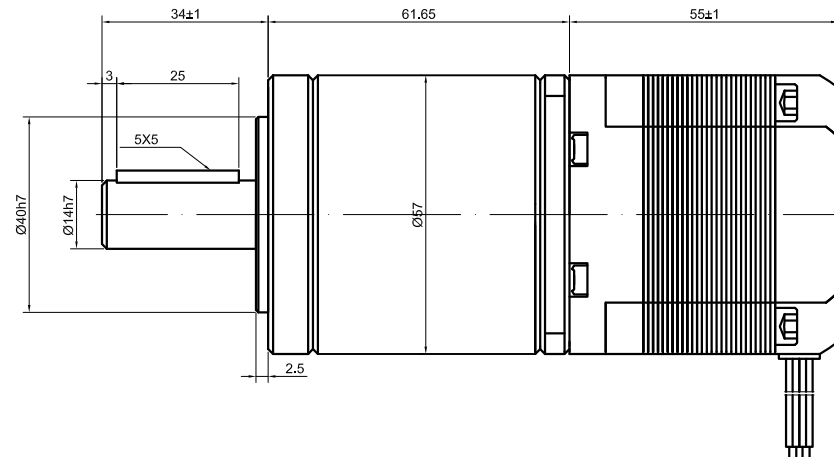
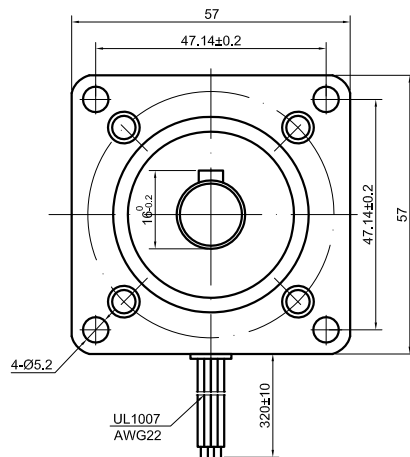


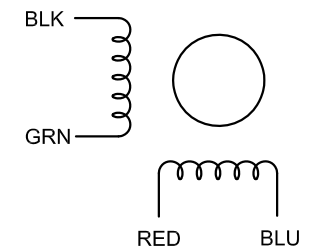


| SPECIFICATION                         | CONNECTION | BIPOLAR    |
|---------------------------------------|------------|------------|
| VOTAGE(VOC)                           |            | 2.50       |
| AMPS/PHASE                            |            | 2.80       |
| RESISTANCE/PHASE(Ohms)@25°C           |            | 0.90±10%   |
| INDUCTANCE/PHASE(mH)@1KHz             |            | 2.80±20%   |
| HOLDING TORQUE w/o GEARBOX(Nm)[lb-in] |            | 1.03[9.12] |
| GEAR RATIO                            |            | 50         |
| EFFICIENCY                            |            | 90.00%     |
| STEP ANGLE w/o GEARBOX(°)             |            | 1.80       |
| BACKLASH@NO-LOAD(arcmin)              |            | <=25       |
| MAX.PERMISSIBLE TORQUE(Nm)            |            | 25.00      |
| MOMENT PERMISSIBLE TORQUE(Nm)         |            | 40.00      |
| WEIGHT(kg)                            |            | 1.80       |
| LIFE(h)                               |            | 20000.00   |
| AMBIENT TEMPERATURE(°C)               |            | -10 - 90   |
| INSULATION CLASS                      |            | B          |
| NOISE(bB)                             |            | <=50       |
| MAX. RADIAL LOAD(N)                   |            | 400        |

| TYPE OF CONNECTION<br>(EXTERN) |         | MOTOR |         |
|--------------------------------|---------|-------|---------|
| PIN NO                         | BIPOLAR | LEADS | WINDING |
| 1                              | A —     | BLK   |         |
| 2                              | A\ —    | GRN   |         |
| 3                              | B —     | RED   |         |
| 4                              | B\ —    | BLU   |         |

FULL STEP 2 PHASE-Ex. ,  
WHEN FACING MOUNTING END (X)

| STEP | A | B | A\ | B\ |  | CCW<br>↑<br>CW<br>↓ |
|------|---|---|----|----|--|---------------------|
| 1    | + | + | -  | -  |  |                     |
| 2    | - | + | +  | -  |  |                     |
| 3    | - | - | +  | +  |  |                     |
| 4    | + | - | -  | +  |  |                     |



|  |       |           |  |      |                   |
|--|-------|-----------|--|------|-------------------|
|  |       | APVD      |  |      | STEPPER MOTOR     |
|  |       | CHKD      |  |      |                   |
|  | 1:1.5 | DRN       |  |      | 23HS22-2804S-HG50 |
|  | SCALE | SIGNATURE |  | DATE |                   |