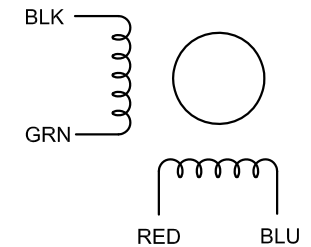


| SPECIFICATION                         | CONNECTION | BIPOLAR    |
|---------------------------------------|------------|------------|
| VOTAGE(VOC)                           |            | 2.50       |
| AMPS/PHASE                            |            | 2.80       |
| RESISTANCE/PHASE(Ohms)@25°C           |            | 0.90±10%   |
| INDUCTANCE/PHASE(mH)@1KHz             |            | 2.80±20%   |
| HOLDING TORQUE w/o GEARBOX(Nm)[lb-in] |            | 1.03[9.12] |
| GEAR RATIO                            |            | 10         |
| EFFICIENCY                            |            | 95.00%     |
| STEP ANGLE w/o GEARBOX(°)             |            | 1.80       |
| BACKLASH@NO-LOAD(arcmin)              |            | <=15       |
| MAX.PERMISSIBLE TORQUE(Nm)            |            | 6.00       |
| MOMENT PERMISSIBLE TORQUE(Nm)         |            | 12.00      |
| WEIGHT(kg)                            |            | 1.50       |
| LIFE(h)                               |            | 20000.00   |
| AMBIENT TEMPERATURE(°C)               |            | -10 - 90   |
| INSULATION CLASS                      |            | B          |
| NOISE(bB)                             |            | <=50       |
| MAX. RADIAL LOAD(N)                   |            | 400        |

| TYPE OF CONNECTION (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 |
|------|---|---|----|----|---|-----|
| 1    | + | + | -  | -  | ↓ | ↑   |
| 2    | - | + | +  | -  |   |     |
| 3    | - | - | +  | +  | ↑ | ↓   |
| 4    | + | - | -  | +  |   |     |



|       |           |      |  |
|-------|-----------|------|--|
|       | APVD      |      |  |
|       | CHKD      |      |  |
| 1:1.5 | DRN       |      |  |
| SCALE | SIGNATURE | DATE |  |

STEPPER MOTOR

23HS22-2804S-HG10