USER MANUAL

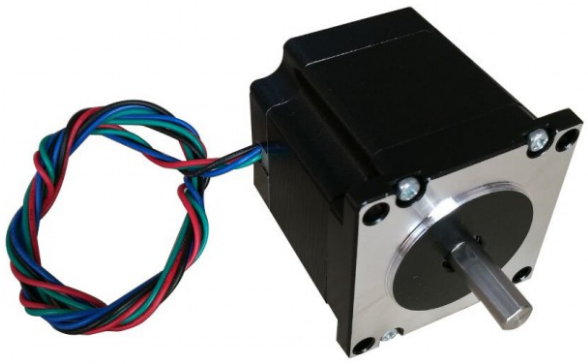
OUKEDA NEMA 23 Stepper Motor
1.8° | 1.26 N·m Holding Torque | 2.8 A
Manufacturer Part Number: 57BYG250B

Product Overview

The OUKEDA 57BYG250B is a two-phase NEMA 23 stepper motor with a 57 × 57 mm frame, 1.26 N·m holding torque, and a keyed output shaft.

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1. Electrical Specifications

Parameter	Specification
Manufacturer part number	57BYG250B
Number of phases	2
Step angle	1.8° ±5%
Holding torque	1.26 N·m (178.43 oz·in)
Rated current per phase	2.8 A
Phase resistance	0.9 Ω ±10% (at 20°C)
Phase inductance	2.5 mH ±20%
Rated phase voltage	2.52 V DC
Operating voltage	20–48 V DC / 24–36 V AC
Insulation class	Class B
Insulation resistance	100 MΩ minimum at 500 V DC
Ambient temperature	–40°C to +50°C
Ambient humidity	15%–95%

Driver: Use a compatible stepper motor driver and set phase current to the rated 2.8 A. The listed 2.52 V DC is the winding voltage; do not connect the motor windings directly to the supply. Follow the driver wiring and current-limit instructions.

2. Physical Specifications

Parameter	Specification
Frame size	57 × 57 mm (NEMA 23)
Body length	55 mm
Shaft diameter	8 mm
Shaft length	21 ±1 mm
Keyway shaft length	18 mm
Mounting holes	4 × Ø5.2 mm through holes
Mounting hole spacing	47.14 ±0.2 mm
Number of leads	4
Lead length	500 mm
Weight	Approx. 0.6 kg

3. Wiring and Excitation Sequence

Motor lead assignments shown in the supplied drawing:

Wire color	Motor terminal
Black	A+
Green	A–
Red	B+
Blue	B–

Excitation sequence

Step	A+	B+	A–	B–
1	+	+	–	–
2	–	+	+	–
3	–	–	+	+
4	+	–	–	+

The rotation direction shown in the drawing is referenced to viewing the motor from the mounting surface.

4. Installation and Commissioning

Mechanical Mounting

• Mount the motor using the four Ø5.2 mm through holes and the specified 47.14 ±0.2 mm mounting-hole spacing.
• Check shaft, keyway, coupling, and clearance dimensions before installation.
• Align the motor shaft with the driven load and secure the mounting hardware.

Electrical Setup

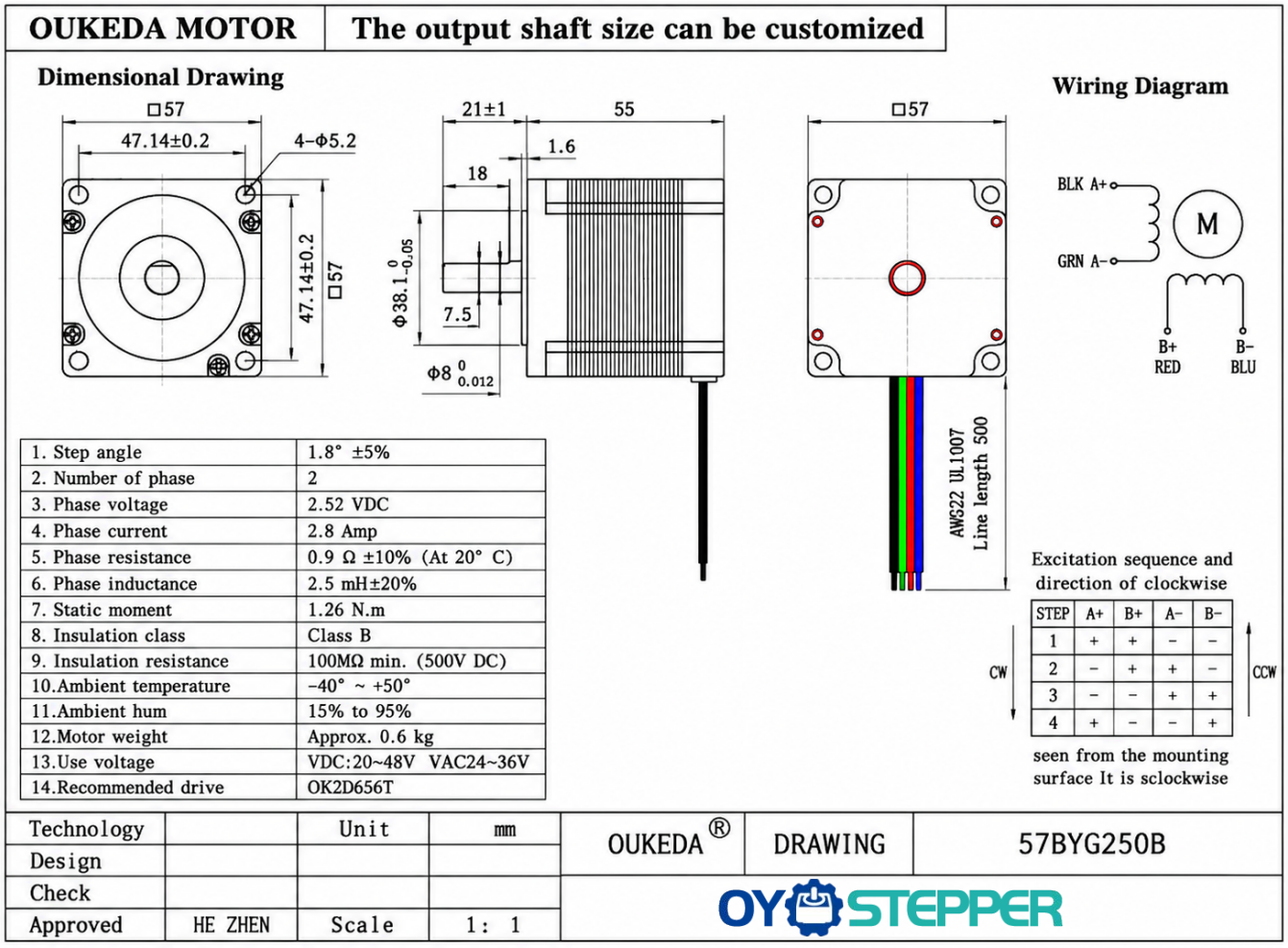
• Disconnect power before wiring the motor.
• Connect the four leads to a compatible two-phase stepper driver according to the phase assignments.
• Set the driver current limit to match the 2.8 A rated phase current and verify supply compatibility before powering on.

Initial Test

• Begin at low speed and acceleration, then increase gradually.
• Check rotation direction, vibration, unusual noise, and motor temperature.
• Provide adequate ventilation and operate within the specified ambient temperature range.

5. Dimensional Drawing

Dimensional drawing and wiring reference:



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