USER MANUAL

OUKEDA Hollow Shaft NEMA 11 Stepper Motor

1.8° | 6.7 N·cm Holding Torque | 0.8 A

Manufacturer Part Number: OK28ZK34-084B-HM5

Product Overview

The OK28ZK34-084B-HM5 is a two-phase hollow-shaft stepper motor with a 28 × 28 mm frame, dual-axis shaft arrangement, and 1.8° step angle.

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1. Electrical Specifications

Parameter	Specification
Manufacturer part number	OK28ZK34-084B-HM5
Number of phases	2
Step angle	1.8° ±5%
Holding torque	6.7 N·cm (9.49 oz·in)
Rated current per phase	0.8 A
Phase resistance	4.5 Ω ±10%
Phase inductance	2.7 mH ±20%
Rated voltage	3.6 V
Detent torque	0.5 N·cm (0.71 oz·in)
Insulation class	Class B
Insulation resistance	100 MΩ minimum at 500 V DC
Rotor inertia	9 g·cm²

Driver: Use a compatible two-phase stepper motor driver with phase current set to the rated 0.8 A. The listed 3.6 V is the winding voltage; do not connect the motor windings directly to a power supply.

2. Physical Specifications

Parameter	Specification
Frame size	28 × 28 mm (NEMA 11)
Body length	34 mm maximum
Front shaft diameter	5 mm
Front shaft length	9 ±0.5 mm
Rear shaft diameter	8 mm
Rear shaft length	7 ±1 mm
Shaft type	Hollow shaft / dual-axis configuration
Mounting holes	4 × M2.5, minimum 3.5 mm depth
Number of leads	4
Lead length	300 ±10 mm
Weight	0.12 kg

3. Wiring and Phase Identification

The supplied wiring diagram identifies two motor phases:

Phase	Terminal labels in drawing
Phase A	A and A■
Phase B	B and B■

Connect each phase pair to the corresponding outputs of a compatible bipolar stepper driver. Follow the driver terminal markings and keep power disconnected while wiring.

4. Installation and Operation

Mechanical Installation

• Secure the motor using the four M2.5 mounting holes.
• Check the front and rear shaft dimensions and required clearance before fitting couplings or other components.
• Align the shaft with the driven mechanism and tighten mounting hardware evenly.

Electrical Setup

• Identify the two phase pairs using the wiring diagram and connect them to a suitable stepper driver.
• Set the phase current to 0.8 A and verify driver supply requirements before powering on.
• Inspect connections and ensure exposed conductors cannot contact each other.

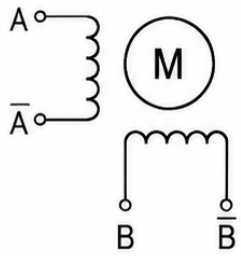
Initial Test

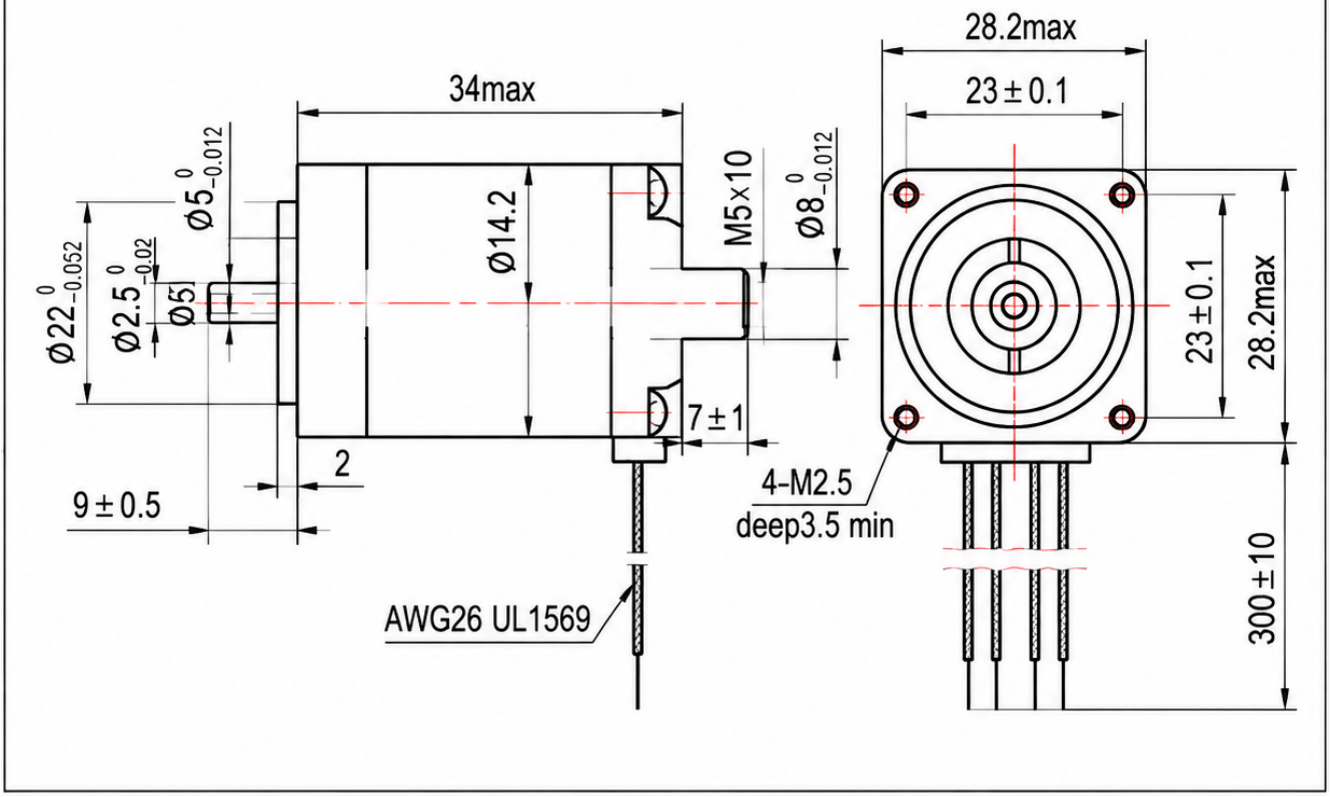
• Begin at low speed and acceleration, then increase gradually.
• Check rotation, vibration, unusual noise, and motor temperature during operation.
• Keep the motor within its specified operating conditions.

5. Dimensional Drawing

Dimensional drawing and wiring reference:

OUKEDA MOTOR OK28ZK34-084B-HM5 | REV | A

General Specification		Electrical Specification		Wiring Diagram
Step Angle	1.8° ±5%	Rated Voltage	3.6 V	
Number of Phase	2	Rated Current	0.8 A	
Insulation Resistance	100MΩ min. (500V DC)	Phase Resistance	4.5 Ω ±10%	
Insulation Class	Class B	Phase Inductance	2.7 mH ±20%	
Rotor Inertia	9 g·cm^2	Holding Torque	67 mN·m	
Weight	0.12 kg	Detent Torque	5 mN·m	



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