USER MANUAL

OUKEDA NEMA 6 Mini Stepper Motor Linear Guide Slide Module

Model: OK14FD32-HT25-N1

1. Product Overview

The OK14FD32-HT25-N1 is a compact two-phase stepper motor actuator integrated with a precision screw rod and linear guide slide. The module provides a nominal 30 mm travel distance and is designed for controlled linear positioning using a suitable stepper motor driver.

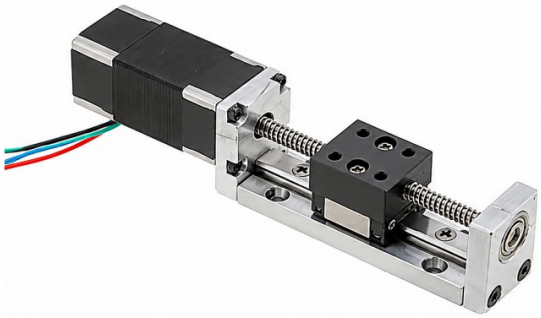
2. Electrical Specification

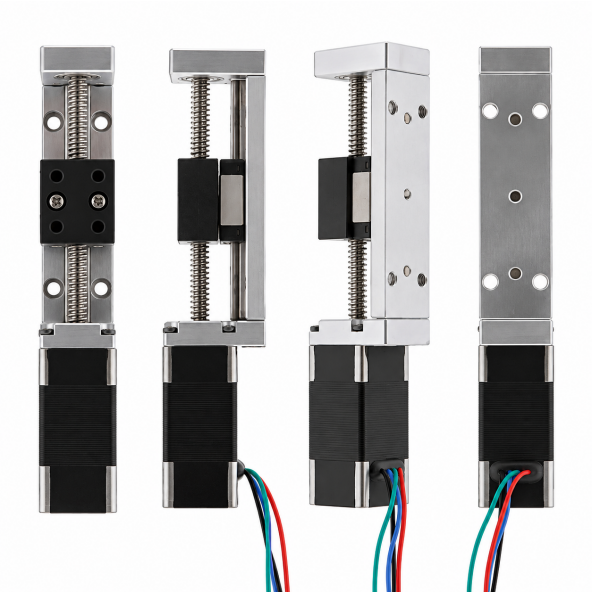
Parameter	Specification
Manufacturer Part Number	OK14FD32-HT25-N1
Motor Type	2-Phase Stepper Motor
Step Angle	1.8° ±5%
Number of Phases	2
Rated Voltage	6.6 V DC
Rated Current / Phase	0.3 A
Holding Torque	0.569 N·cm (0.081 oz·in)
Phase Resistance	22 Ω ±10% (at 20°C)
Phase Inductance	4.2 mH ±20%
Static Torque	0.058 kg·cm min.
Insulation Resistance	100 MΩ min. (500 V DC)
Insulation Class	Class B
Operating Temperature	–20°C to +50°C
Ambient Humidity	15%–95%
Recommended Driver	OK2D4020A

3. Physical Specification

Parameter	Specification
Frame Size	14 × 14 mm
Motor Body Length	32 mm
Guide Rail Length	57 mm
Overall Length	89 mm
Travel Distance	30 mm
Lead Screw Diameter	3.5 mm

Parameter	Specification
Lead / Revolution	1 mm
Linear Travel / Step	0.005 mm
Slider Width	17 mm
Slider Mounting Holes	4 × M2.5
Weight	50 g





4. Wiring and Driver Connection

Connect the motor phases to a compatible two-phase stepper driver according to the wiring diagram. The drawing identifies the four motor connections as follows:

Wire	Driver Connection
Black (BLK)	A+
Green (GRN)	A–
Red (RED)	B+
Blue (BLU)	B–

5. Full-Step Excitation Sequence

The following sequence is reproduced from the supplied drawing. The clockwise direction is indicated when viewed from the mounting surface.

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

6. Linear Motion Data

Parameter	Value
Lead Screw	3.5 mm diameter; 1 mm lead per revolution
Travel Distance	30 mm
Linear Travel per Full Step	0.005 mm (5 μm)
Step Angle	1.8° (200 full steps per revolution)

The nominal linear travel per full step is based on a 1 mm screw lead and a 1.8° motor step angle. Microstepping can provide smaller commanded increments when supported by the driver.

7. Installation and Operation

• Mount the guide module on a flat, rigid surface using the mounting features shown in the dimensional drawing.

• Ensure the slider and screw rod are aligned with the driven mechanism and are free from side loading or obstruction.

• Connect the four motor wires to a compatible two-phase stepper driver using the wiring table.

• Set the driver phase-current limit to match the motor's rated current of 0.3 A per phase.

• Use a suitable DC supply and driver configuration within the specified 5–24 VDC operating range shown on the drawing.

• Apply motion commands gradually and verify the direction of travel before operating the mechanism over its full 30 mm travel.

8. Dimensional Drawing and Wiring Reference

The original dimensional drawing, wiring diagram, excitation sequence, and linear guide specifications are included below for reference.

OUKEDA MOTOR | **The output shaft size can be customized**

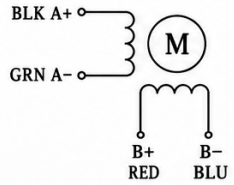
Dimensional drawing

Excitation sequence and direction of clockwise

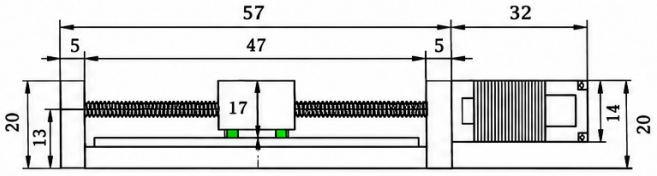
STEP	A+	B+	A−	B−
1	+	+	−	−
2	−	+	+	−
3	−	−	+	+
4	+	−	−	+

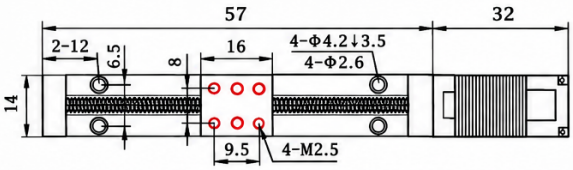
CW ↓ ↑ CCW

seen from the mounting surface It Isclockwise



Wiring Diagram





1. Step angle	1.8° ±5%
2. Number of phase	2
3. Phase voltage	6.6VDC
4. Phase current	0.3Amp
5. Phase resistance	22Ω ±10% (At 20°C)
6. Phase inductance	4.2mH ±20%
7. Static moment	0.058kg·cm Min
8. Insulation class	Class B
9. Insulation resistance	100MΩ min. (500V DC)
10. Ambient temperature	−20°C ~ +50°C
11. Ambient hum	15% to 95%
12. Motor weight	Approx. 0.003Kg
13. Use voltage	VDC:5~24V
14. Recommended drive	OK2D4020A

High precision screw rod	
Screw diameter	3.5mm
Lead screw	1mm
Screw step	0.005mm
Limited travel	30mm
Model	OK14FD32-HT25-N3.5×1

Technology		Unit	mm	OUKEDA®	DRAWING	OK14FD32-HT25-N1
Design						
Check						
Approved		Scale	1:1			