

# OK57ZLYS131-615A

57 mm Brushed DC Motor · 60 VDC · 40 W · 1500 RPM

|                |                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------|
| Product type   | Brushed DC motor                                                                                                             |
| Intended use   | DC-powered rotary drive applications where the rated speed, torque, and mounting arrangement are suitable for the equipment. |
| Document basis | Prepared from the supplied specifications and dimensional drawing.                                                           |

## 1. Electrical Specifications

| Parameter                | Specification            |
|--------------------------|--------------------------|
| Manufacturer Part Number | OK57ZLYS131-615A         |
| Motor Type               | Brushed DC Motor         |
| Rated Voltage            | 60 VDC                   |
| Rated Speed              | 1500 RPM                 |
| No-Load Speed            | 1900 RPM                 |
| Rated Current            | 1.0 A max.               |
| No-Load Current          | 0.15 A max.              |
| Rated Torque             | 0.25 N·m                 |
| Rated Power              | 40 W                     |
| Torque Constant          | 0.294 N·m/A              |
| Resistance               | 14.3 $\Omega$            |
| Rotation Direction       | Clockwise (as specified) |
| Insulation Class         | Class B                  |

## 2. Physical Specifications

| Parameter                           | Specification            |
|-------------------------------------|--------------------------|
| Frame Size / Motor Diameter         | 57 mm body diameter      |
| Body Length                         | 131 mm                   |
| Motor Flange Diameter               | 74 mm                    |
| Shaft Diameter                      | 8 mm                     |
| Shaft Length                        | 28 mm                    |
| D-cut Length                        | 25 mm                    |
| Shaft Collar Diameter               | 25.4 mm                  |
| Mounting Holes                      | 4 × M4                   |
| Mounting Hole Pitch Circle Diameter | 39 mm                    |
| Rear Mounting Holes                 | 3 × M2, arranged at 120° |
| Approximate Weight                  | 1.35 kg                  |
| Ambient Humidity                    | 15%–95%                  |

Note: Shaft length and D-cut length are listed according to the supplied product details. Confirm the actual shaft geometry and mounting dimensions before manufacturing mating parts.

### 3. Wiring and Electrical Connection

Use a suitable DC power supply rated for 60 VDC and the motor's operating current. Disconnect power before wiring or servicing.

| Terminal / Lead | Connection     | Instructions                                                                      |
|-----------------|----------------|-----------------------------------------------------------------------------------|
| DC positive     | Power supply + | Connect according to the motor's verified polarity and the system wiring diagram. |
| DC negative     | Power supply – | Ensure secure insulation and strain relief for all electrical connections.        |

Rotation direction: The supplied specification lists clockwise rotation. Lead colors and polarity are not specified in the provided parameter list. Verify the actual wiring diagram and test direction at low risk before coupling the motor to the machine. Reversing polarity on a typical brushed DC motor reverses its rotation.

### 4. Installation

- Mount the motor on a rigid support using fasteners compatible with the mounting pattern. Do not rely on the shaft to support the motor body.
- Align the motor shaft with the driven component. Misalignment can cause vibration, bearing wear, excess current, or shaft damage.
- Use a compatible coupling, pulley, or gear that matches the shaft diameter and D-cut geometry. Do not hammer or force components onto the shaft.
- Secure all fasteners and check that the shaft and driven mechanism rotate freely before applying power.
- Route cables away from moving parts, sharp edges, hot surfaces, and sources of mechanical strain.

### 5. Operation

- Apply the rated DC voltage only. Do not connect the motor directly to AC mains.
- Start with the driven load clear and increase load gradually while monitoring current, temperature, vibration, and sound.
- Avoid prolonged stall or locked-rotor conditions. A stalled motor may draw excessive current and overheat rapidly.
- Use appropriate overcurrent protection and ensure the supply, connectors, and wiring are suitable for the circuit.

### 6. Safety Precautions

- Disconnect the power supply before installation, maintenance, or any wiring changes.
- Guard exposed rotating shafts and couplings. Keep hands, hair, clothing, and tools away from rotating parts.
- Do not exceed the rated voltage or operate the motor outside the application's validated thermal limits.
- Stop operation immediately if there is unusual noise, excessive vibration, smoke, burning odor, or abnormal heating.

### 7. Basic Troubleshooting

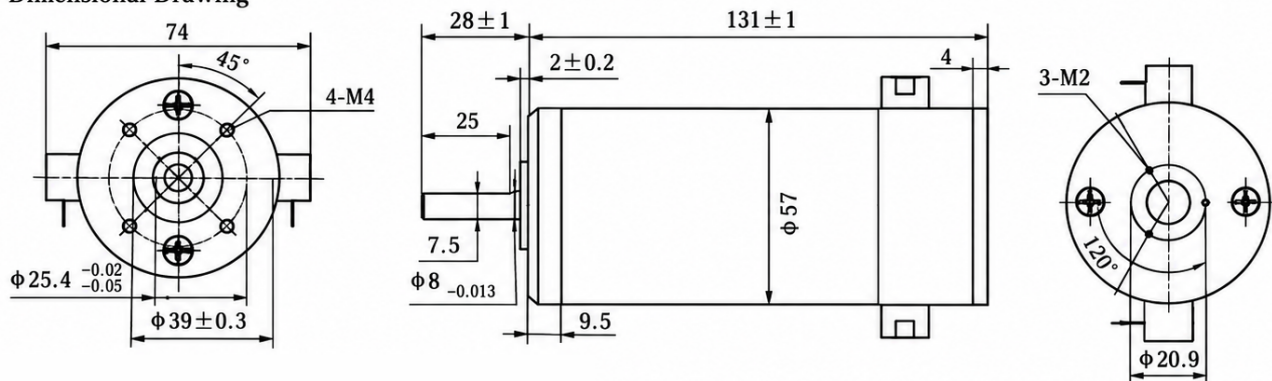
| Symptom                    | Possible Cause                           | Recommended Check                                                                             |
|----------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------|
| Motor does not run         | No power, poor connection, blocked shaft | Check supply voltage, wiring, protection devices, and free shaft movement.                    |
| Speed is too low           | Excess load or low supply voltage        | Check voltage under load and confirm the driven mechanism is not binding.                     |
| High current / overheating | Overload, stall, poor ventilation        | Disconnect power, remove the cause of overload, and allow the motor to cool before retesting. |
| Noise or vibration         | Loose mounting or misalignment           | Check fasteners, shaft alignment, and the driven component.                                   |

Maintenance: periodically inspect mounting hardware, wiring insulation, shaft alignment, and the driven mechanism. Keep the motor clean and dry. Do not disassemble the motor unless qualified to do so.

## 8. Dimensional Drawing

The drawing below is included as a dimensional reference. Dimensions are in millimeters unless otherwise indicated. Check the original drawing and the actual motor before finalizing a mechanical design.

Dimensional Drawing



### Key dimensional references

|                  |                   |                |                 |
|------------------|-------------------|----------------|-----------------|
| Body diameter    | 57 mm             | Body length    | 131 mm          |
| Flange diameter  | 74 mm             | Shaft diameter | 8 mm            |
| Shaft length     | 28 mm             | D-cut length   | 25 mm           |
| Mounting pattern | 4 × M4; PCD 39 mm | Weight         | Approx. 1.35 kg |

Disclaimer: This manual is prepared from the information supplied for the product and is intended as general operating guidance. Actual performance depends on the load, power supply, installation, and operating conditions. The user is responsible for confirming suitability in the final application.