

P向

## Encoder signal interface

## Motor line interface

**B** **1:1**  **$\bar{A}$**   
**red** **green**

Black 10

Blue white 8

Green white 6

Purple white 4

Yellow 2

9 red

7 blue

5 green

3 purple

1 orange

A diagram of a 4x4 grid. The columns are labeled 1, 2, 3, 4 from left to right. The rows are labeled blue, black, A, B from top to bottom. An arrow points from the label 'blue' to the cell at column 1, row blue.

**coupler : PHD-2 x 5P**

**coupler : 5557 4.2mm 2 x 2P**

**terminal : DF11-2428SCF**

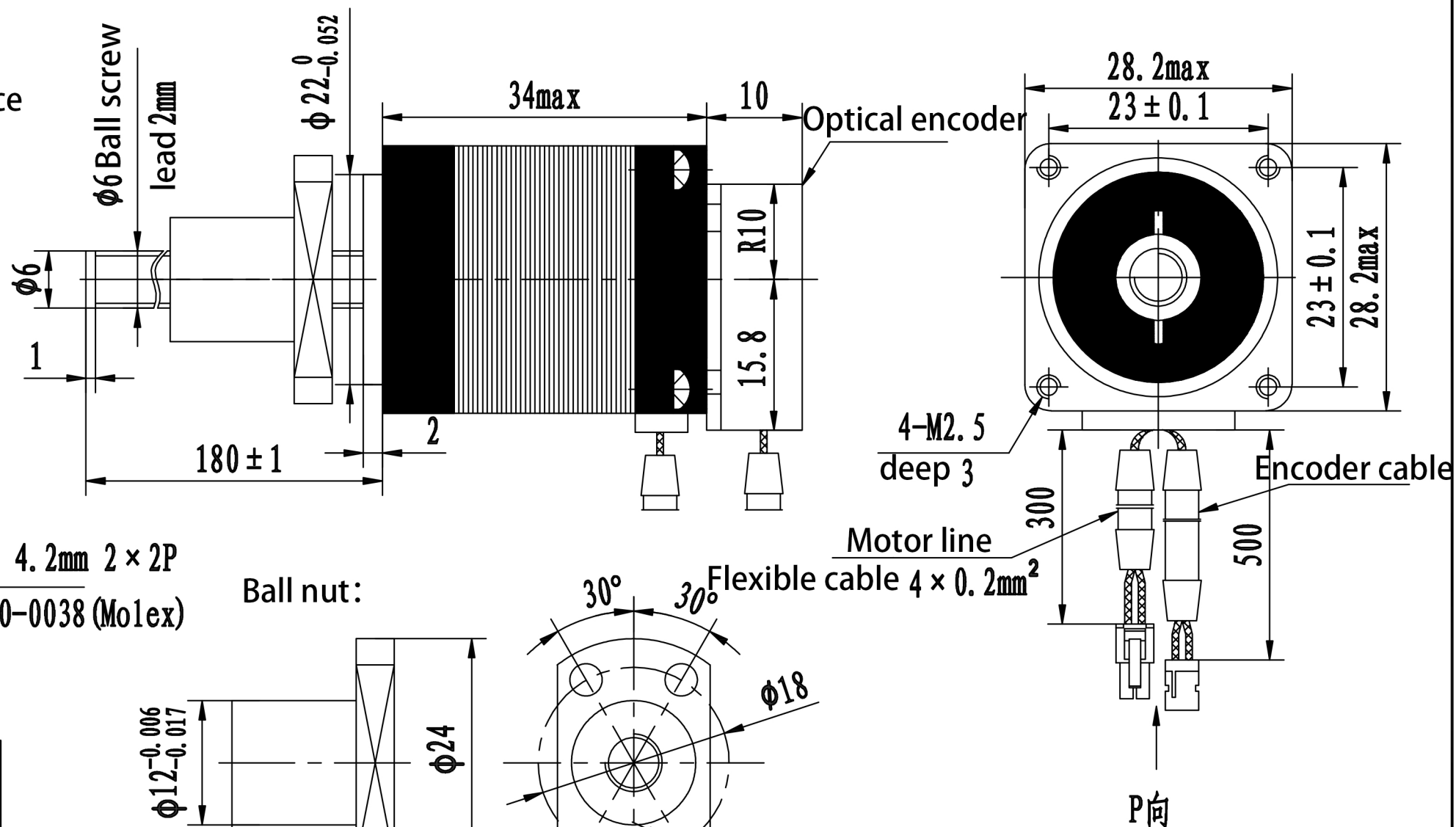
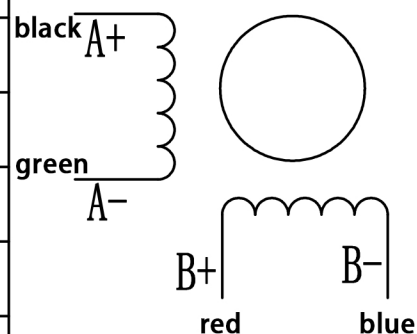
**terminal : 39-00-0038 (Mol ex)**

**Ball nut:**

# Universal parameter

|                       |                                 |
|-----------------------|---------------------------------|
| Step angle            | 1.8°                            |
| Number of phases      | 2                               |
| Insulation resistance | 100MΩ <sub>min.</sub> (500V DC) |
| Insulation grade      | Class B                         |
| Moment of inertia     | 9g. cm <sup>2</sup>             |
| Weight                | 0.14kg                          |
| Drive voltage         | 24V                             |
| Rated current         | 0.67A                           |
| Phase resistance      | 6.5Ω ±10%                       |
| Phase inductance      | 3.2mH±20%                       |
| Holding torque        | 60mN. m                         |
| Step length           | 0.01MM                          |

## Wiring diagram



|                 |                 |                |                |                                          |                       |                      |                             |            |                                  |
|-----------------|-----------------|----------------|----------------|------------------------------------------|-----------------------|----------------------|-----------------------------|------------|----------------------------------|
| 材 质<br>MATERIAL |                 | —————          |                | 2                                        |                       |                      |                             |            | KST-28D18-02GZ-180E-0009         |
|                 |                 | —————          |                | 1                                        |                       |                      |                             |            |                                  |
| 表面处理<br>FINISH  |                 | —————          |                | 0                                        | ' 20-04-03            | —————                | 00初版                        | 许元好        | 备 注 NOTE                         |
|                 |                 | 改版<br>SYM      | 年 月 日<br>DATE  |                                          | 变更票图号<br>REVISION NO. | 变 更 事 项<br>REVISIONS | 设计<br>BY                    |            |                                  |
| 制 图<br>DRAWN    | 设 计<br>DESIGNED | 检 图<br>CHECKED | 检 印<br>CHECKED | 比例<br>SCALE                              | FREE                  | 品 名<br>TITLE         | 电机规格书<br>MOTR SPECIFICATION |            | 三角法<br>THIRD ANGLE<br>PROJECTION |
|                 |                 |                |                |                                          |                       | 图 号<br>DWG. NO.      | Y-20-0403-0                 |            |                                  |
|                 |                 |                |                | 东莞市凯福电子科技有限公司 DONGGUAN KAIFULL CO., LTD. |                       |                      |                             | 页<br>SHEET | 1/2                              |

## Environmental conditions

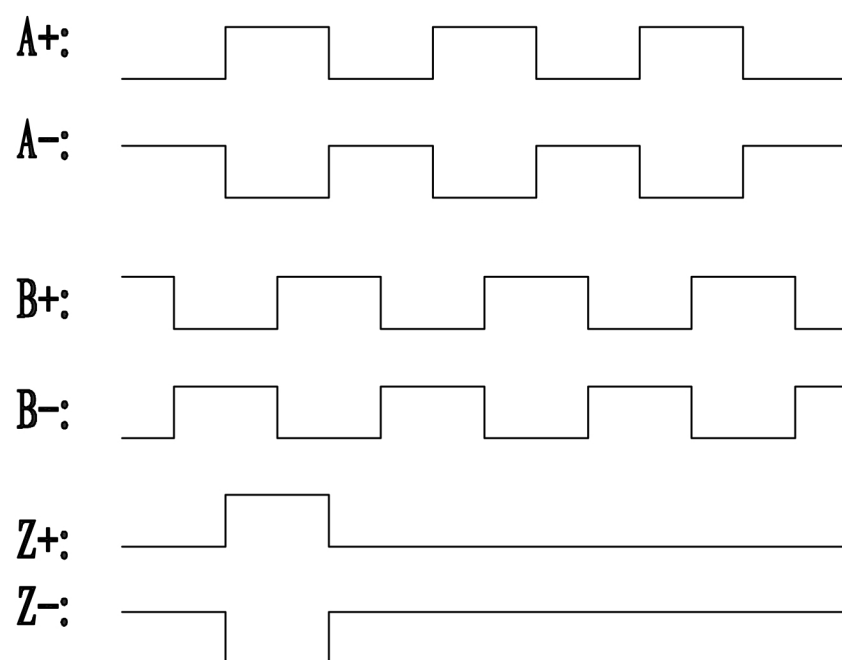
|                            |                   |
|----------------------------|-------------------|
| Operating temperature      | -20° C ~ 85° C    |
| Storage temperature        | -40° C ~ 85° C    |
| humidness                  | RH 90% max. 非冷凝环境 |
| Non-condensing environment |                   |

**Maximum output current per channel**

Encoder resolution : 1000

## Output mode: voltage output

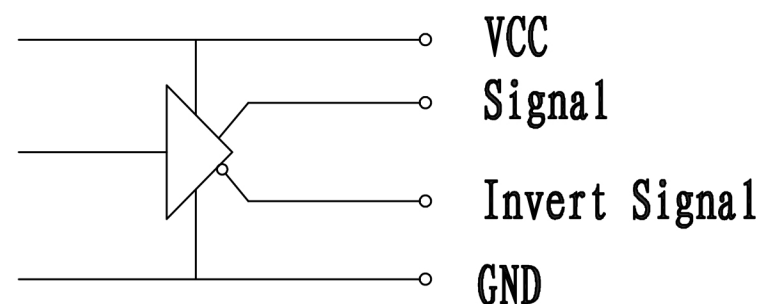
## Output waveform



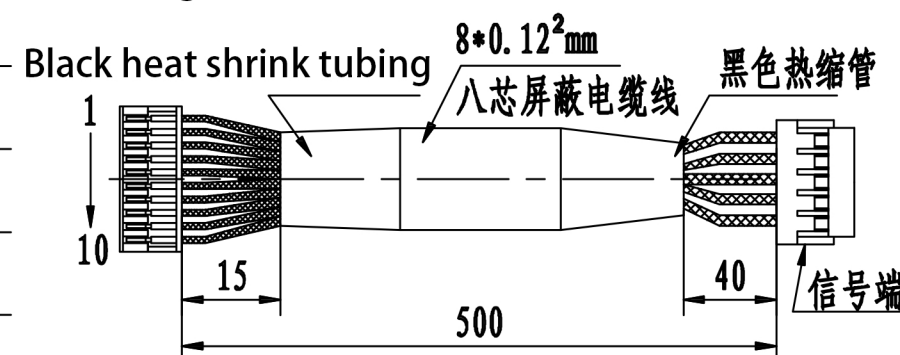
## Electrical specification

|                            |                                              |
|----------------------------|----------------------------------------------|
| Supply voltage             | 4.5–5.5V                                     |
| Current consumption        | 30mA                                         |
| Critical frequency         | 120 KHz                                      |
| Critical speed             | 6600r/min                                    |
| Pulse width                | $180 \pm 50^\circ$ e                         |
| Phase shift                | $90 \pm 50^\circ$ e                          |
| Output current per channel | 150mA                                        |
| Signal level               | Low 0V; High +3.5V<br>No load, +3V is loaded |

## Output circuit: (Linear drive)



## Wiring Harness Assemblies :



Encoder connection list :

|   |              |        |
|---|--------------|--------|
| 2 | blue         | A+     |
| 3 | blue white   | A-     |
| 4 | green white  | B-     |
| 5 | green        | B+     |
| 6 | purple white | Z-     |
| 7 | purple       | Z+     |
| 8 | black        | GND    |
| 9 | red          | VCC+5V |

**Note: Port 1 and port 10  
(yellow and orange wires)  
are for shielding purposes and are  
not connected.**

|                               |                               |                |                |                                          |               |                       |                             |            |                                                                                       |
|-------------------------------|-------------------------------|----------------|----------------|------------------------------------------|---------------|-----------------------|-----------------------------|------------|---------------------------------------------------------------------------------------|
| 材 质<br>MATERIAL               |                               | _____          |                | 2                                        |               |                       |                             |            | Y07-28D1-3401-02GZ-180E                                                               |
| 表面处理<br>FINISH                |                               | _____          |                | 1                                        |               |                       |                             |            |                                                                                       |
|                               |                               |                |                | 0                                        | '20-04-03     | ----                  | 00初版                        | 许元好        |                                                                                       |
|                               |                               |                |                | 改版<br>SYM                                | 年 月 日<br>DATE | 变更票图号<br>REVISION NO. | 变 更 事 项<br>REVISIONS        | 设计<br>BY   | 备 注<br>NOTE                                                                           |
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