OUKEDA MOTOR

USER MANUAL

130 mm Three-Phase Stepper Motor | OK1303LK283-683A-19J

Document type: Product user guide and technical reference. This guide covers identification, electrical and mechanical specifications, connection, installation, and basic commissioning.

1. Product identification

Manufacturer / Brand	OUKEDA MOTOR
Part number	OK1303LK283-683A-19J
Motor type	3-phase hybrid stepper motor
Frame size	130 x 130 mm (often marketed as NEMA 52 class)
Step angle	1.2 degrees +/- 5%

2. Electrical specifications

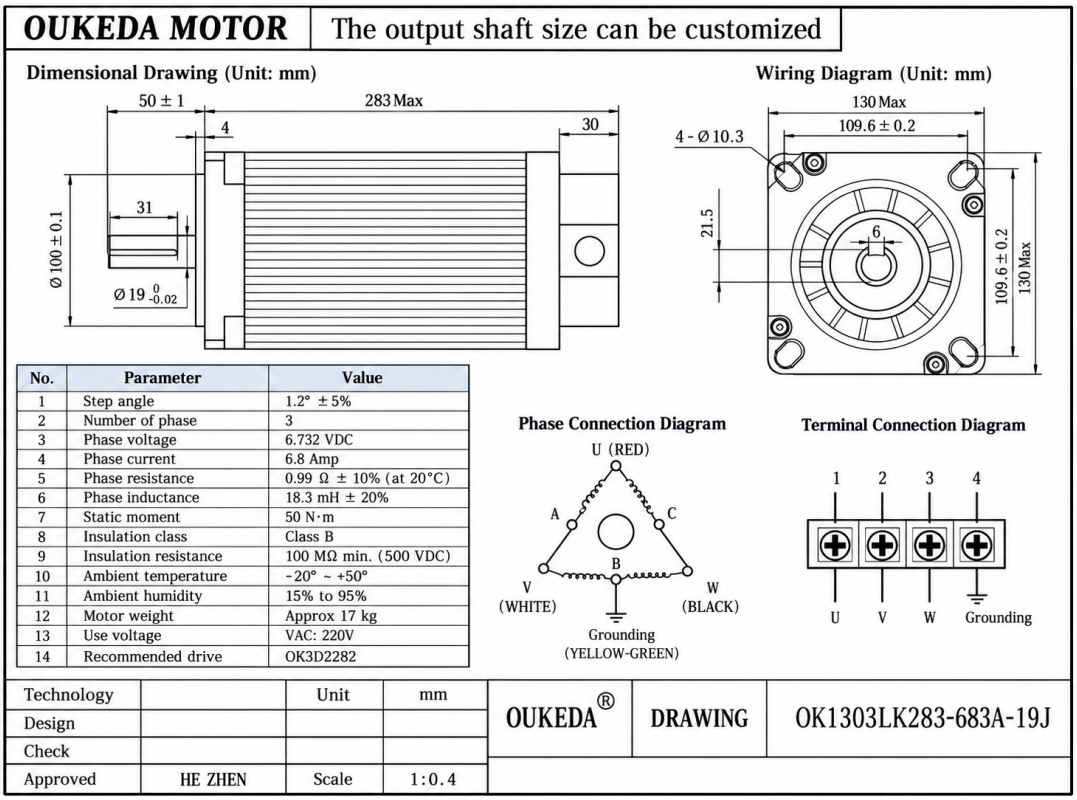
Holding torque	50 N.m = 5000 N.cm (approx. 7081 oz.in)
Rated current per phase	6.8 A
Phase voltage	6.732 V DC (winding nominal)
Phase resistance	0.99 ohm +/- 10% (at 20 C)
Phase inductance	18.3 mH +/- 20%
Number of phases	3
Insulation class	Class B
Insulation resistance	100 Mohm minimum (500 V DC)
Rated speed (seller-provided)	400 RPM - confirm with application test
Rated power (seller-provided)	500 W - not specified on drawing; confirm rating

3. Operating conditions

Ambient temperature	-20 C to +50 C
Ambient relative humidity	15% to 95% (avoid condensation)
Recommended driver	OK3D2282 (per supplied drawing)
Driver supply	220 V AC (driver input only; never connect directly to motor windings)

MECHANICAL DIMENSIONS & DRAWING

All dimensions are in millimeters unless otherwise stated. The drawing below is the supplied manufacturer-style reference; verify critical dimensions against the physical product before machining or installation.



4. Mechanical specifications

Overall frame	130 x 130 mm maximum
Motor body length	283 mm maximum (excluding projecting shaft)
Shaft diameter	19 mm (drawing tolerance: +0 / -0.02 mm)
Shaft projection	50 +/- 1 mm
Keyway length	31 mm (drawing indication)
Keyway width	6 mm (drawing indication)
Mounting hole diameter	4 x diameter 10.3 mm
Mounting-hole spacing	109.6 +/- 0.2 mm
Motor weight	Approx. 17 kg

WIRING, INSTALLATION & OPERATION

5. Motor wiring

U phase	RED wire
V phase	WHITE wire
W phase	BLACK wire
Protective earth (PE)	YELLOW-GREEN wire

Connect U, V, and W to the corresponding three-phase stepper driver outputs. Connect protective earth to the driver/system protective grounding point in accordance with the equipment design. Check the motor and driver terminal labels before energizing.

6. Installation procedure

1. Disconnect and lock out all electrical power before installation.

2. Secure the motor using appropriately rated fasteners through the mounting holes. Ensure the mounting surface is flat and rigid.

3. Align the load and shaft coupling to avoid excessive radial or axial force. Do not hammer the shaft.

4. Verify driver compatibility with a 3-phase stepper motor and 6.8 A/phase motor rating.

5. Connect U/V/W and protective earth as shown; check continuity and insulation as appropriate.

6. Set driver phase current and motion parameters according to the driver manual. Start at low speed without load, then increase gradually.

7. Commissioning checks

• Confirm the shaft rotates freely and no wiring is loose.

• Test at low speed, then verify rotation direction and step accuracy.

• Monitor motor temperature, vibration, and driver alarms under the actual load.

• If direction is wrong, use the driver direction control or the manufacturer-approved phase wiring procedure. Do not rewire while energized.

8. Important safety information

This motor must be operated with a compatible current-controlled 3-phase stepper driver. The listed 6.732 V DC is the nominal winding voltage, not a recommendation to connect the motor directly to a DC supply. The 220 V AC figure is a driver supply specification. Installation and electrical work should be performed by qualified personnel. Protect rotating parts and prevent contact with hot surfaces.

9. Notes on published ratings

Holding torque (50 N.m) is a static energized rating, not torque available at 400 RPM. Available running torque depends on driver, supply, wiring, speed, and load. The seller-provided 400 RPM and 500 W values are not shown on the supplied technical drawing and should be validated with a torque-speed curve or manufacturer test data before being presented as guaranteed ratings.

10. Reference and revision

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