                 | 100% Load      0.890                                                                                                 |                                                                        |               |      |      |
| Service Factor                                 | 1.15                                                                                        |                                                                                 | Speed at Full Load      3535 r.p.m                                                                                   |                                                                        |               |      |      |
| Mounting                                       | B3                                                                                          |                                                                                 | Torque                                                                                                               |                                                                        |               |      |      |
| Bearing                                        | Type                                                                                        | Anti-Friction                                                                   |                                                                                                                      |                                                                        |               |      |      |
|                                                | DE/N-DE                                                                                     | 6309ZZC3 / 6309ZZC3                                                             | Full Load                                                                                                            | 3.0 kg·m      29.7                                                     |               |      |      |
|                                                | Lubricant                                                                                   | Grease                                                                          | Locked-rotor**                                                                                                       | 180 %      5.5 kg·m                                                    |               |      |      |
| External Thrust                                | Not applicable                                                                              |                                                                                 | Breakdown**                                                                                                          | 250 %      7.6 kg·m                                                    |               |      |      |
| Coupling Method                                | <input checked="" type="checkbox"/> Direct <input type="checkbox"/> V-Belt                  |                                                                                 | Moment of Inertia (J)                                                                                                |                                                                        |               |      |      |
| Shaft Extension                                | <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double                  |                                                                                 | Load(Max.)      3.637 kg·m <sup>2</sup>                                                                              |                                                                        |               |      |      |
| Terminal                                       | Main                                                                                        | <input checked="" type="checkbox"/> Aluminum <input type="checkbox"/> Cast Iron | Motor      0.039 kg·m <sup>2</sup>                                                                                   |                                                                        |               |      |      |
| Box                                            | Aux.                                                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No                        | Sound Pressure Level (No-load & mean value at 1m from motor)                                                         |                                                                        |               |      |      |
|                                                | Location                                                                                    | Refer to Outline Drawing                                                        | 77 dB(A)                                                                                                             |                                                                        |               |      |      |
| Application                                    |                                                                                             |                                                                                 | Vibration      2.2 mm/sec (peak)                                                                                     |                                                                        |               |      |      |
| Area classification                            | Non-Hazardous                                                                               |                                                                                 | Permissible number of consecutive starts                                                                             |                                                                        |               |      |      |
| Type of Ex-Protection                          | Not applicable                                                                              |                                                                                 | Cold      7 times                                                                                                    |                                                                        |               |      |      |
| Applicable Standard                            | KS, IEC, NEMA MG1 Part30(Vpeak)                                                             |                                                                                 | Hot      6 times                                                                                                     |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | Paint                                                                                                                | Munsell No.                                                            | PHANTONE 279C |      |      |
| <b>ACCESSORIES</b>                             |                                                                                             |                                                                                 | <b>SUBMITTAL DRAWING</b>                                                                                             |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | Outline Dimension Drawing \ Motor Weight(Approx.)                                                                    |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | B3      LM-T1163B3PLV01      118 kg                                                                                  |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | <b>REMARK</b>                                                                                                        |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | *. Premium efficiency(IE3) acc. to KS C 4202                                                                         |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | *. SSEN Series                                                                                                       |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | *. For use on PWM VFD 10:1VT,3:1CT@1.0S.F&F Temp.rise                                                                |                                                                        |               |      |      |
| <b>SPARE PARTS</b>                             |                                                                                             |                                                                                 | <div style="border: 2px solid red; padding: 20px; text-align: center; font-size: 2em; color: red;">FOR BIDDING</div> |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 |                                                                                                                      |                                                                        |               |      |      |
|                                                |                                                                                             |                                                                                 | Date                                                                                                                 | DSND                                                                   | CHKD          | CHKD | APPD |
|                                                |                                                                                             |                                                                                 | 2021-04-29                                                                                                           |                                                                        |               |      |      |

Type : HLP-11/2

Full Load Torque : 3.0 kg.m

Load moment of Inertia (J) : - kg.m<sup>2</sup>

Motor moment of Inertia (J) : 0.039 kg.m<sup>2</sup>

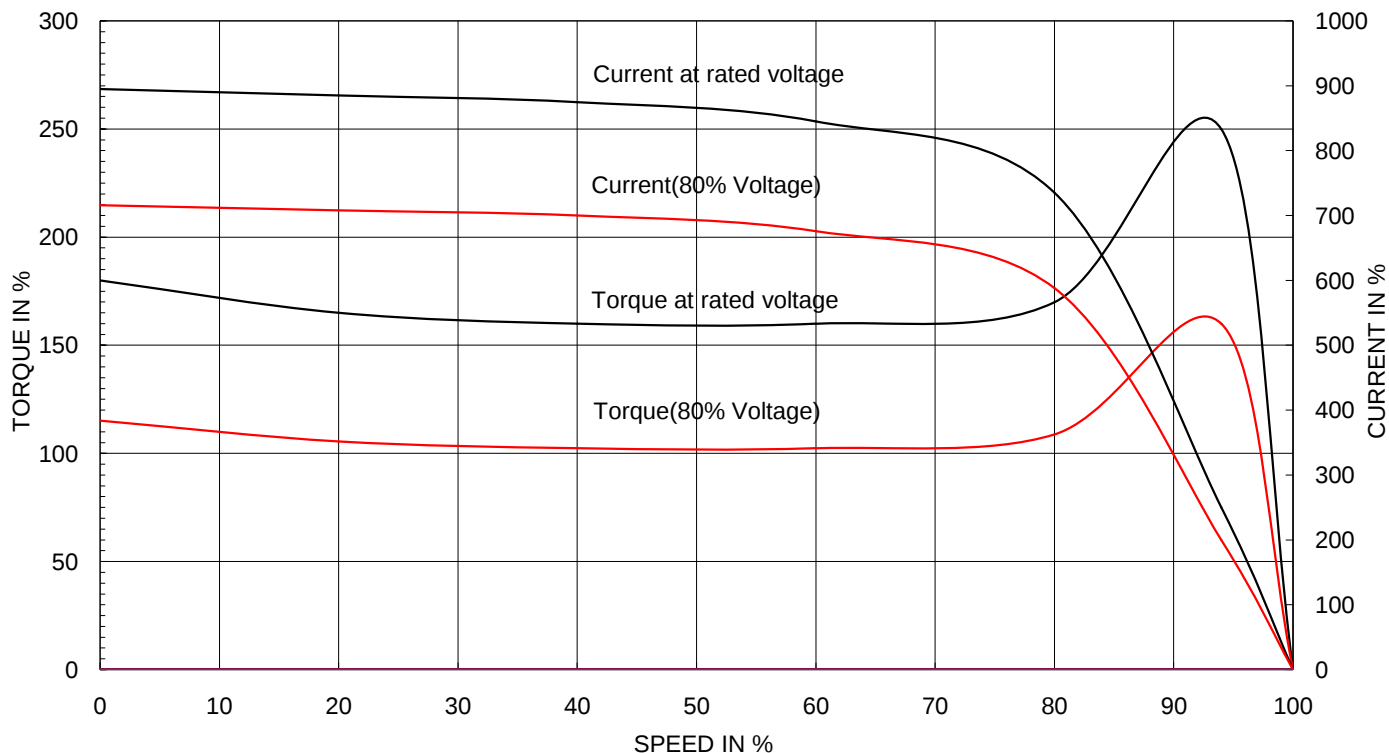
11 kW 2 P 60 Hz

Speed at Full Load : 3535 RPM

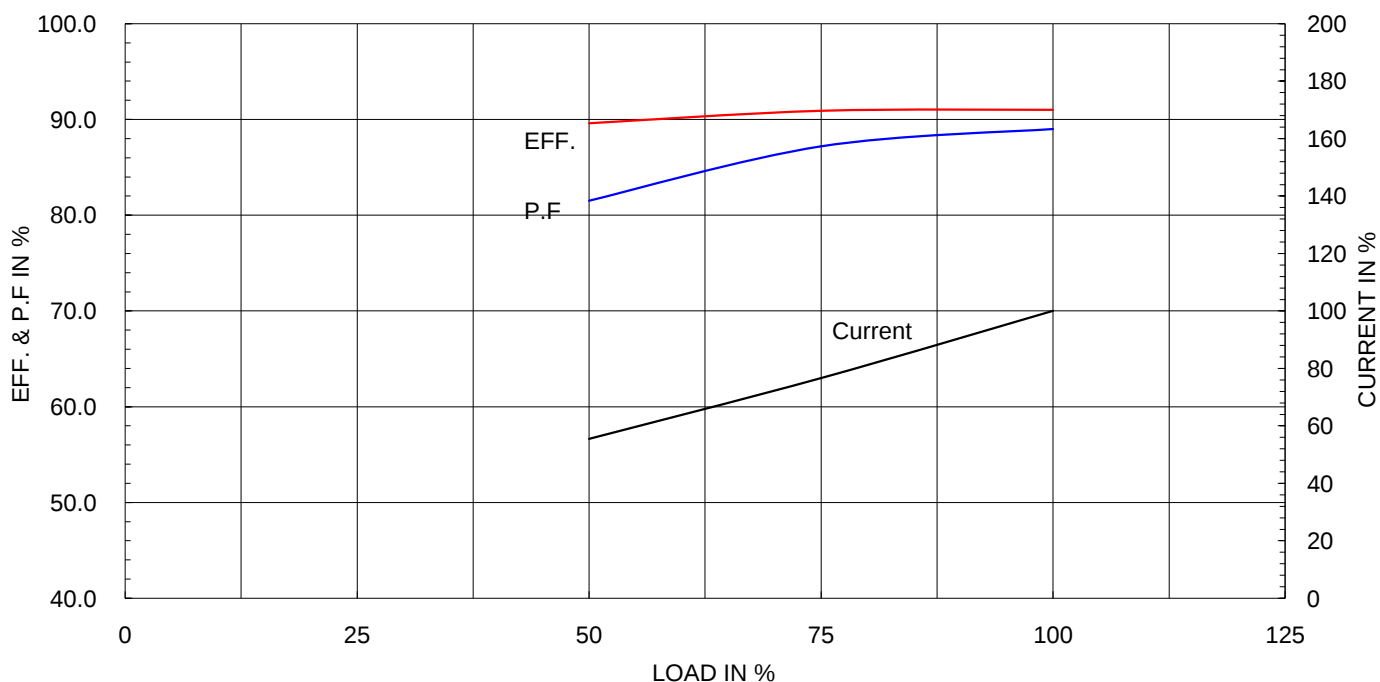
Rated Voltage 440

Full Load Current 17.8A

SPEED VS TORQUE & CURRENT CURVE



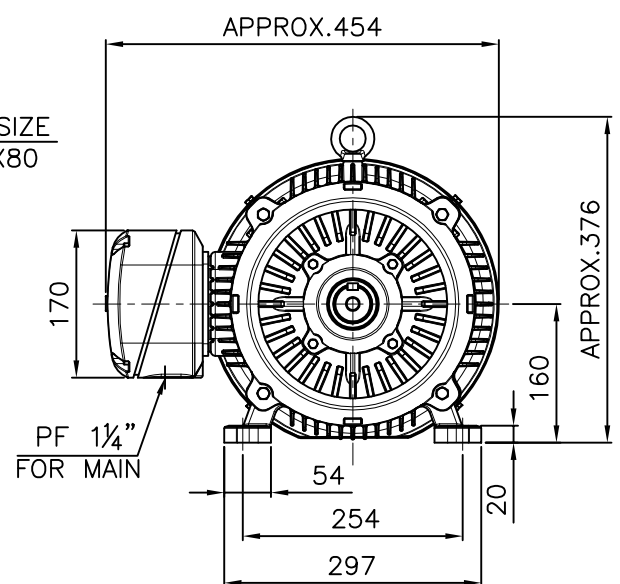
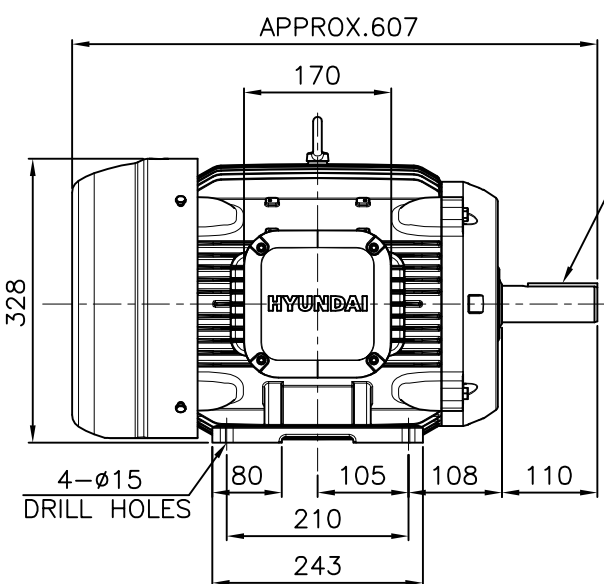
OUTPUT VS EFF., P.F & CURRENT CURVE



본 도면은 현대일렉트릭(주) 재산이므로  
허가없이 복사할 수 없음 (취급주의)

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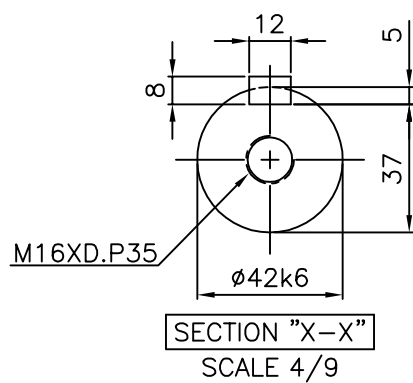
| 1    |       |     | 2    |          | 3 |         | 4       |         |         |
|------|-------|-----|------|----------|---|---------|---------|---------|---------|
| ▽    | 50S   | REV | DATE | CONTENTS |   | REVD BY | CHKD BY | CHKD BY | APPD BY |
| ▽▽   | 12.5S |     |      |          |   | 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



# NOTE

1.TOLERANCE :

|                |           |                                                          |
|----------------|-----------|----------------------------------------------------------|
| CENTER HEIGHT  | 160       | $\begin{smallmatrix} 0 \\ -0.5 \end{smallmatrix}$        |
| BASE HOLES     | $\phi 15$ | $\begin{smallmatrix} +0.43 \\ 0 \end{smallmatrix}$       |
| SHAFT DIAMETER | $\phi 42$ | $\begin{smallmatrix} +0.018 \\ +0.002 \end{smallmatrix}$ |
| KEYWAY WIDTH   | 12        | $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$      |
| KEYWAY DEPTH   | 5         | $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$        |
| KEY WIDTH      | 12        | $\begin{smallmatrix} 0 \\ -0.043 \end{smallmatrix}$      |
| KEY HEIGHT     | 8         | $\begin{smallmatrix} 0 \\ -0.090 \end{smallmatrix}$      |

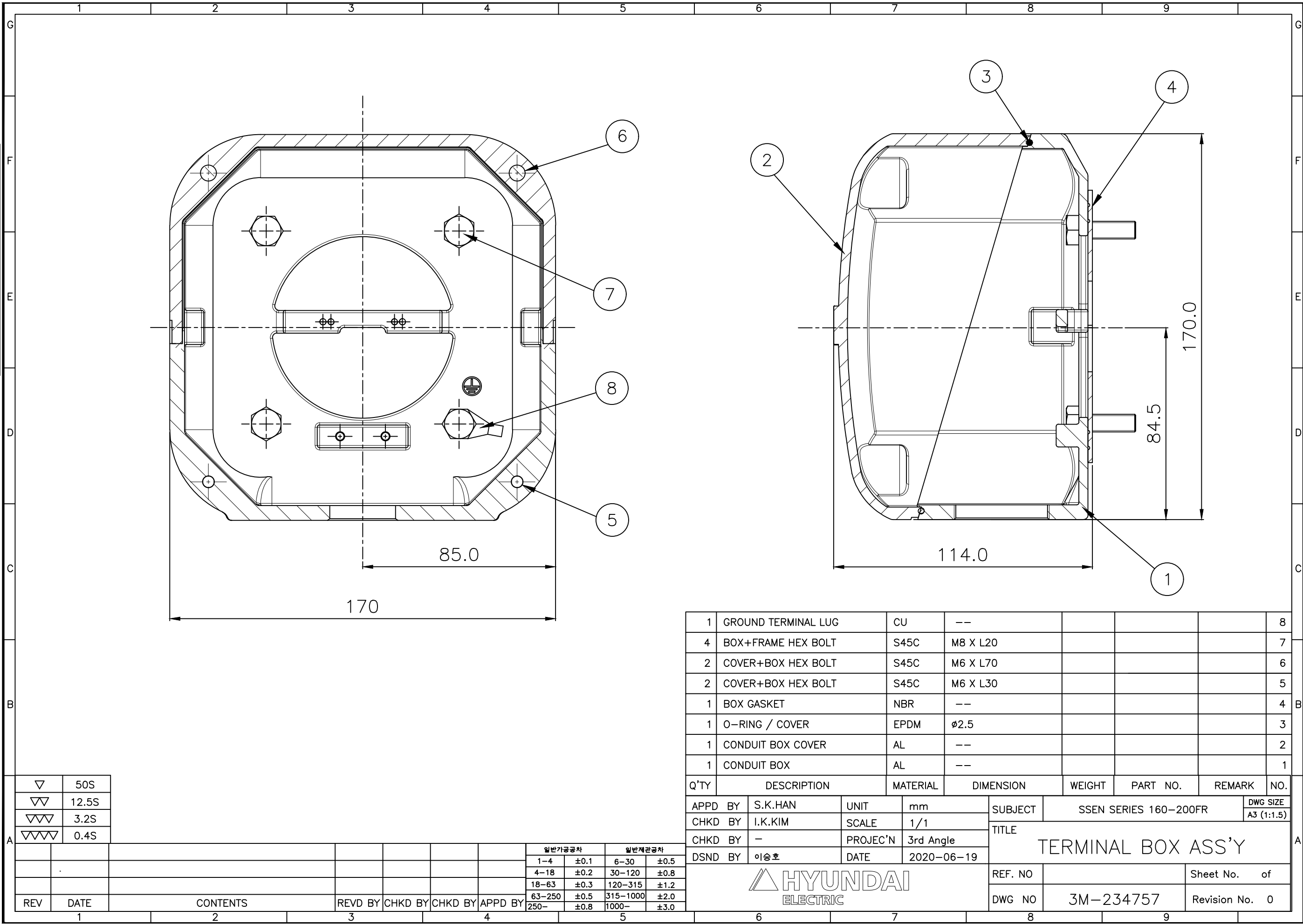


|         |         |          |                 |         |                 |                |
|---------|---------|----------|-----------------|---------|-----------------|----------------|
| APPD BY | S.K.HAN | UNIT     | mm              | SUBJECT | KS, IEC Fr.160M | DWG SIZE       |
| CHKD BY | S.Y.KIM | SCALE    | 1/9             | TITLE   |                 | A4 ( 1:9 )     |
| CHKD BY | I.K.KIM | PROJEC'N | 3각법 (3rd Angle) |         |                 |                |
| DSND BY | S.H.LEE | DATE     | 2019.06.17      |         |                 |                |
|         |         |          |                 | REF. NO |                 | Sheet No. of   |
|         |         |          |                 | DWG NO  | LM-T1163B3PLV01 | Revision No. 0 |

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

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

|                                                                                       |                     |          |            |                             |                       |              |     |            |
|---------------------------------------------------------------------------------------|---------------------|----------|------------|-----------------------------|-----------------------|--------------|-----|------------|
| 1                                                                                     | GROUND TERMINAL LUG | CU       | --         |                             |                       |              |     | 8          |
| 4                                                                                     | BOX+FRAME HEX BOLT  | S45C     | M8 X L20   |                             |                       |              |     | 7          |
| 2                                                                                     | COVER+BOX HEX BOLT  | S45C     | M6 X L70   |                             |                       |              |     | 6          |
| 2                                                                                     | COVER+BOX HEX BOLT  | S45C     | M6 X L30   |                             |                       |              |     | 5          |
| 1                                                                                     | BOX GASKET          | NBR      | --         |                             |                       |              |     | 4          |
| 1                                                                                     | O-RING / COVER      | EPDM     | ø2.5       |                             |                       |              |     | 3          |
| 1                                                                                     | CONDUIT BOX COVER   | AL       | --         |                             |                       |              |     | 2          |
| 1                                                                                     | CONDUIT BOX         | AL       | --         |                             |                       |              |     | 1          |
| Q'TY                                                                                  | DESCRIPTION         | MATERIAL | DIMENSION  | WEIGHT                      | PART NO.              | REMARK       | NO. |            |
| APPD BY                                                                               | S.K.HAN             | UNIT     | mm         | SUBJECT                     | SSEN SERIES 160-200FR |              |     | DWG SIZE   |
| CHKD BY                                                                               | I.K.KIM             | SCALE    | 1/1        |                             |                       |              |     | A3 (1:1.5) |
| CHKD BY                                                                               | -                   | PROJEC'N | 3rd Angle  | TITLE<br>TERMINAL BOX ASS'Y |                       |              |     |            |
| DSND BY                                                                               | 이승호                 | DATE     | 2020-06-19 |                             |                       |              |     |            |
|  |                     |          |            | REF. NO                     |                       | Sheet No.    |     | of         |
|                                                                                       |                     |          |            | DWG NO                      | 3M-234757             | Revision No. |     | 0          |
| 6                                                                                     |                     | 7        |            | 8                           |                       | 9            |     |            |