

# Brushless DC Motor

## 24 VDC Built-In Driver

### General Specifications

|                                         |                     |
|-----------------------------------------|---------------------|
| Winding Type                            | Star                |
| Insulation Class                        | B                   |
| Ambient Temperature Range               | -20°C ~ +50°C       |
| Insulation Resistance                   | 100 MΩ Min. 500 VDC |
| Dielectric Strength                     | 500 VAC 1 minute    |
| <b>Customized solutions on request.</b> |                     |

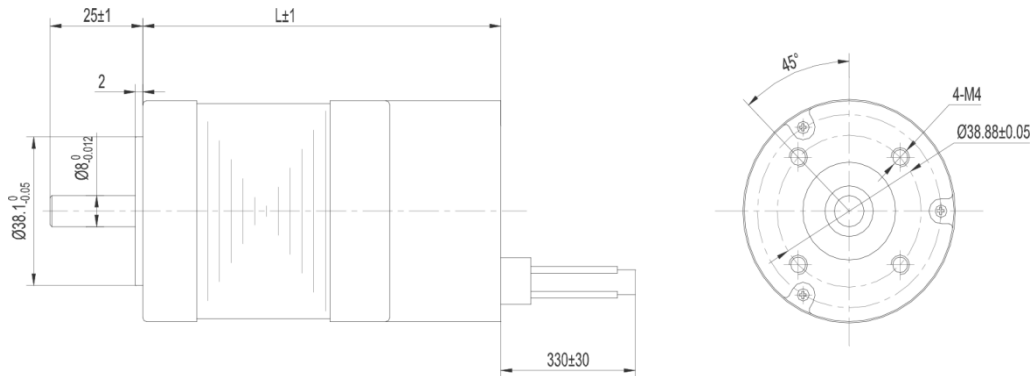


### Electrical Specifications

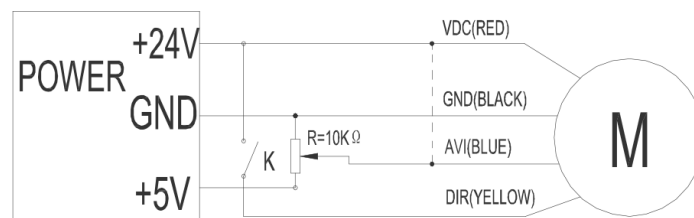
| Model            |                  | 57BID01-24 | 57BID02-24 | 57BID03-24 | 57BID04-24 | 57BID05-24 | 57BID06-24 |
|------------------|------------------|------------|------------|------------|------------|------------|------------|
| Number of Poles  |                  | 4          | 4          | 4          | 4          | 4          | 4          |
| Number of Phases |                  | 3          | 3          | 3          | 3          | 3          | 3          |
| Rated Voltage    | VDC              | 24±10%     | 24±10%     | 24±10%     | 24±10%     | 24±10%     | 24±10%     |
| Rated Speed      | RPM              | 3000       | 3000       | 3000       | 3000       | 3000       | 3000       |
| Rated Torque     | Nm               | 0.057      | 0.11       | 0.165      | 0.22       | 0.33       | 0.44       |
| Rated Current    | A                | 1.2        | 2.3        | 3          | 4.4        | 6.1        | 8.5        |
| Output Power     | W                | 15         | 34         | 52         | 69         | 103        | 138        |
| Peak Torque      | Nm               | 0.18       | 0.38       | 0.58       | 0.8        | 1.2        | 1.6        |
| Peak Current     | A                | 3.6        | 6.9        | 9          | 13         | 19.8       | 25.8       |
| Torque Constant  | Nm/A             | 0.062      | 0.06       | 0.06       | 0.062      | 0.06       | 0.062      |
| Back EMF         | V/KRPM           | 6.3        | 6.3        | 6.3        | 6.3        | 6.3        | 6.3        |
| Rotor inertia    | gcm <sup>2</sup> | 32         | 42         | 58         | 72         | 106        | 140        |
| Body Length      | mm               | 71         | 76         | 86         | 96         | 116        | 136        |
| Mass             | kg               | 0.6        | 0.7        | 0.85       | 0.95       | 1.25       | 1.6        |

Caution: Peak Torque is provided for the purpose of performance calculations only.  
Operating near, or at this condition can result in motor damage.

### Mechanical Dimensions



### Connection diagram



### Specifications

Switching power supply output current shall be not less than the motor peak current; through AVI terminals can be governor does not need, it can short VDC and then motor running at rated speed; DIR terminals can be controlled the motor rotation direction, when switch off, the motor anti-clockwise rotation, when linking-up, the motor rotating clockwise.