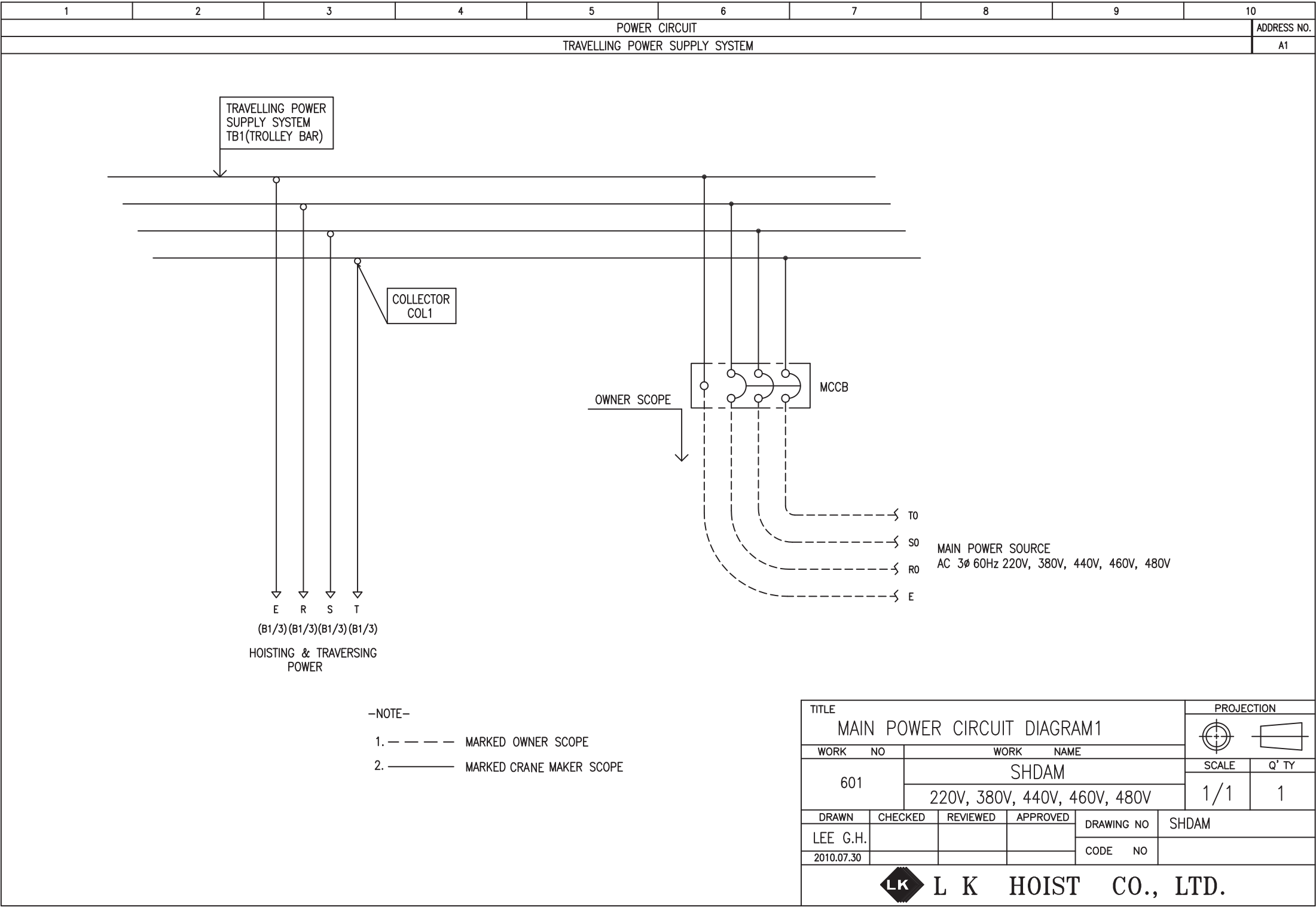
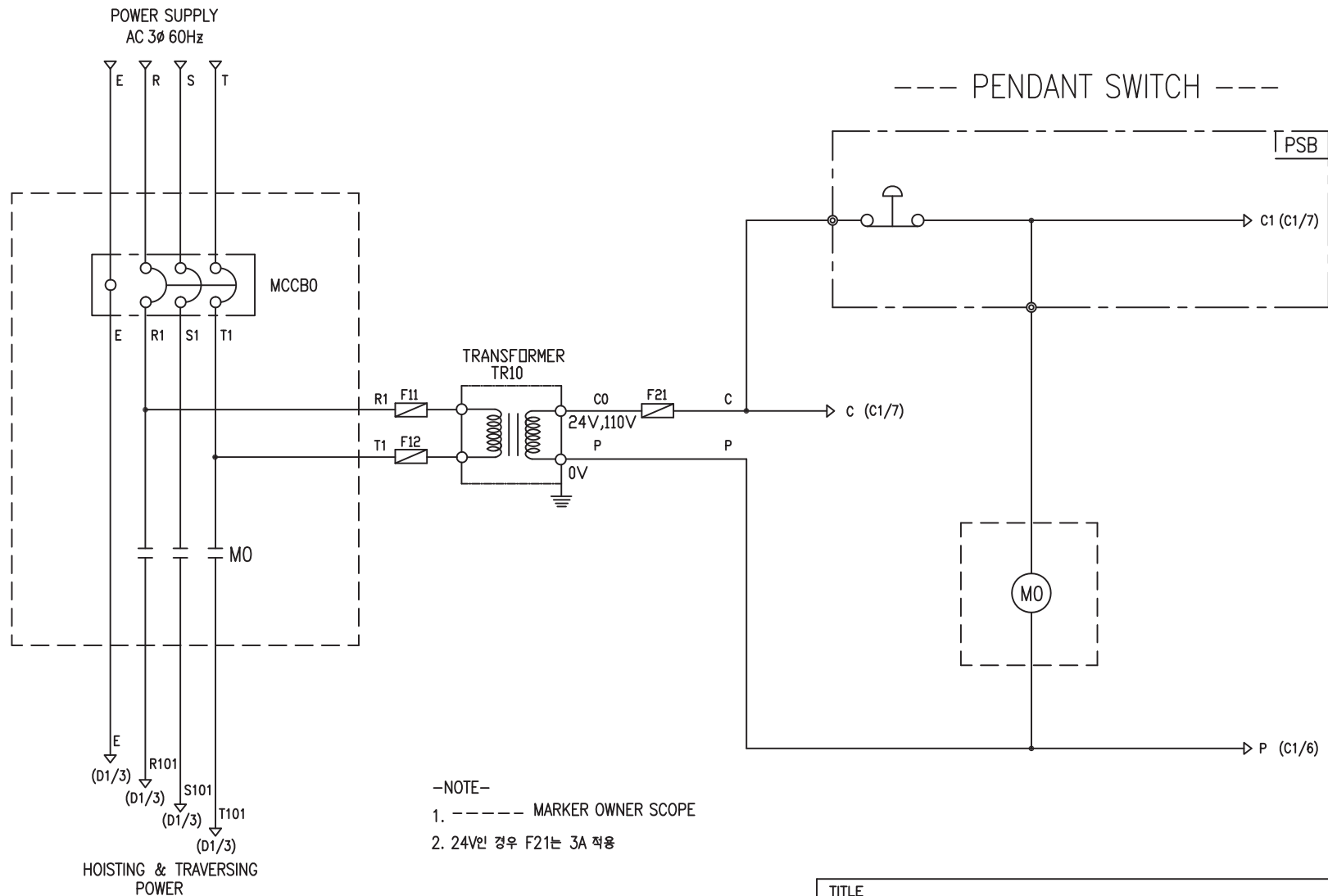
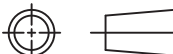


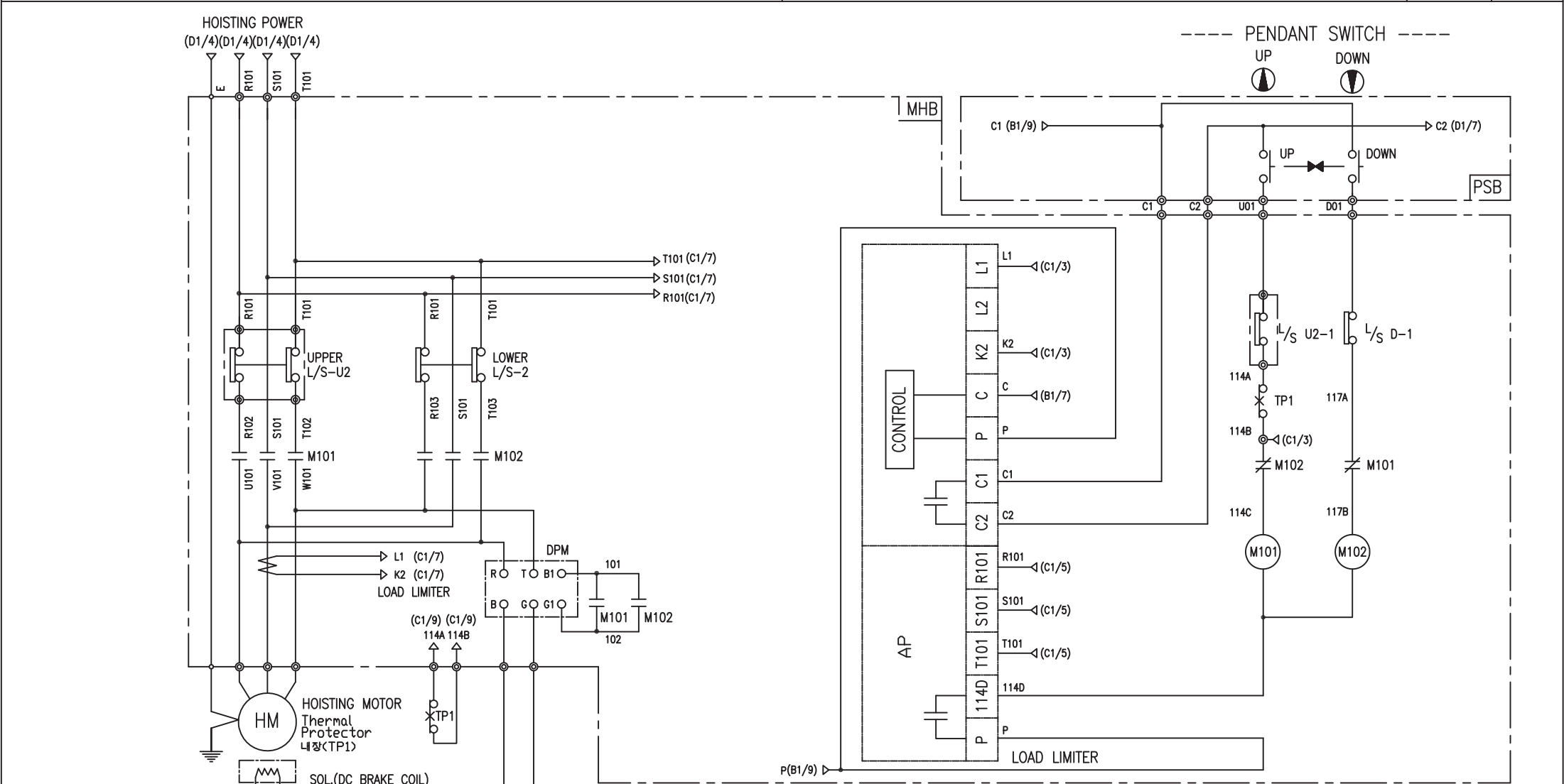


|               |   |   |   |   |                 |   |   |   |    |             |    |
|---------------|---|---|---|---|-----------------|---|---|---|----|-------------|----|
| 1             | 2 | 3 | 4 | 5 | 6               | 7 | 8 | 9 | 10 |             |    |
| POWER CIRCUIT |   |   |   |   | CONTROL CIRCUIT |   |   |   |    | ADDRESS NO. | B1 |



| SPECIFICATION | NO FUSE BREAKER |     | MAGNET CONTACT |        | TRANSFORMER | FUSE          |
|---------------|-----------------|-----|----------------|--------|-------------|---------------|
| SYMBOLS       | MCCB0           |     | M0             |        | TR10        | F11, F12, F21 |
| DESCRIPTION   | 220V            | 50A | GMC22          | DMC-22 | 60VA        | 1A            |
|               | 380V            | 30A |                |        |             |               |
|               | 440V            | 20A |                |        |             |               |
|               | 460V            | 20A |                |        |             |               |
|               | 480V            | 20A |                |        |             |               |
| MAKER         | LS              |     | LS             | DONGA  | LK          | —             |

|                                                                                                           |         |                              |          |         |                                                                                       |       |       |
|-----------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|---------------------------------------------------------------------------------------|-------|-------|
| TITLE                                                                                                     |         |                              |          |         | PROJECTION                                                                            |       |       |
| MAIN POWER & CONTROL CIRCUIT DIAGRAM                                                                      |         |                              |          |         |  |       |       |
| WORK                                                                                                      | NO      | WORK NAME                    |          |         |                                                                                       |       |       |
| 602                                                                                                       |         | SHDAM                        |          |         |                                                                                       | SCALE | Q' TY |
|                                                                                                           |         | 220V, 380V, 440V, 460V, 480V |          |         |                                                                                       | 1/1   | 1     |
| DRAWN                                                                                                     | CHECKED | REVIEWED                     | APPROVED | MODEL   |                                                                                       | SHDAM |       |
| LEE.G.H                                                                                                   |         |                              |          | CODE NO |                                                                                       |       |       |
| 2010.07.30                                                                                                |         |                              |          |         |                                                                                       |       |       |
|  L K HOIST CO., LTD. |         |                              |          |         |                                                                                       |       |       |



1

2

3

4

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6

7

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9

10

HOIST POWER CIRCUIT

HOIST CONTROL CIRCUIT

ADDRESS NO.

C1

HOISTING POWER  
(D1/4)(D1/4)(D1/4)(D1/4)

UPPER L/S-U2

LOWER L/S-2

HOISTING MOTOR Thermal Protector 내장(TP1)

SOL(DC BRAKE COIL)

HOIST CONTROL CIRCUIT

PSB

UP DOWN

U01 D01

L1 L2 K2 C P C1 C2

R101 S101 T101

114A 114B 114C 117A 117B

M101 M102

LOAD LIMITER

CONTROL

AP

114D

P

101 102

DPM

R T B1 B G G1

M101 M102

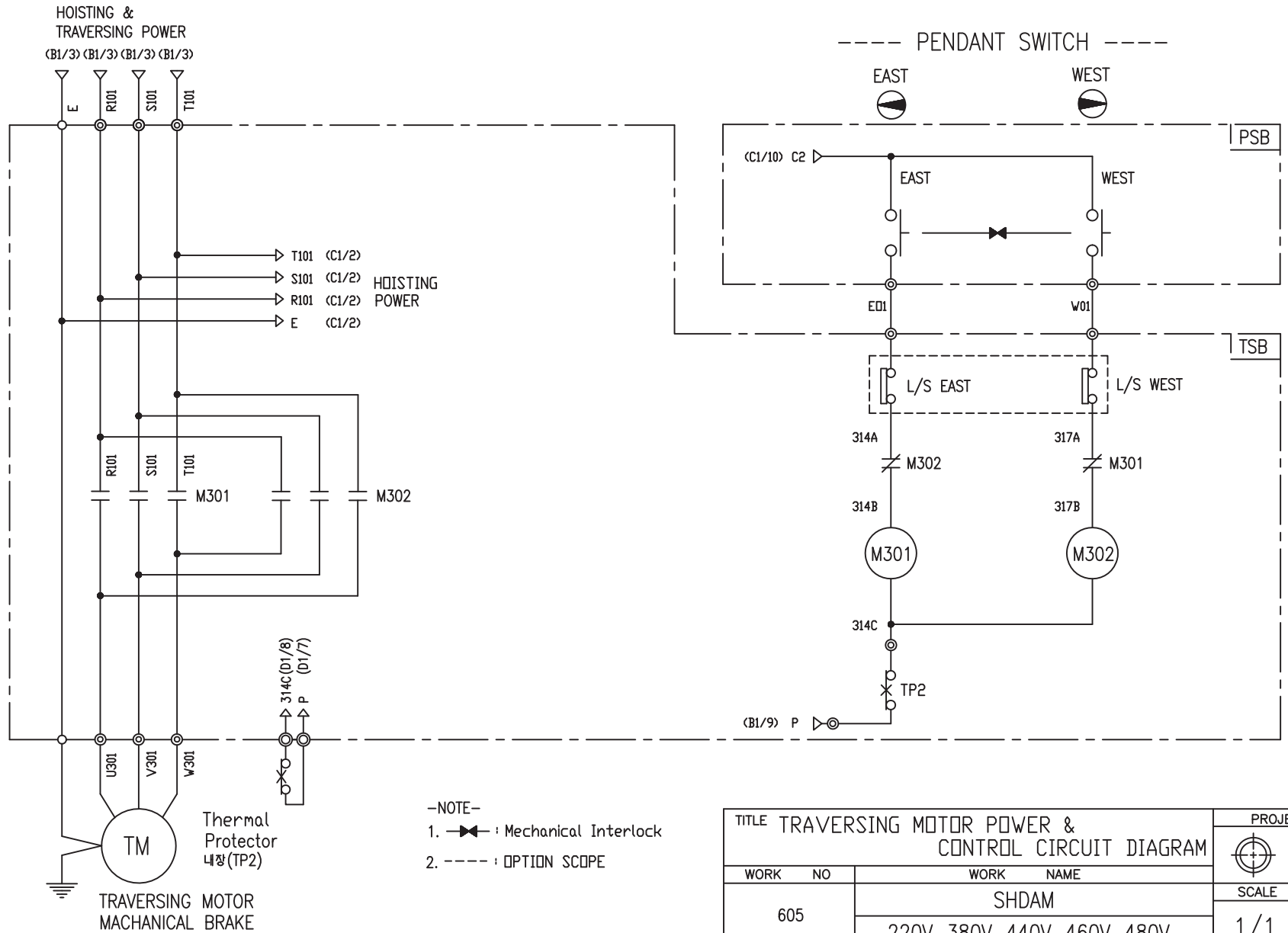
P(B1/9)

1. →↯→ : Mechanical Interlock

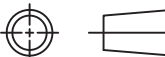
|               |  |                |        |              |                   |        |        |        |                   |             |
|---------------|--|----------------|--------|--------------|-------------------|--------|--------|--------|-------------------|-------------|
| SPECIFICATION |  | MAGNET CONTACT |        | LOAD LIMITER | SILICON RECTIFIER |        |        |        | Thermal Protector | HOIST MOTOR |
| SYMBOLS       |  | M101, M102     |        | -            | DPM               |        |        |        | TP1               | HM          |
| DESCRIPTION   |  | DMC-22         | GMC-22 | LKDL-601     | AC220V            | AC440V | AC460V | AC480V | 17AM032           | 3.5Kw * 4P  |
|               |  |                |        |              | DC99V             | DC198V | DC207V | DC216V |                   |             |
| MAKER         |  | DONG-A         | LS     | LK           | LK                |        |        |        | Texas Instruments | LK          |

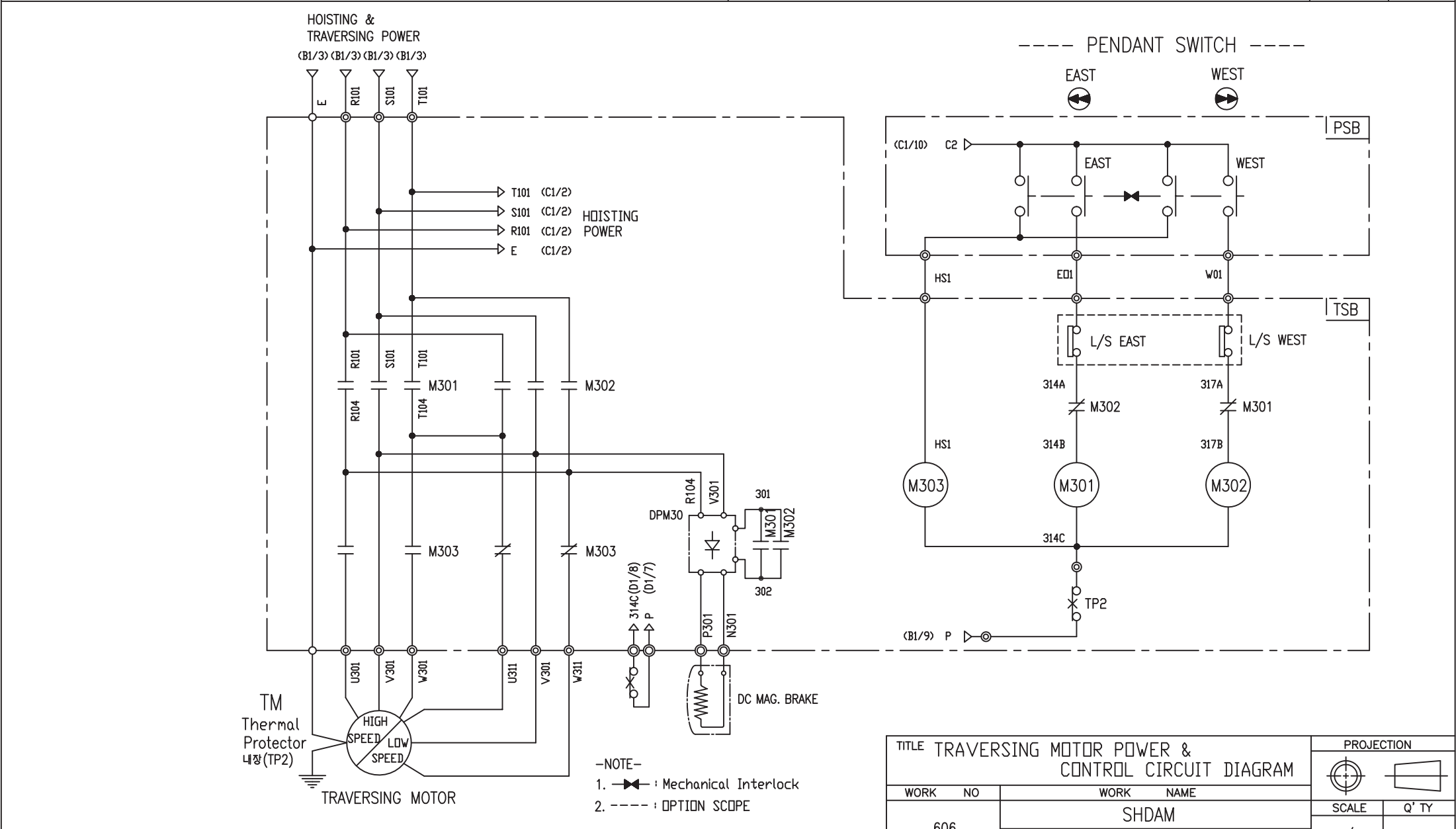
|                                       |         |           |          |            |       |
|---------------------------------------|---------|-----------|----------|------------|-------|
| TITLE                                 |         |           |          | PROJECTION |       |
| HOIST POWER & CONTROL CIRCUIT DIAGRAM |         |           |          |            |       |
| WORK NO                               |         | WORK NAME |          | SCALE      | Q' TY |
| 603                                   |         | SHDAM     |          | 1/1        | 1     |
| 220V, 440V, 460V, 480V                |         |           |          |            |       |
| DRAWN                                 | CHECKED | REVIEWED  | APPROVED | MODEL      | SHDAM |
| LEE.G.H                               |         |           |          | CODE NO    |       |
| 2010.07.30                            |         |           |          |            |       |
|                                       |         |           |          |            |       |

|                          |   |   |   |   |                            |   |   |   |    |             |    |
|--------------------------|---|---|---|---|----------------------------|---|---|---|----|-------------|----|
| 1                        | 2 | 3 | 4 | 5 | 6                          | 7 | 8 | 9 | 10 |             |    |
| TRAVERSING POWER CIRCUIT |   |   |   |   | TRAVERSING CONTROL CIRCUIT |   |   |   |    | ADDRESS NO. | D1 |



|               |                |       |                   |                  |           |
|---------------|----------------|-------|-------------------|------------------|-----------|
| SPECIFICATION | MAGNET CONTACT |       | Thermal Protector | TRAVERSING MOTOR |           |
| SYMBOLS       | M301, M302     |       | TP2               | TM               |           |
| DESCRIPTION   | GMC12          | DMC12 | 17AM032           | 0.75KW *4P       | 0.4KW *6P |
| MAKER         | LS             | DONGA | Texas Instruments | LK               |           |

|                                                                                                                  |         |                              |          |         |  |                                                                                                     |       |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|--|-----------------------------------------------------------------------------------------------------|-------|
| TITLE TRAVERSING MOTOR POWER & CONTROL CIRCUIT DIAGRAM                                                           |         |                              |          |         |  | PROJECTION<br> |       |
| WORK NO                                                                                                          |         | WORK NAME                    |          |         |  |                                                                                                     |       |
| 605                                                                                                              |         | SHDAM                        |          |         |  | SCALE                                                                                               | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         |  | 1/1                                                                                                 | 1     |
| DRAWN                                                                                                            | CHECKED | REVISED                      | APPROVED | MODEL   |  | SHDAM                                                                                               |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE NO |  |                                                                                                     |       |
| 2010.07.30                                                                                                       |         |                              |          |         |  |                                                                                                     |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |         |  |                                                                                                     |       |



| SPECIFICATION | MAGNET CONTACT   |       | Thermal Protector | SILICON RECTIFIER |        |        |        |        | TRAVERSING MOTOR   |
|---------------|------------------|-------|-------------------|-------------------|--------|--------|--------|--------|--------------------|
| SYMBOLS       | M301, M302, M303 |       | TP2               | DPM30             |        |        |        |        | TM                 |
| DESCRIPTION   | GMC12            | DMC12 | 17AM032           | AC220V            | AC380V | AC440V | AC460V | AC480V | 0.75/0.25KW *4/12P |
|               |                  |       |                   | DC99V             | DC171V | DC198V | DC207V | DC216V |                    |
| MAKER         | LS               | DONGA | Texas Instruments | LK                |        |        |        |        | LK                 |

TITLE TRAVERSING MOTOR POWER & CONTROL CIRCUIT DIAGRAM

WORK NO606

WORK NAMESHDAM

220V, 380V, 440V, 460V, 480V

PROJECTION

SCALE1/1

Q' TY1

DRAWNLEE.G.H

CHECKED

REVIEWED

APPROVED

MODEL

SHDAM

2010.07.30

CODE NO

L K HOIST CO., LTD.

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| SPECIFICATION FOR<br>ELECTRIC MOTORS        | INTERNAL IDENTIFICATION NO. | PAGE :<br>REV : |
| SCHEDULE OF TECHNICAL DATA                  |                             |                 |
| 1. SERVICE                                  | HOISTING                    |                 |
| 2. MANUFACTURE                              | LK HOIST CO. LTD            |                 |
| 3. MOTOR MODEL NO                           | 3.5 - 4 - 44                |                 |
| 4. RATED POWER                              | 3.5 KW × 4 P                |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 440 V      60HZ             |                 |
| 6. MOTOR TYPE                               | SQUIRREL CAGE ROTOR TYPE    |                 |
| 7. RATING                                   | 30 MIN                      |                 |
| 8. LOCATION                                 | IN-DOOR , OUTDOOR           |                 |
| 9. INSULATION CLASS                         | B                           |                 |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80℃                         |                 |
| 11. FULL LOAD SPEED                         | 1740 RPM                    |                 |
| 12. FULL LOAD CURRENT                       | 8.6 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 46.4 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 396 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 73.3 %                      |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 72.8 %                      |                 |
| 17. STARTING TORQUE                         | 245 %                       |                 |
| 18. TYPE OF ENCLOSURE                       | 전폐형(IP-54)                  |                 |
| 19. TYPE OF BEARING                         | PL : 6205DD    OPL : 6008ZZ |                 |
| 20. MOUNTING                                | VERTICAL                    |                 |
| 21. MAXIMUM AMBIENT TEMPURE                 | 40℃                         |                 |
| 22. BEARING LUBRICATION                     | GREASE                      |                 |
| 23. STARTING METHOD                         | FULL VOLTAGE                |                 |

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| SPECIFICATION FOR<br>ELECTRIC MOTORS        | INTERNAL IDENTIFICATION NO. | PAGE :<br>REV : |
| SCHEDULE OF TECHNICAL DATA                  |                             |                 |
| 1. SERVICE                                  | TRAVERSING                  |                 |
| 2. MANUFACTURE                              | LK HOIST CO. LTD            |                 |
| 3. MOTOR MODEL NO                           | 0.75 - 4 - 44               |                 |
| 4. RATED POWER                              | 0.75 KW × 4 P               |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 440 V      60HZ             |                 |
| 6. MOTOR TYPE                               | SQUIRREL CAGE ROTOR TYPE    |                 |
| 7. RATING                                   | 15 MIN                      |                 |
| 8. LOCATION                                 | OUTDOOR                     |                 |
| 9. INSULATION CLASS                         | B                           |                 |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 100℃                        |                 |
| 11. FULL LOAD SPEED                         | 1670 RPM                    |                 |
| 12. FULL LOAD CURRENT                       | 2.4 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 13.2 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 396 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 65 %                        |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 63 %                        |                 |
| 17. STARTING TORQUE                         | 249 %                       |                 |
| 18. TYPE OF ENCLOSURE                       | 전폐형                         |                 |
| 19. TYPE OF BEARING                         | PL : 6008DD    OPL : 6207ZZ |                 |
| 20. MOUNTING                                | VERTICAL                    |                 |
| 21. MAXIMUM AMBIENT TEMPURE                 | 40℃                         |                 |
| 22. BEARING LUBRICATION                     | GREASE                      |                 |
| 23. STARTING METHOD                         | FULL VOLTAGE                |                 |

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| SPECIFICATION FOR<br>ELECTRIC MOTORS        | INTERNAL IDENTIFICATION NO. | PAGE :<br>REV : |
| SCHEDULE OF TECHNICAL DATA                  |                             |                 |
| 1. SERVICE                                  | TRAVERSING                  |                 |
| 2. MANUFACTURE                              | LK HOIST CO. LTD            |                 |
| 3. MOTOR MODEL NO                           | 0.4 - 6 - 44                |                 |
| 4. RATED POWER                              | 0.4 KW × 6 P                |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 440 V      60HZ             |                 |
| 6. ROTOR TYPE                               | SQUIRREL CAGE ROTOR TYPE    |                 |
| 7. RATING                                   | 15 MIN                      |                 |
| 8. LOCATION                                 | OUTDOOR                     |                 |
| 9. INSULATION CLASS                         | B                           |                 |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 100℃                        |                 |
| 11. FULL LOAD SPEED                         | 1140 RPM                    |                 |
| 12. FULL LOAD CURRENT                       | 1.6 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 8.8 A                       |                 |
| 14. MINIMUM STARTING VOLTAGE                | 396 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 65 %                        |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 63 %                        |                 |
| 17. STARTING TORQUE                         | 250 %                       |                 |
| 18. TYPE OF ENCLOSURE                       | 전폐형                         |                 |
| 19. TYPE OF BEARING                         | PL : 6008DD    OPL : 6207ZZ |                 |
| 20. MOUNTING                                | VERTICAL                    |                 |
| 21. MAXIMUM AMBIENT TEMPERATURE             | 40℃                         |                 |
| 22. BEARING LUBRICATION                     | GREASE                      |                 |
| 23. STARTING METHOD                         | FULL VOLTAGE                |                 |

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| SPECIFICATION FOR<br>ELECTRIC MOTORS        | INTERNAL IDENTIFICATION NO. | PAGE :<br>REV : |
| SCHEDULE OF TECHNICAL DATA                  |                             |                 |
| 1. SERVICE                                  | TRAVERSING                  |                 |
| 2. MANUFACTURE                              | LK HOIST CO. LTD            |                 |
| 3. MOTOR MODEL NO                           | 0.75/0.25 - 4/12 - 44       |                 |
| 4. RATED POWER                              | 0.75/0.25 KW × 4/12 P       |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 440 V                       | 60HZ            |
| 6. MOTOR TYPE                               | SQUIRREL CAGE ROTOR TYPE    |                 |
| 7. RATING                                   | 15 MIN                      |                 |
| 8. LOCATION                                 | OUTDOOR                     |                 |
| 9. INSULATION CLASS                         | B                           |                 |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 100℃                        |                 |
| 11. FULL LOAD SPEED                         | 1670 / 550 RPM              |                 |
| 12. FULL LOAD CURRENT                       | 2.4 / 1.5 A                 |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 13.2 / 8.25 A               |                 |
| 14. MINIMUM STARTING VOLTAGE                | 396 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 65 / 48 %                   |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 63 / 46 %                   |                 |
| 17. STARTING TORQUE                         | 250 / 243 %                 |                 |
| 18. TYPE OF ENCLOSURE                       | 전폐형                         |                 |
| 19. TYPE OF BEARING                         | PL : 6008DD OPL : 6207ZZ    |                 |
| 20. MOUNTING                                | VERTICAL                    |                 |
| 21. MAXIMUM AMBIENT TEMPURE                 | 40℃                         |                 |
| 22. BEARING LUBRICATION                     | GREASE                      |                 |
| 23. STARTING METHOD                         | FULL VOLTAGE                |                 |