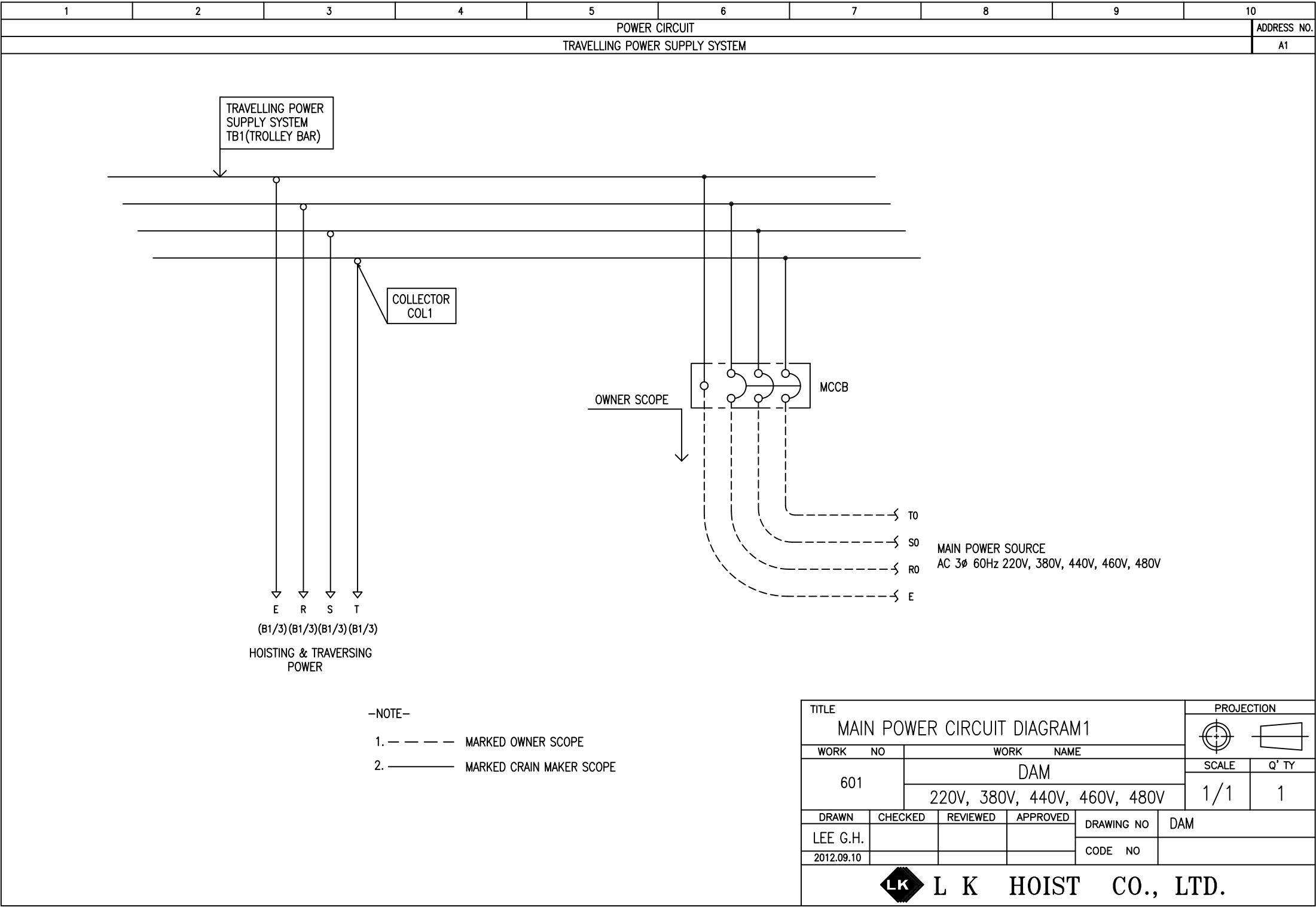
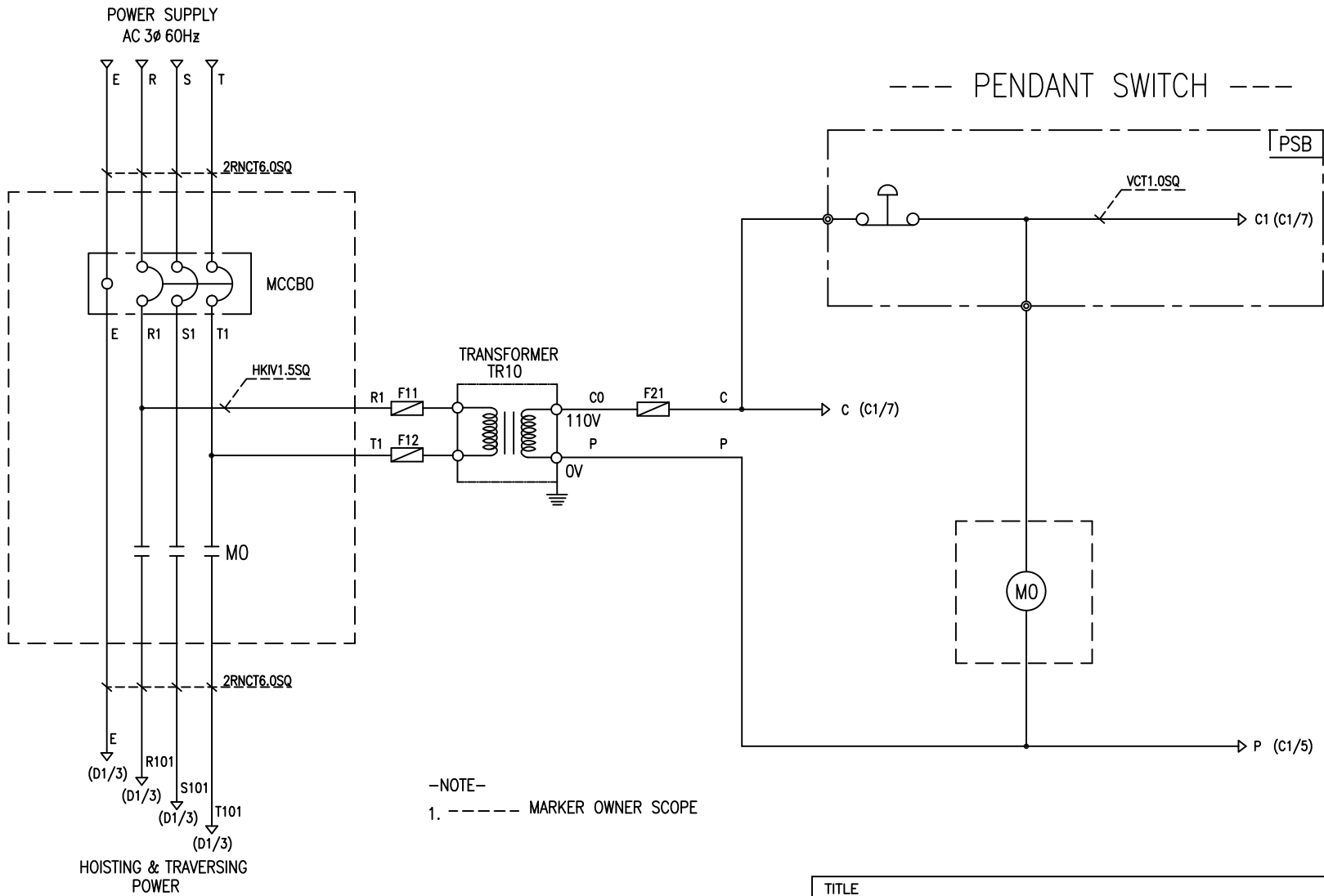




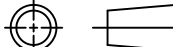
|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|

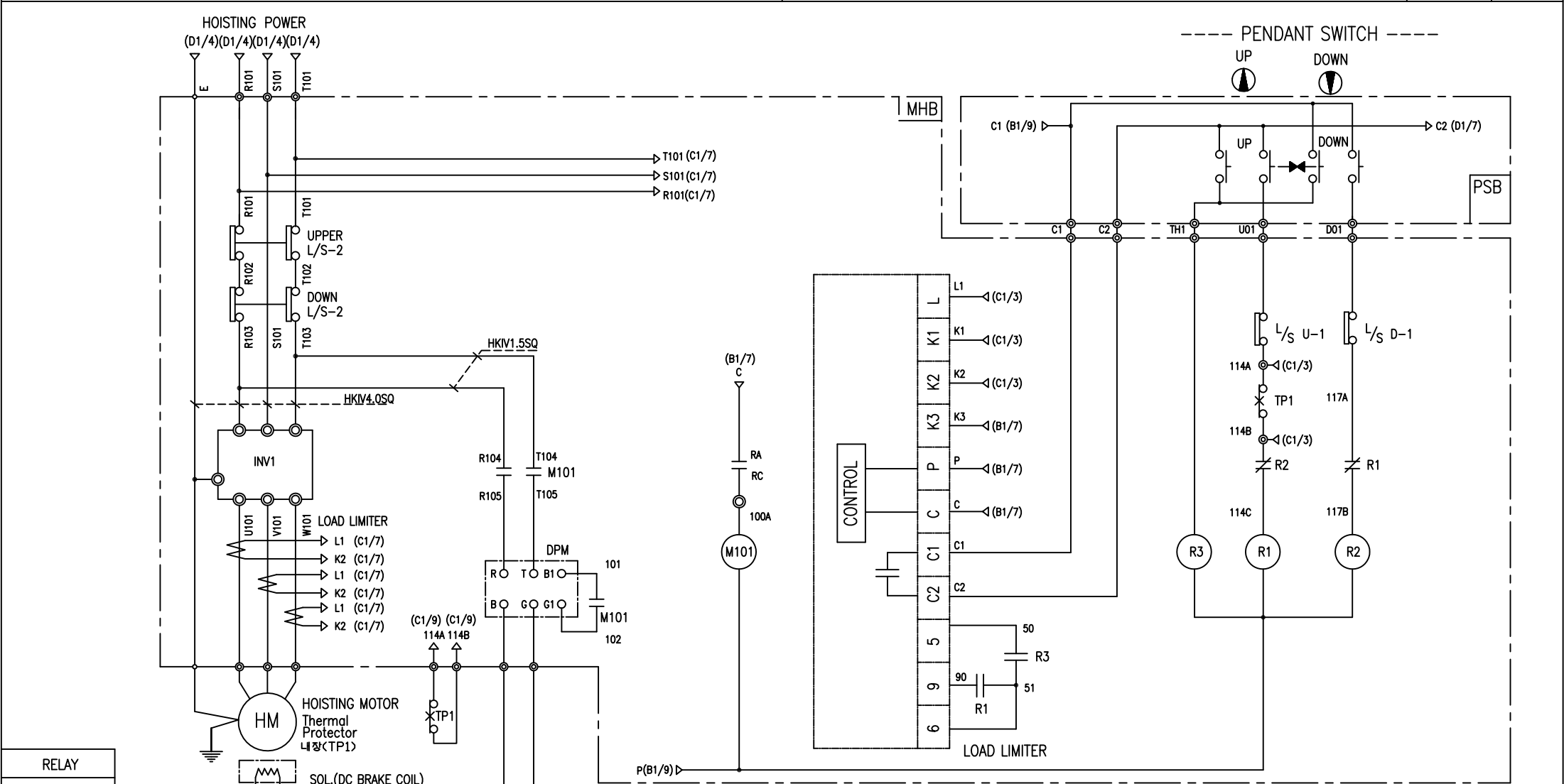


-NOTE-

1. ----- MARKER OWNER SCOPE

| SPECIFICATION | NO FUSE BREAKER |     | MAGNET CONTACT |        | TRANSFORMER | FUSE          |
|---------------|-----------------|-----|----------------|--------|-------------|---------------|
| SYMBOLS       | MCCB0           |     | M0             |        | TR10        | F11, F12, F21 |
| DESCRIPTION   | 220V            | 30A | GMC22          | DMC-22 | 40VA        | 1A            |
|               | 380V            | 15A |                |        |             |               |
|               | 440V            | 15A |                |        |             |               |
|               | 460V            | 15A |                |        |             |               |
|               | 480V            | 15A |                |        |             |               |
| MAKER         | LS              |     | LS             | DONGA  | LK          | —             |

|                                                                                                                  |         |                              |          |       |                                                                                       |       |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|-------|---------------------------------------------------------------------------------------|-------|
| TITLE                                                                                                            |         |                              |          |       | PROJECTION                                                                            |       |
| MAIN POWER & CONTROL CIRCUIT DIAGRAM                                                                             |         |                              |          |       |  |       |
| WORK                                                                                                             | NO      | WORK                         |          |       | NAME                                                                                  |       |
| 602                                                                                                              |         | DAM                          |          |       | SCALE                                                                                 | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |       | 1/1                                                                                   | 1     |
| DRAWN                                                                                                            | CHECKED | REVISED                      | APPROVED | MODEL | DAM                                                                                   |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE  | NO                                                                                    |       |
| 2012.09.10                                                                                                       |         |                              |          |       |                                                                                       |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |       |                                                                                       |       |

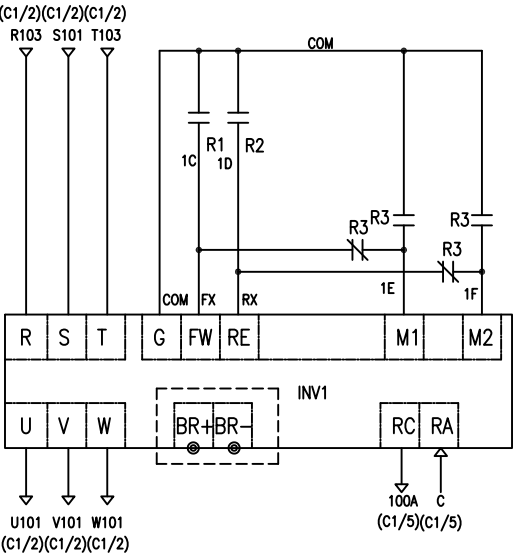


|            |
|------------|
| RELAY      |
| R1, R2, R3 |
| 4A4B       |
| KACON      |

|               |                |              |                   |        |        |        |                   |             |
|---------------|----------------|--------------|-------------------|--------|--------|--------|-------------------|-------------|
| SPECIFICATION | MAGNET CONTACT | LOAD LIMITER | SILICON RECTIFIER |        |        |        | Thermal Protector | HOIST MOTOR |
| SYMBOLS       | M101           | -            | DPM               |        |        |        | TP1               | HM          |
| DESCRIPTION   | DMC25C         | ALD-90 INV   | AC220V            | AC380V | AC440V | AC460V | AC480V            | 17AM032     |
| MAKER         | DONG-A         | ASAN         | DC99V             | DC171V | DC198V | DC207V | DC216V            | 1.8Kw * 4P  |
|               |                |              | LK                |        |        |        | Texas Instruments | LK          |

-NOTE-  
1. : Mechanical Interlock

|                                                |         |                  |          |                  |     |                |            |
|------------------------------------------------|---------|------------------|----------|------------------|-----|----------------|------------|
| TITLE<br>HOIST POWER & CONTROL CIRCUIT DIAGRAM |         |                  |          |                  |     | PROJECTION<br> |            |
| WORK NO<br>603                                 |         | WORK NAME<br>DAM |          |                  |     | SCALE<br>1/1   | Q' TY<br>1 |
| 220V, 380V, 440V, 460V, 480V                   |         |                  |          |                  |     |                |            |
| DRAWN<br>LEE.G.H                               | CHECKED | REVIEWED         | APPROVED | MODEL<br>CODE NO | DAM |                |            |
| 2012.09.10                                     |         |                  |          |                  |     |                |            |
|                                                |         |                  |          |                  |     |                |            |

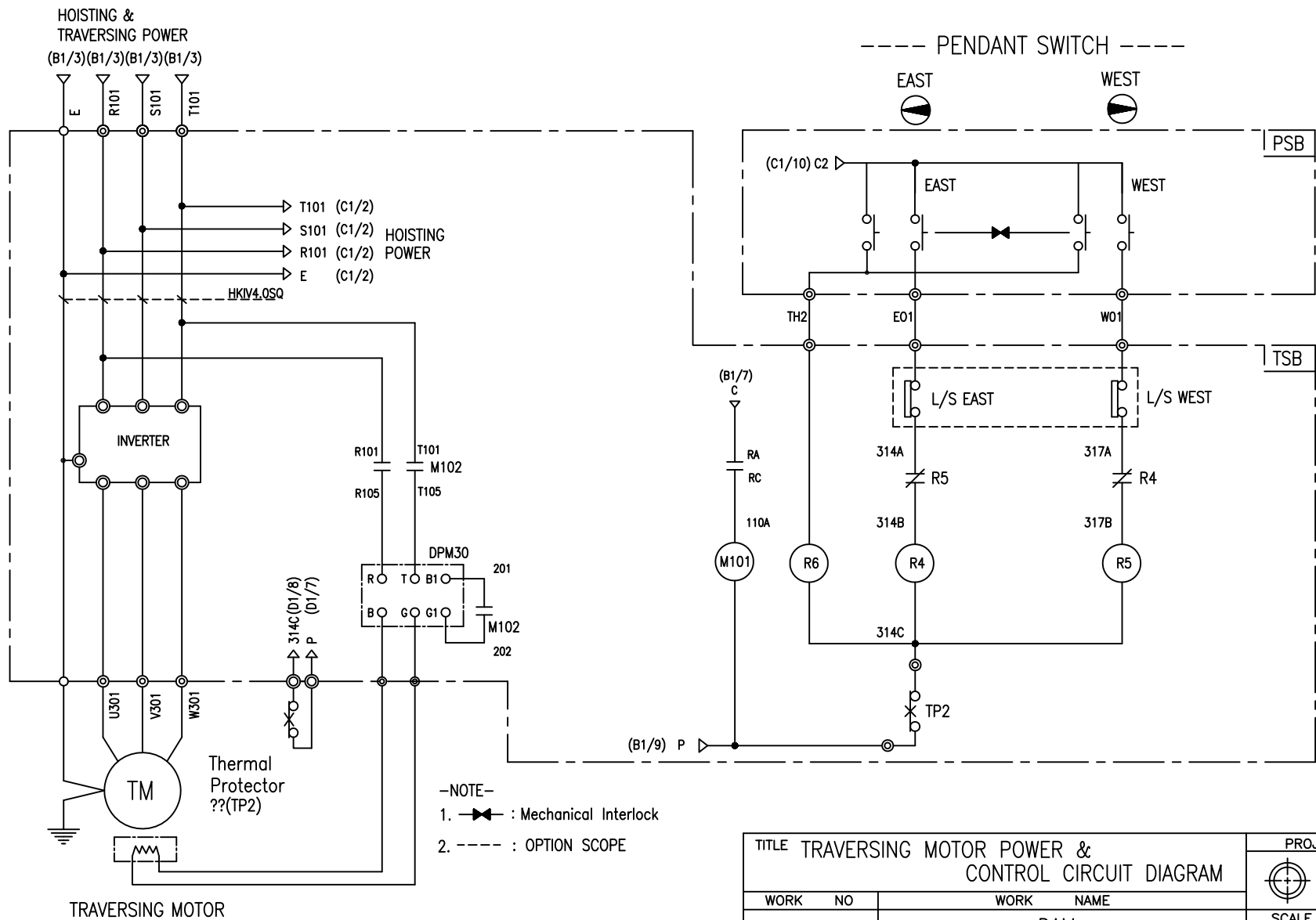


—NOTE—  
1. ----- : OPTION SCOPE

|               |          |                  |
|---------------|----------|------------------|
| SPECIFICATION | INVERTER | BRAKING RESISTOR |
| SYMBOLS       | INV1     | BR               |
| DESCRIPTION   | 2.2KW    | 300W 250 OHM     |
| MAKER         | ROCKWELL | —                |

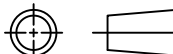
|                                                                                                           |  |                              |          |          |                                                                                                                                                                             |     |
|-----------------------------------------------------------------------------------------------------------|--|------------------------------|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| TITLE                                                                                                     |  |                              |          |          | (D1/6) PROJECTION                                                                                                                                                           |     |
| INVERTER CONTROL CIRCUIT DIAGRAM                                                                          |  |                              |          |          |   |     |
| WORK NO                                                                                                   |  | WORK NAME                    |          |          | SCALE                                                                                                                                                                       |     |
| 604                                                                                                       |  | HOISTING                     |          |          | Q' TY                                                                                                                                                                       |     |
|                                                                                                           |  | 220V, 380V, 440V, 460V, 480V |          |          | 1/1                                                                                                                                                                         |     |
| DRAWN                                                                                                     |  | CHECKED                      | REVIEWED | APPROVED | MODEL                                                                                                                                                                       | DAM |
| LEE.G.H                                                                                                   |  |                              |          |          | CODE NO                                                                                                                                                                     |     |
| 2012.09.10                                                                                                |  |                              |          |          |                                                                                                                                                                             |     |
|  L K HOIST CO., LTD. |  |                              |          |          |                                                                                                                                                                             |     |

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

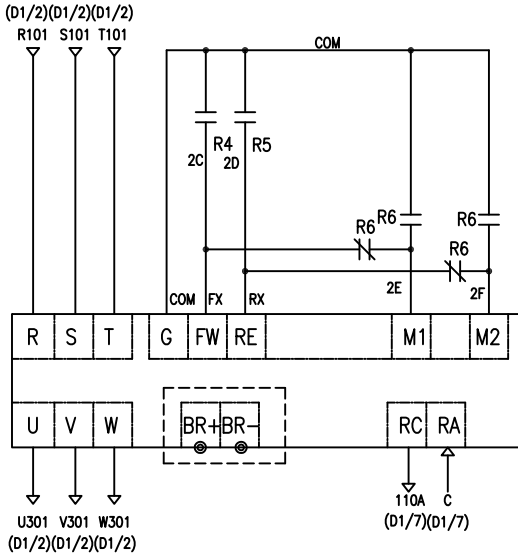


|            |
|------------|
| RELAY      |
| R4, R5, R6 |
| 4A4B       |
| KACON      |

|               |                |                   |        |        |        |        |                   |                  |           |
|---------------|----------------|-------------------|--------|--------|--------|--------|-------------------|------------------|-----------|
| SPECIFICATION | MAGNET CONTACT | SILICON RECTIFIER |        |        |        |        | Thermal Protector | TRAVERSING MOTOR |           |
| SYMBOLS       | M102           | DPM30             |        |        |        |        | TP2               | TM               |           |
| DESCRIPTION   | DMC12          | AC220V            | AC380V | AC440V | AC460V | AC480V | 17AM032           | 0.75KW *4P       | 0.4KW *6P |
|               |                | DC99V             | DC171V | DC198V | DC207V | DC216V |                   |                  |           |
| MAKER         | DONG-A         | LK                |        |        |        |        | Texas Instruments | LK               |           |

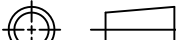
|                                                                                                                  |         |                              |          |         |     |                                                                                                     |       |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|-----|-----------------------------------------------------------------------------------------------------|-------|
| TITLE TRAVERSING MOTOR POWER & CONTROL CIRCUIT DIAGRAM                                                           |         |                              |          |         |     | PROJECTION<br> |       |
| WORK NO                                                                                                          |         | WORK NAME                    |          |         |     |                                                                                                     |       |
| 605                                                                                                              |         | DAM                          |          |         |     | SCALE                                                                                               | Q' TY |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         |     | 1/1                                                                                                 | 1     |
| DRAWN                                                                                                            | CHECKED | REVIEWED                     | APPROVED | MODEL   | DAM |                                                                                                     |       |
| LEE.G.H                                                                                                          |         |                              |          | CODE NO |     |                                                                                                     |       |
| 2012.09.10                                                                                                       |         |                              |          |         |     |                                                                                                     |       |
|  <b>L K HOIST CO., LTD.</b> |         |                              |          |         |     |                                                                                                     |       |

|                       |   |   |   |   |   |   |   |   |             |    |
|-----------------------|---|---|---|---|---|---|---|---|-------------|----|
| 1                     | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10          |    |
| HOIST CONTROL CIRCUIT |   |   |   |   |   |   |   |   | ADDRESS NO. | D2 |



1. ----- : OPTION SCOPE

|               |          |                  |
|---------------|----------|------------------|
| SPECIFICATION | INVERTER | BRAKING RESISTOR |
| SYMBOLS       | INV2     | BR               |
| DESCRIPTION   | 0.75KW   | 80W 750 OHM      |
| MAKER         | ROCKWELL | —                |

|                                                                                                                  |         |                              |          |         |                                                                                       |     |            |  |
|------------------------------------------------------------------------------------------------------------------|---------|------------------------------|----------|---------|---------------------------------------------------------------------------------------|-----|------------|--|
| TITLE                                                                                                            |         |                              |          |         | (01/6)                                                                                |     | PROJECTION |  |
| INVERTER CONTROL CIRCUIT DIAGRAM                                                                                 |         |                              |          |         |  |     |            |  |
| WORK NO                                                                                                          |         | WORK NAME                    |          |         |                                                                                       |     |            |  |
| 606                                                                                                              |         | TRAVERSING                   |          |         | SCALE                                                                                 |     | Q' TY      |  |
|                                                                                                                  |         | 220V, 380V, 440V, 460V, 480V |          |         | 1/1                                                                                   |     | 1          |  |
| DRAWN                                                                                                            | CHECKED | REVIEWED                     | APPROVED | MODEL   |                                                                                       | DAM |            |  |
| LEE.G.H                                                                                                          |         |                              |          |         |                                                                                       |     |            |  |
| 2012.09.10                                                                                                       |         |                              |          | CODE NO |                                                                                       |     |            |  |
|  <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                           | 1.8 - 4 - 22                |                 |
| 4. RATED POWER                              | 1.8 KW × 4 P                |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 220 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                       | 9.3 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 46.7 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 198 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 72.5 %                      |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 70.1 %                      |                 |
| 17. STARTING TORQUE                         | 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                |                 |

|                                             |                             |                 |
|---------------------------------------------|-----------------------------|-----------------|
| 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 - 22               |                 |
| 4. RATED POWER                              | 0.75 KW × 4 P               |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 220 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                       | 4.8 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 26.4 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 198 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 - 22                |                 |
| 4. RATED POWER                              | 0.4 KW × 6 P                |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 220 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                       | 3.2 A                       |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 17.5 A                      |                 |
| 14. MINIMUM STARTING VOLTAGE                | 198 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 - 22       |                 |
| 4. RATED POWER                              | 0.75/0.25 KW × 4/12 P       |                 |
| 5. RATED VOLTAGE AND FREQUENCY              | 220 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                       | 4.8 / 3.0 A                 |                 |
| 13. STARTING CURRENT AT RATED VOLTAGE       | 26.4 / 16.5 A               |                 |
| 14. MINIMUM STARTING VOLTAGE                | 198 V                       |                 |
| 15. EFFICIENCY AT 100% RATED LOAD           | 65 / 48 %                   |                 |
| 16. POWER FACTOR AT 100% RATED LOAD         | 63 / 46 %                   |                 |
| 17. STARTING TORQUE                         | 249 / 245 %                 |                 |
| 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                |                 |