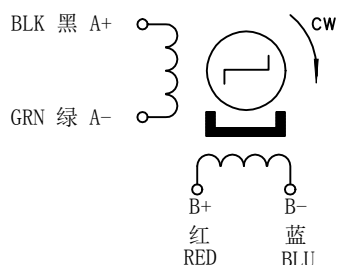
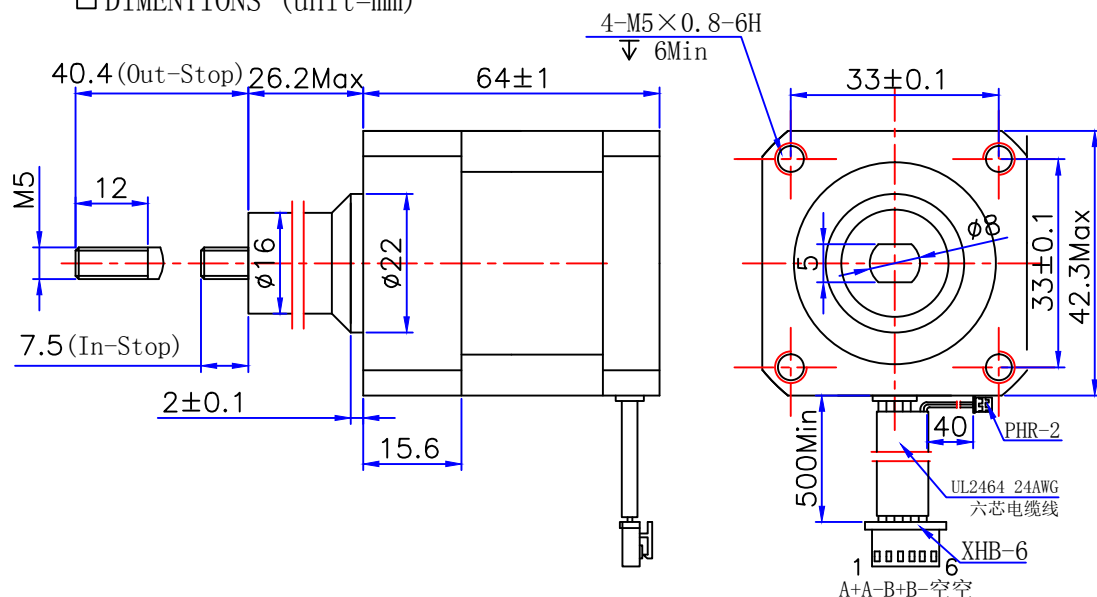


# HYBRID STEPPING MOTOR MOD. ZX42HB901-X

## COLOURS OF LEAD WIRES



## DIMENSIONS (unit=mm)



## 性能参数 SPECIFICATIONS

| 1    | 相数                  | Number of Phase        | 2                     | <div>注释 COMMENT</div> <table><tr><th>X</th><th>直径 (mm)<br/>Diameter</th><th>导程 (mm)<br/>Lead</th><th>螺距 (mm)<br/>Pitch</th><th>步长 (mm)<br/>Travel/step</th></tr><tr><td>L1</td><td>8</td><td>1</td><td>1</td><td>0.005</td></tr><tr><td>L2</td><td>8</td><td>2</td><td>2</td><td>0.01</td></tr><tr><td>L3</td><td>8</td><td>3</td><td>1.5</td><td>0.015</td></tr><tr><td>L4</td><td>8</td><td>4</td><td>2</td><td>0.02</td></tr><tr><td>L8</td><td>8</td><td>8</td><td>2</td><td>0.04</td></tr><tr><td>L14</td><td>8</td><td>14</td><td>2</td><td>0.07</td></tr><tr><td>L16</td><td>8</td><td>16</td><td>2</td><td>0.08</td></tr></table> <div>□ 开关顺序图 SWITCHING SEQUENCE</div> <table><tr><th>STEP</th><th>A+</th><th>B+</th><th>A-</th><th>B-</th><th rowspan="4">CCW</th></tr><tr><td>1</td><td>+</td><td>+</td><td>-</td><td>-</td></tr><tr><td>2</td><td>-</td><td>+</td><td>+</td><td>-</td></tr><tr><td>3</td><td>-</td><td>-</td><td>+</td><td>+</td></tr><tr><td>4</td><td>+</td><td>-</td><td>-</td><td>+</td></tr></table> <div>VIEWED FROM MOUNTING SURFACE</div> | X                      | 直径 (mm)<br>Diameter | 导程 (mm)<br>Lead | 螺距 (mm)<br>Pitch | 步长 (mm)<br>Travel/step | L1 | 8 | 1 | 1 | 0.005 | L2 | 8 | 2 | 2 | 0.01 | L3 | 8 | 3 | 1.5 | 0.015 | L4 | 8 | 4 | 2 | 0.02 | L8 | 8 | 8 | 2 | 0.04 | L14 | 8 | 14 | 2 | 0.07 | L16 | 8 | 16 | 2 | 0.08 | STEP | A+ | B+ | A- | B- | CCW | 1 | + | + | - | - | 2 | - | + | + | - | 3 | - | - | + | + | 4 | + | - | - | + |
|------|---------------------|------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|-----------------|------------------|------------------------|----|---|---|---|-------|----|---|---|---|------|----|---|---|-----|-------|----|---|---|---|------|----|---|---|---|------|-----|---|----|---|------|-----|---|----|---|------|------|----|----|----|----|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X    | 直径 (mm)<br>Diameter | 导程 (mm)<br>Lead        | 螺距 (mm)<br>Pitch      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 步长 (mm)<br>Travel/step |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L1   | 8                   | 1                      | 1                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.005                  |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L2   | 8                   | 2                      | 2                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.01                   |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L3   | 8                   | 3                      | 1.5                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.015                  |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L4   | 8                   | 4                      | 2                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.02                   |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L8   | 8                   | 8                      | 2                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.04                   |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L14  | 8                   | 14                     | 2                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.07                   |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| L16  | 8                   | 16                     | 2                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.08                   |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| STEP | A+                  | B+                     | A-                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | B-                     | CCW                 |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1    | +                   | +                      | -                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -                      |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2    | -                   | +                      | +                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -                      |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3    | -                   | -                      | +                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | +                      |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4    | +                   | -                      | -                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | +                      |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2    | 步距角                 | Step Angle             | 1.8 ° ±5%             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3    | 电压                  | Voltage                | 2.1 V                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4    | 电流                  | Current                | 2.1 A/Phase           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5    | 相电阻                 | Resistance/Phase (20℃) | 1.5 ±10% ohm/phase    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6    | 相电感                 | Inductance/Phase       | 3.3 ±20% mH/phase     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7    | 转子惯量                | Rotor Inertia          | 100 g.cm <sup>2</sup> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8    | 保持转矩                | Holding Torque         | 7 Kg.cm Min           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9    | 绝缘电阻                | Insulation Resistance  | 100MΩ 500VDC          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10   | 绝缘等级                | Insulation Class       | B, 130℃               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11   | 环境温度                | Ambient Temperature    | -20℃~50℃              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12   | 环境湿度                | Ambient Humidity       | 15%~95%               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13   | 重量                  | Weight                 | 0.5 Kg ref            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14   | 寿命                  | Life                   | 6000h                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                     |                 |                  |                        |    |   |   |   |       |    |   |   |   |      |    |   |   |     |       |    |   |   |   |      |    |   |   |   |      |     |   |    |   |      |     |   |    |   |      |      |    |    |    |    |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|       |    |      |    |        |    |       |      |  |             |                                         |                                         |  |  |
|-------|----|------|----|--------|----|-------|------|--|-------------|-----------------------------------------|-----------------------------------------|--|--|
|       |    |      |    |        |    | 技术规格书 |      |  |             | 常州宝来电器有限公司<br>Baolai Electric Appliance |                                         |  |  |
| 旧底图总号 |    |      |    |        |    |       |      |  |             |                                         |                                         |  |  |
|       |    |      |    |        |    |       |      |  |             |                                         |                                         |  |  |
|       |    |      |    |        |    |       |      |  |             |                                         |                                         |  |  |
| 底图总号  |    | 更改标记 | 处数 | 更改文件号  | 签名 | 年月日   | 阶段标记 |  | 重量          | 比例                                      | info@baolai-cn.com<br>www.baolai-cn.com |  |  |
|       |    | 设计   | HQ | 260429 |    |       |      |  |             |                                         |                                         |  |  |
| 日期    | 签名 |      |    |        |    |       |      |  |             | 1:1                                     |                                         |  |  |
|       |    | 审核   |    |        | 批准 |       |      |  | 共 1 张 第 1 张 |                                         |                                         |  |  |

格式 (1)

制图：

描图：

幅面：4<sup>#</sup>