

# BO4316NB2B $\varnothing 42.8\text{mm} \times 15.9\text{mm}$ , 外转子无传感器 Outer Rotor, Sensorless

应用领域: 无人机云台、激光雷达、激光扫描、手持云台。

Applications: UAV gimbals, LiDAR, laser scanner, handheld gimbals.

|  | 27-38-9.0 | 26-39-12.0 | 05-38-24.0 |
|--|-----------|------------|------------|
|--|-----------|------------|------------|

| 电机参数 / Motor Data |                       |                |      |
|-------------------|-----------------------|----------------|------|
| 1 电压              | Voltage               | V              | 9.0  |
| 2 端电阻             | Terminal resistance   | $\Omega$       | 0.56 |
| 3 空载转速            | No-load speed         | rpm            | 3730 |
| 4 空载电流            | No-load current       | A              | 0.21 |
| 5 堵转转矩            | Stall torque          | mNm            | 359  |
| 6 堵转电流            | Stall current         | A              | 15.9 |
| 7 额定转矩            | Nominal torque        | mNm            | 79.7 |
| 8 额定转速            | Nominal speed         | rpm            | 2910 |
| 9 额定电流            | Nominal current       | A              | 3.69 |
| 10 最大输出功率         | Max. output power     | W              | 35   |
| 11 最大效率           | Max. efficiency       | %              | 78   |
| 12 反电势常数          | Back-EMF constant     | mV/rpm         | 2.38 |
| 13 转矩常数           | Torque constant       | mNm/A          | 22.7 |
| 14 电感             | Terminal inductance   | mH             | 0.4  |
| 15 转速 / 转矩斜率      | Speed/torque gradient | rpm/mNm        | 10   |
| 16 转子惯量           | Rotor inertia         | $\text{gcm}^2$ | 97   |
| 17 重量             | Weight                | g              | 72   |

| 热参数 / Thermal Data |                                    |                    |          | 特性曲线 / Characteristics Curve |  |  |  |
|--------------------|------------------------------------|--------------------|----------|------------------------------|--|--|--|
| 18 热阻 (机壳 - 环境)    | Thermal resistance housing-ambient | K/W                | 5.8      |                              |  |  |  |
| 19 热阻 (线圈 - 机壳)    | Thermal resistance winding-housing | K/W                | 2.8      |                              |  |  |  |
| 20 热时间常数 (电机)      | Thermal time constant motor        | s                  | 400      |                              |  |  |  |
| 21 热时间常数 (线圈)      | Thermal time constant winding      | s                  | 13       |                              |  |  |  |
| 22 工作温度范围          | Operating temperature range        | $^{\circ}\text{C}$ | -40~+120 |                              |  |  |  |
| 23 绕组耐温等级          | Thermal class of winding           | $^{\circ}\text{C}$ | 155      |                              |  |  |  |

| 机械参数 / Mechanical Data |  |    |       |
|------------------------|--|----|-------|
| 24 轴向间隙                | Axial play                             | mm | 0.012 |
| 25 径向间隙                | Radial play                            | mm | 0.008 |
| 26 动态轴向载荷              | Axial load dynamic                     | N  | 8     |
| 27 静态轴向载荷              | Axial load static                      | N  | 85    |
| 28 径向载荷 (距安装面 3mm)     | Radial load at 3 mm from mounting face | N  | 26    |

| 其它参数 / Other Specifications |                       |  |            |
|-----------------------------|-----------------------|--|------------|
| 29 极对数                      | No. of pole pairs     |  | 8          |
| 30 滚珠轴承                     | Ball bearings         |  | 2          |
| 31 换向结构                     | Commutation structure |  | sensorless |
| 32 防护等级                     | Protection class      |  | IP30       |

仅供参考, 详细了解请以产品规格书为准。 For reference only, please refer to the product specification.

| 可选配置 / Options   |  | 端子定义 / Connection     |                     |
|--|--|-----------------------|---------------------|
| 齿轮箱: 行星齿轮  | 齿轮组主要技术指标详见第 138 页                                     | A 霍尔传感器 / hall sensor | B 无传感器 / sensorless |
| Gearbox: planetary gearbox   | the main technical parameters are detailed on page 138 | FPC                   | AWG 28              |
| 性能 Special coils: 连续运行范围内可定制 customizable in continuous operation range      |  | Pin1 H+               | Pin1 U red          |
| 编码器 Encoder/ 驱动器 Driver: 可定制 customizable upon request                       |  | Pin2 Hw               | Pin2 V black        |
| 法兰 Flange: 标准前后法兰 standard front and rear flanges / 定制法兰 custom flanges      |  | Pin3 Hu               | Pin3 W white        |
| 轴 Shaft: 长度 length / 异形 shape  |  | Pin4 Hv               |                     |
| 轴承类型 Bearing type: 含油轴承 sleeve bearings / 滚珠轴承 ball bearings                 |  | Pin5 H-               |                     |
| 电气连接 Electrical connection: 端子或导线 connector or wire / 导线长度 lead wires length |  | Pin6 W                |                     |
|  |  | Pin7 V                |                     |
|  |  | Pin8 U                |                     |

## 外观图 / Outline Drawing

