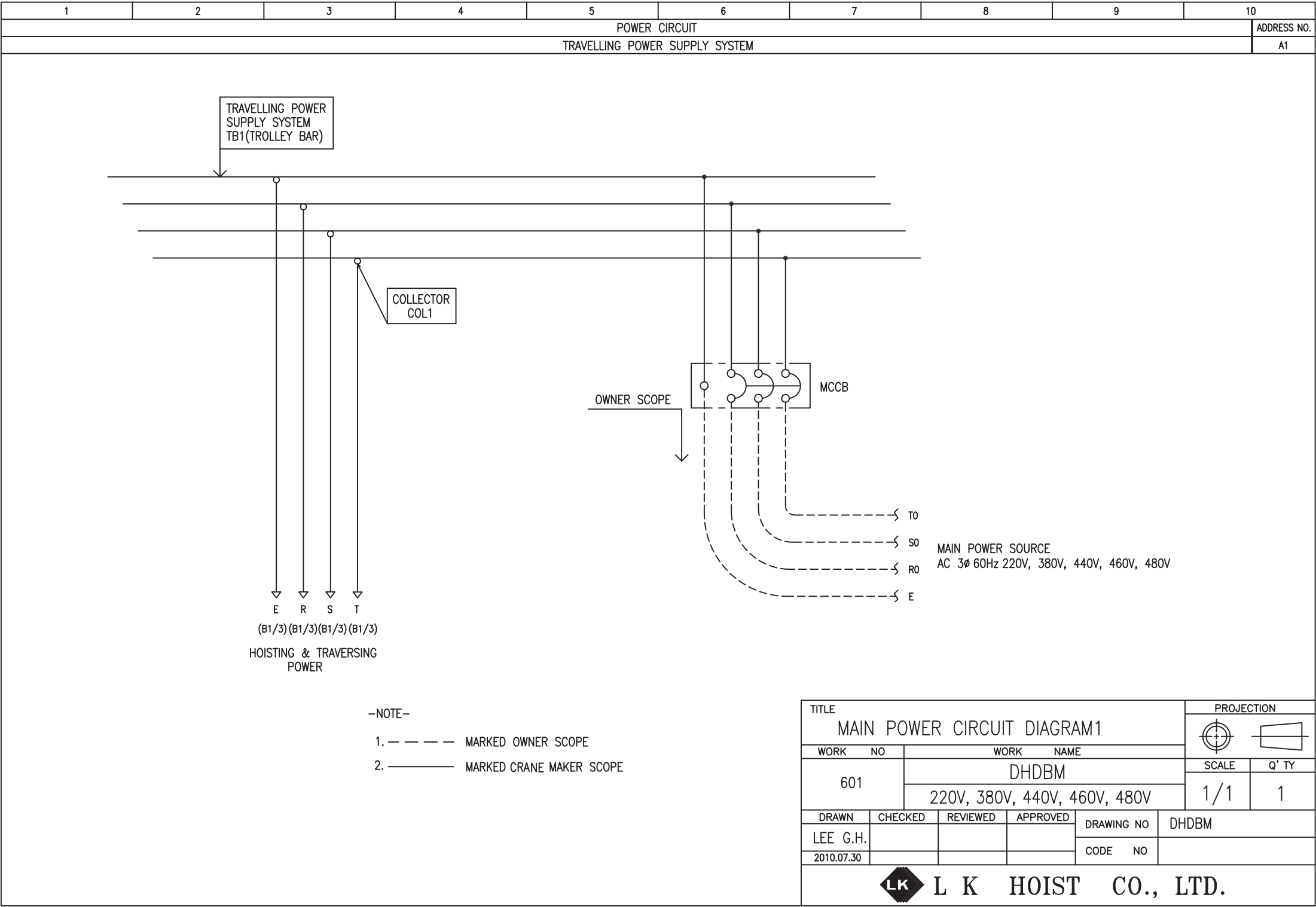
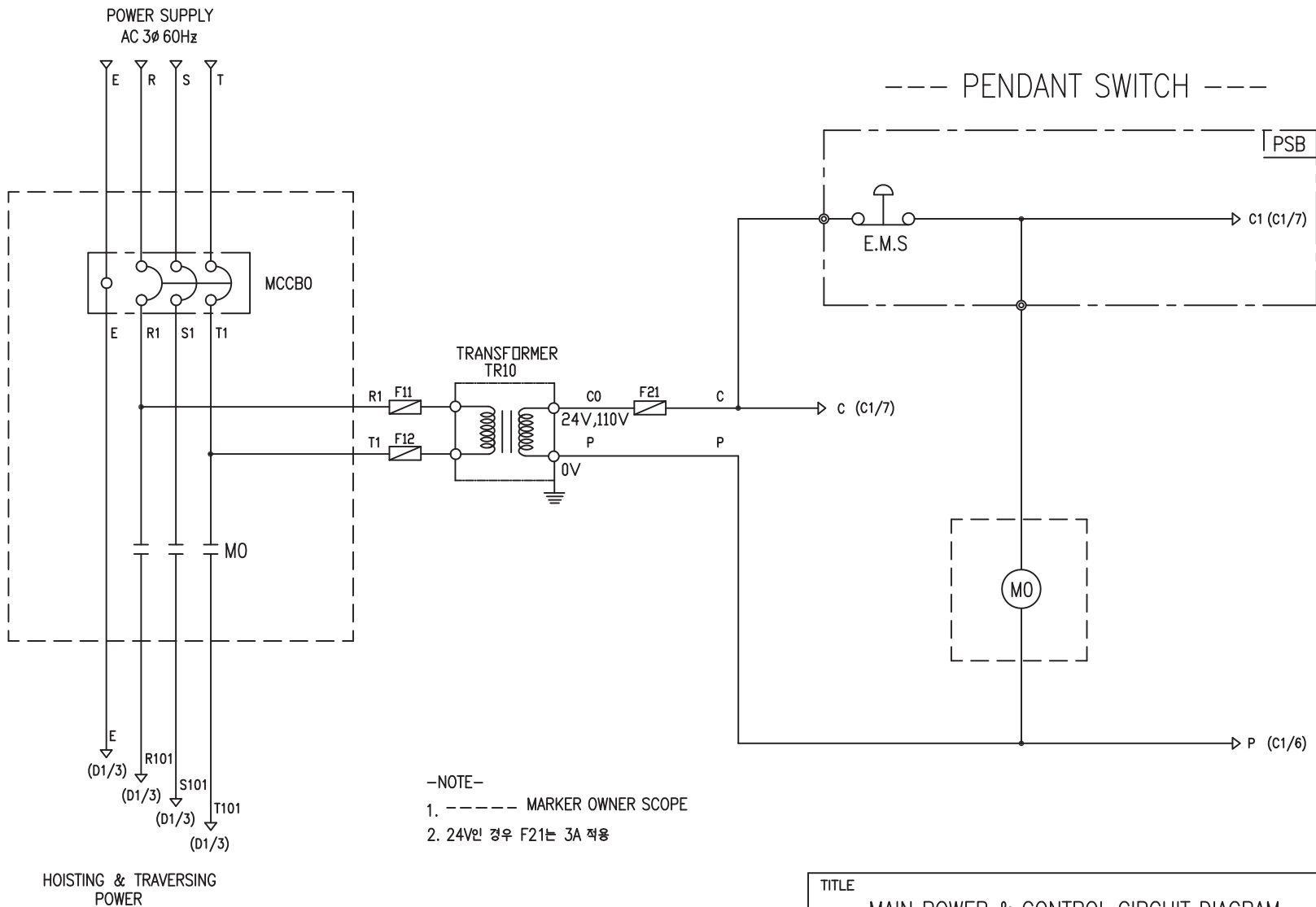
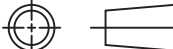




|               |   |   |   |   |                 |   |   |   |    |             |    |
|---------------|---|---|---|---|-----------------|---|---|---|----|-------------|----|
| 1             | 2 | 3 | 4 | 5 | 6               | 7 | 8 | 9 | 10 |             |    |
| POWER CIRCUIT |   |   |   |   | CONTROL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

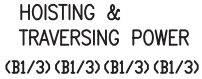


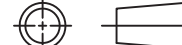
| SPECIFICATION | NO FUSE BREAKER |     | MAGNET CONTACT |       | TRANSFORMER | FUSE          |
|---------------|-----------------|-----|----------------|-------|-------------|---------------|
| SYMBOLS       | MCCB0           |     | M0             |       | TR10        | F11, F12, F21 |
| DESCRIPTION   | 220V            | 50A | GMC22          | DMC22 | 60VA        | 1A            |
|               | 380V            | 30A |                |       |             |               |
|               | 440V            | 30A |                |       |             |               |
|               | 460V            | 30A |                |       |             |               |
|               | 480V            | 30A |                |       |             |               |
| MAKER         | LS              |     | LS             | DONGA | LK          | —             |

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

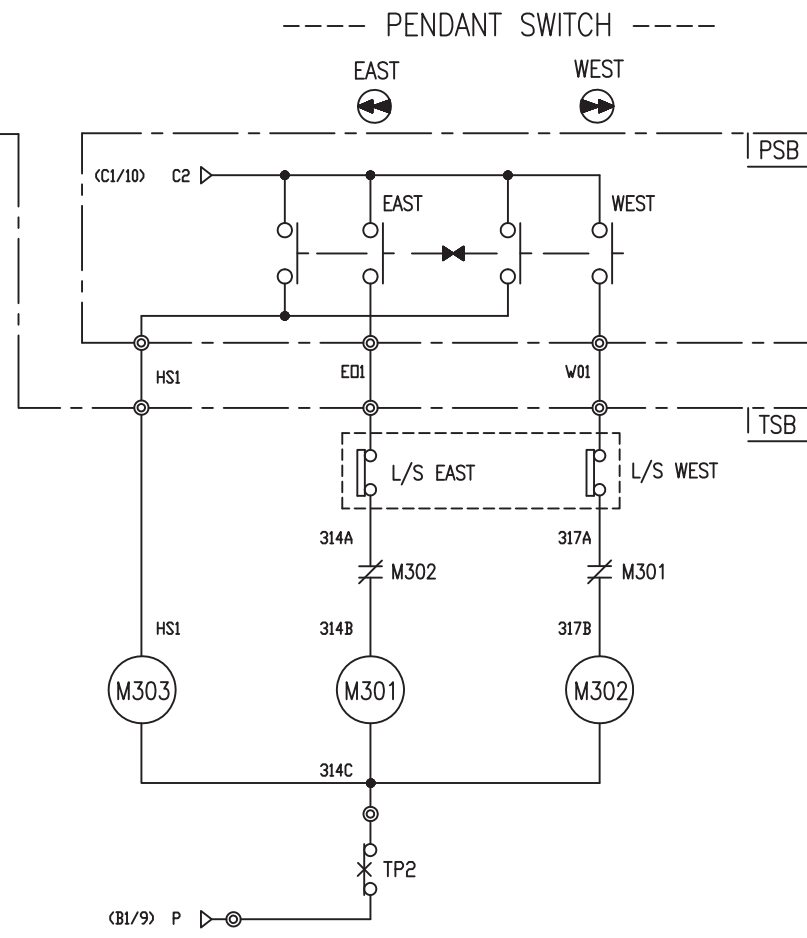
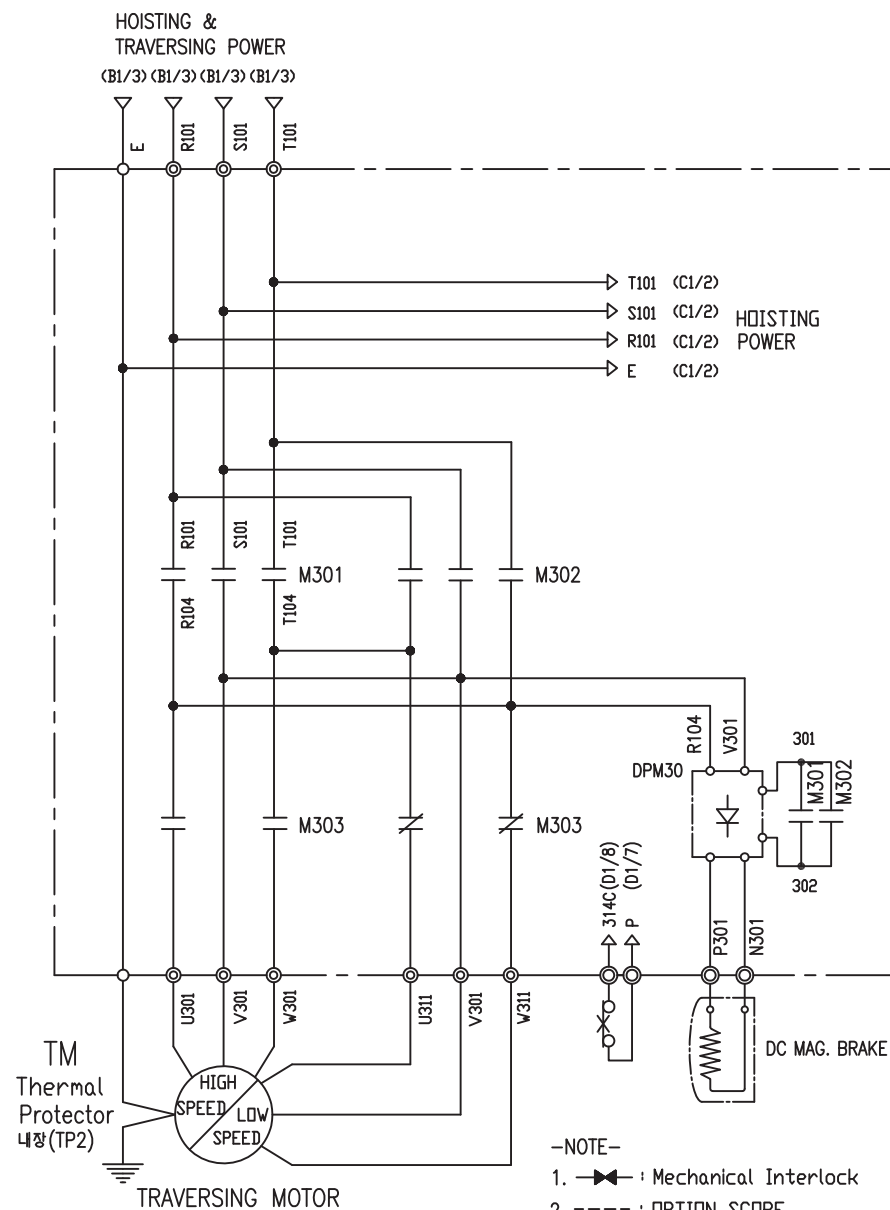


|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

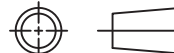


|                                                                                                           |         |                              |          |         |  |                                                                                                     |  |
|-----------------------------------------------------------------------------------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

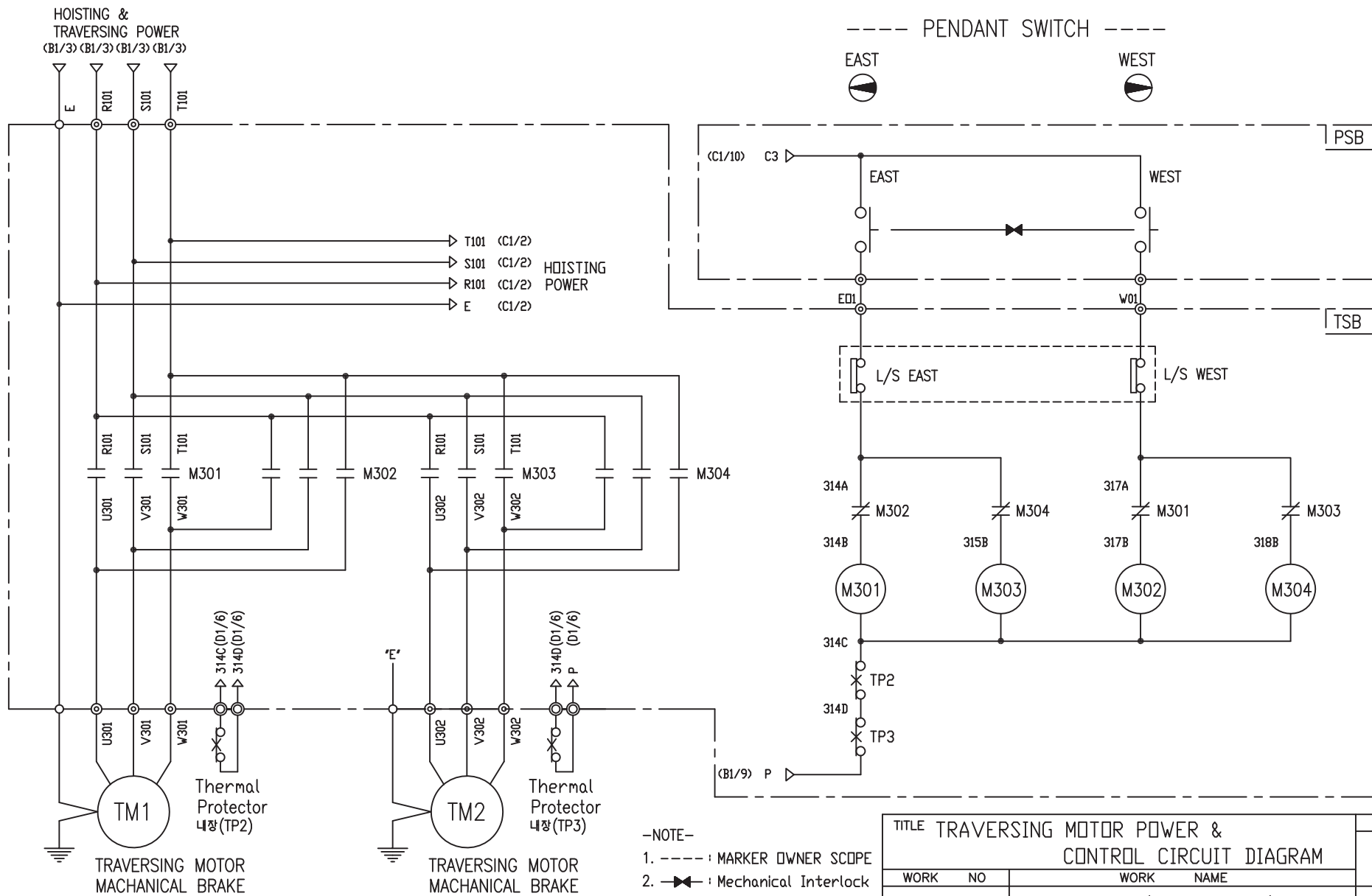
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|--------------------------|---|---|---|---|----------------------------|---|---|---|----|-------------|----|
| 1                        | 2 | 3 | 4 | 5 | 6                          | 7 | 8 | 9 | 10 |             |    |
| TRAVERSING POWER CIRCUIT |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



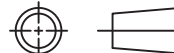
|               |                  |       |                   |                   |        |        |        |        |                    |
|---------------|------------------|-------|-------------------|-------------------|--------|--------|--------|--------|--------------------|
| SPECIFICATION | 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                                                           |         |                              |          |         | PROJECTION<br> |       |
| WORK                                                                                                             | NO      | WORK NAME                    |          |         |                                                                                                     |       |
| 606                                                                                                              |         | DHDBM(HOOK간 거리 1M이하)         |          |         | SCALE                                                                                               | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         | 1/1                                                                                                 | 1     |
| DRAWN                                                                                                            | CHECKED | REVISED                      | APPROVED | MODEL   | DBM                                                                                                 |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE NO |                                                                                                     |       |
| 2010.07.30                                                                                                       |         |                              |          |         |                                                                                                     |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |         |                                                                                                     |       |

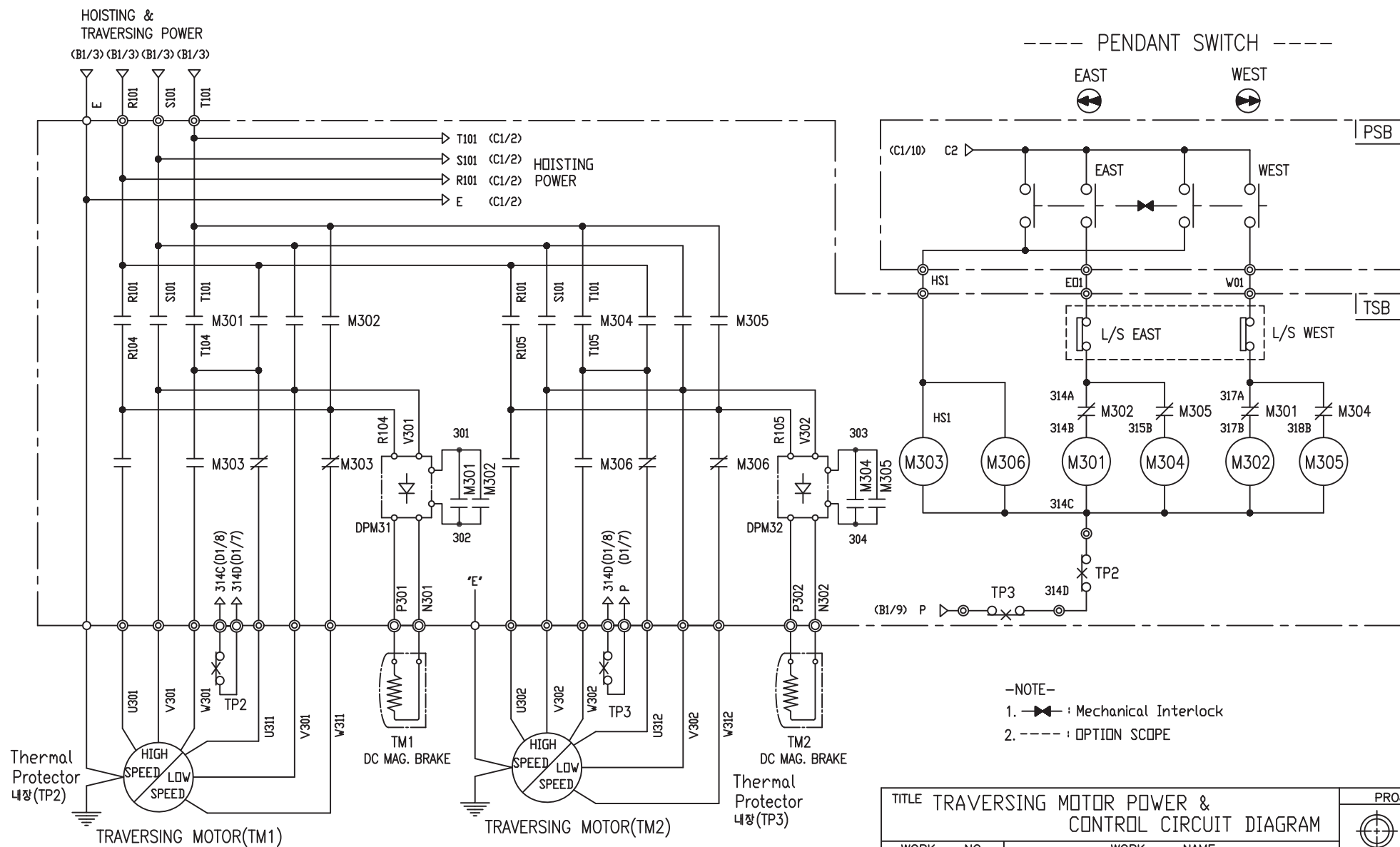
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|--------------------------|---|---|---|---|----------------------------|---|---|---|----|-------------|----|
| 1                        | 2 | 3 | 4 | 5 | 6                          | 7 | 8 | 9 | 10 |             |    |
| TRAVERSING POWER CIRCUIT |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



|               |                        |       |                   |                  |                 |
|---------------|------------------------|-------|-------------------|------------------|-----------------|
| SPECIFICATION | MAGNET CONTACT         |       | Thermal Protector | TRAVERSING MOTOR |                 |
| SYMBOLS       | M301, M302, M303, M304 |       | TP2, TP3          | TM1, TM2         |                 |
| DESCRIPTION   | GMC12                  | DMC12 | 17AM032           | 0.75KW *4P(2set) | 0.4KW *6P(2set) |
| MAKER         | LS                     | DONGA | Texas Instruments | LK               |                 |

|                                                                                                                  |         |                              |          |         |                                                                                                     |       |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|-----------------------------------------------------------------------------------------------------|-------|
| TITLE TRAVERSING MOTOR POWER & CONTROL CIRCUIT DIAGRAM                                                           |         |                              |          |         | PROJECTION<br> |       |
| WORK                                                                                                             | NO      | WORK NAME                    |          |         |                                                                                                     |       |
| 607                                                                                                              |         | DHDBM (H00K간 거리 1M이상)        |          |         | SCALE                                                                                               | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         | 1/1                                                                                                 | 1     |
| DRAWN                                                                                                            | CHECKED | REVIEWED                     | APPROVED | MODEL   | DHDAM                                                                                               |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE NO |                                                                                                     |       |
| 2010.07.30                                                                                                       |         |                              |          |         |                                                                                                     |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |         |                                                                                                     |       |

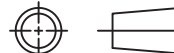
|                          |   |   |   |   |                            |   |   |   |    |             |    |
|--------------------------|---|---|---|---|----------------------------|---|---|---|----|-------------|----|
| 1                        | 2 | 3 | 4 | 5 | 6                          | 7 | 8 |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



-NOTE-

1.  : Mechanical Interlock
2. ---- : OPTION SCOPE

|               |                                      |       |                   |                   |        |        |        |        |                              |
|---------------|--------------------------------------|-------|-------------------|-------------------|--------|--------|--------|--------|------------------------------|
| SPECIFICATION | MAGNET CONTACT                       |       | Thermal Protector | SILICON RECTIFIER |        |        |        |        | TRAVERSING MOTOR             |
| SYMBOLS       | M301, M302, M303<br>M304, M305, M306 |       | TP2, TP3          | DPM31, DPM32      |        |        |        |        | TM1, TM2                     |
| DESCRIPTION   | GMC12                                | DMC12 | 17AM032           | AC220V            | AC380V | AC440V | AC460V | AC480V | 0.75/0.25KW *4/12P<br>(2set) |
|               |                                      |       |                   | DC99V             | DC171V | DC198V | DC207V | DC216V |                              |
| MAKER         | LS                                   | DONGA | Texas Instruments | LK                |        |        |        |        | LK                           |

|                                                                                                                  |         |                              |          |         |                                                                                                     |       |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|-----------------------------------------------------------------------------------------------------|-------|
| TITLE TRAVERSING MOTOR POWER & CONTROL CIRCUIT DIAGRAM                                                           |         |                              |          |         | PROJECTION<br> |       |
| WORK                                                                                                             | NO      | WORK NAME                    |          |         |                                                                                                     |       |
| 608                                                                                                              |         | DHDBM (HOOK간 거리 1M이상)        |          |         | SCALE                                                                                               | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         | 1/1                                                                                                 | 1     |
| DRAWN                                                                                                            | CHECKED | REVIEWED                     | APPROVED | MODEL   | DHDAM                                                                                               |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE NO |                                                                                                     |       |
| 2010.07.30                                                                                                       |         |                              |          |         |                                                                                                     |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |         |                                                                                                     |       |

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| 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                           | 4.4/2.2 - 2/6 - 46          |                 |
| 4. RATED POWER                              | 4.4/2.2 KW × 2/6 P          |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 460 V      60HZ             |                 |
| 6. MOTOR TYPE                               | SQUIRREL CAGE ROTOR TYPE    |                 |
| 7. RATING                                   | 30 MIN                      |                 |
| 8. LOCATION                                 | OUTDOOR                     |                 |
| 9. INSULATION CLASS                         | B                           |                 |
| 10. DESIGN TEMPERATURE RISE (BY RESISTANCE) | 80℃                         |                 |
| 11. FULL LOAD SPEED                         | 3440/1140 RPM               |                 |
| 12. FULL LOAD CURRENT                       | 11/5.3 A                    |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 54/28 A                     |                 |
| 14. MINIMUM STARTING VOLTAGE                | 414 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 73/73 %                     |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 71/71 %                     |                 |
| 17. STARTING TORQUE                         | 243 %                       |                 |
| 18. TYPE OF ENCLOSURE                       | 전폐형                         |                 |
| 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 - 46               |                 |
| 4. RATED POWER                              | 0.75 KW × 4 P               |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 460 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                       | 2.3 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 12.6 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 414 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 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 - 46                |                 |
| 4. RATED POWER                              | 0.4 KW × 6 P                |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 460 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                       | 1.53 A                      |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 8.4 A                       |                 |
| 14. MINIMUM STARTING VOLTAGE                | 414 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 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 - 46       |                 |
| 4. RATED POWER                              | 0.75/0.25 KW × 4/12 P       |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 460 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                       | 2.3 / 1.44 A                |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 12.7 / 7.92 A               |                 |
| 14. MINIMUM STARTING VOLTAGE                | 414 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 65 / 48 %                   |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 63 / 45 %                   |                 |
| 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                |                 |