USER MANUAL

OUKEDA NEMA 17 External Linear Stepper Motor

1.8° | 42 N·cm Holding Torque | 2.0 A

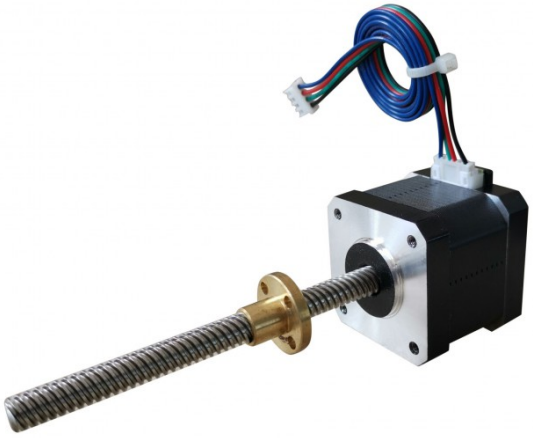
Part Number: OK42FD40-100N-C1

Product Overview

The OK42FD40-100N-C1 is a 42 × 42 mm external linear stepper motor with a lead screw for controlled linear motion.

Contents

Electrical specifications; physical specifications; wiring and excitation sequence; installation and operation; dimensional drawing.



1. Electrical Specifications

Parameter	Specification
Manufacturer part number	OK42FD40-100N-C1
Motor type	External linear stepper motor
Number of phases	2
Step angle	1.8° ±5%
Holding torque	42 N·cm (5.95 oz·in)
Rated current per phase	2.0 A
Phase resistance	1.1 Ω ±10% (at 20°C)
Inductance	2.6 mH ±20%
Rated phase voltage	2.2 V DC
Insulation class	Class B
Insulation resistance	100 MΩ minimum (500 V DC)
Ambient temperature	–20°C to +50°C
Ambient humidity	15%–95%
Recommended drive	OK2D4020A

Driver: Use a compatible two-phase stepper driver set to the rated 2.0 A per phase. The listed 2.2 V DC is the winding voltage; do not connect motor windings directly to a power supply.

2. Physical Specifications

Parameter	Specification
Frame size	42 × 42 mm (NEMA 17)
Body length	40 mm
Lead screw length options	100 / 300 / 350 / 400 mm
Lead screw diameter	8 mm
Lead per step	0.04 mm
Lead per revolution	8 mm
Number of motor leads	4
Cable length	1000 ±20 mm
Weight	Approx. 0.3 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	+	–	–	+

4. Installation and Operation

Mechanical installation
• Select the required lead screw length and provide sufficient travel clearance.
• Align the lead screw and driven mechanism to avoid side loading or binding.

Electrical setup
• Disconnect power before wiring.
• Connect the four motor leads to a compatible two-phase stepper driver using the phase assignments above.
• Set current to 2.0 A per phase and verify driver compatibility before powering on.

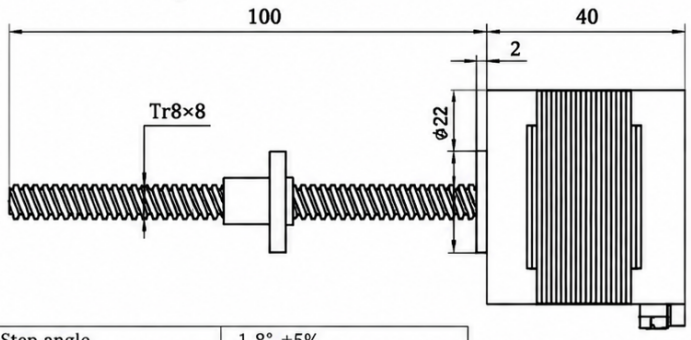
Initial test
• Start at low speed and acceleration, then increase gradually.
• Check travel direction, vibration, unusual noise, and motor temperature.

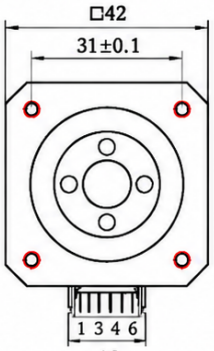
5. Dimensional Drawing

Dimensional drawing and wiring reference:

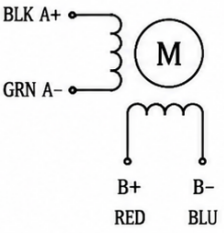
OUKEDA MOTOR | The output shaft size can be customized

Dimensional drawing

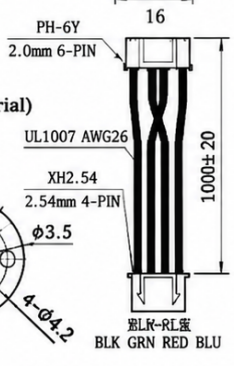




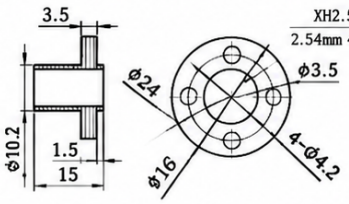
Wiring Diagram



1	Step angle	1.8° ±5%
2	Number of phase	2
3	Phase voltage	2.2 VDC
4.	Phase current	2.0 Amp
5	Phase resistance	1.1 Ω ±10% (At 20° C)
6.	Phase inductance	2.6 mH ±20%
7.	Static moment	0.42 N-m
8.	Insulation class	Class B
9.	Insulation resistance	100MΩ min. (500V DC)
10	Ambient temperature	-20° ~ +50° C
11	Ambient humidity	15% to 95%
12	Motor weight	Approx 0.3 Kg
13	Use voltage	VDC:12-36V
14	Recommended drive	OK2D4020A



Nut Dimensions (Steel Material)



Excitation sequence and direction of clockwise

STEP	A+	B+	A-	B-
1	+	+	–	–
2	–	+	+	–
3	–	–	+	+
4	+	–	–	+

CW

Technology		Unit	mm	OUKEDA®	DRAWING	OK42FD40-100N-C1
Design						
Check						
Approved	HE ZHEN	Scale	1: 1			