

Product Specification

Model: TSL-3454GW-28STH3306A4-S

Ø28 mm Hybrid Stepper Motor with Worm Gearbox



PRODUCT SUMMARY

MODEL

TSL-3454GW-28STH3306A4-S

PRODUCT TYPE

Hybrid Stepper Motor
with Worm Gearbox

MOTOR FRAME SIZE

28 × 28 mm (NEMA 11)

RATED VOLTAGE

3.3 VDC

PHASE CURRENT

0.6 A / phase

MOTOR STEP ANGLE

1.8° / step

AVAILABLE RATIOS

32.3:1 to 207:1

Performance data are for reference only. Specifications can be customized for application requirements.

Hybrid Stepper Motor Specifications

Model: TSL-3454GW-28STH3306A4-S

Parameter	Specification
Step Angle	1.8° / step
Rated Voltage	3.3 VDC
Rated Phase Current	0.6 A / phase
Phase Resistance	5.5 Ω / phase
Phase Inductance	3.2 mH / phase
Holding Torque	6 N·cm
Detent Torque	0.4 N·cm
Rotor Inertia	8 g·cm ²
Number of Phases	2 phases
Lead Configuration	4-wire bipolar

Note: Performance parameters are for reference only and can be customized according to customer requirements.

Worm Gearbox Specifications

Nominal gearbox data

Configuration Right-angle worm gearbox | Four available gear ratios | Motor step angle: 1.8°

Gear Ratio	Nominal Output Step Angle	Nominal Steps per Revolution	Rated Allowable Load	Peak Allowable Load
32.3:1	0.0557°	6,460	3 kgf·cm	9 kgf·cm
67.3:1	0.0267°	13,460	3 kgf·cm	9 kgf·cm
99:1	0.0182°	19,800	12 kgf·cm	55 kgf·cm
207:1	0.0087°	41,400	12 kgf·cm	55 kgf·cm

CALCULATION BASIS

Nominal output step angle = 1.8° ÷ gear ratio.
Nominal steps per revolution = 200 × gear ratio.
Calculated values exclude gearbox backlash and mechanical compliance.

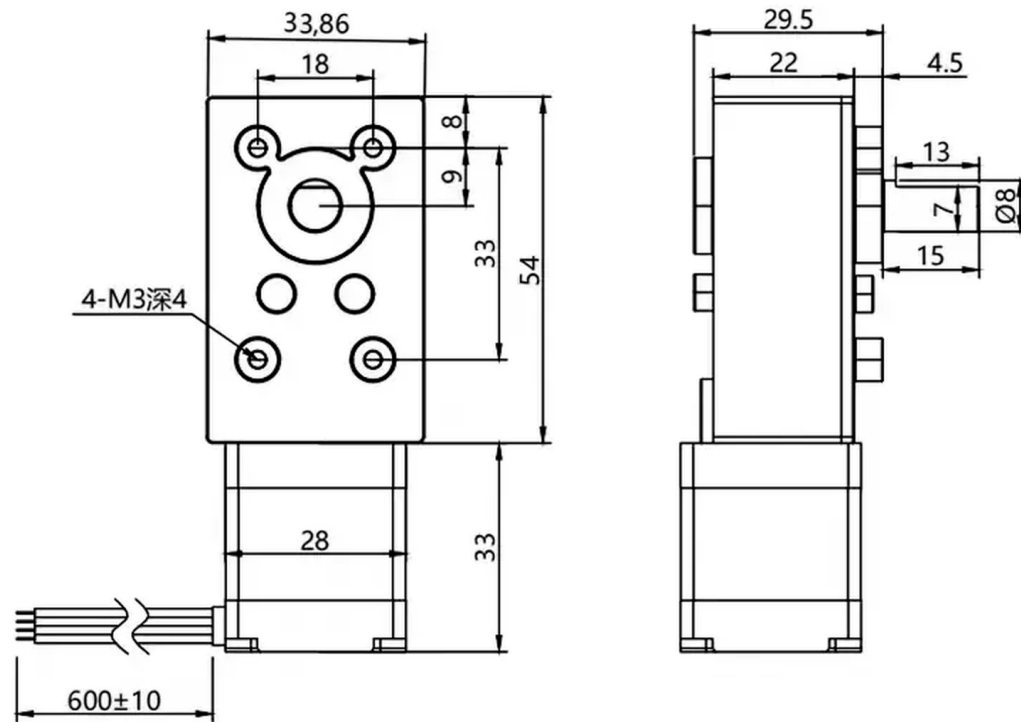
LOAD GUIDANCE

Rated allowable load is the recommended continuous gearbox load. Peak allowable load is for short-duration operation and should not be used continuously.

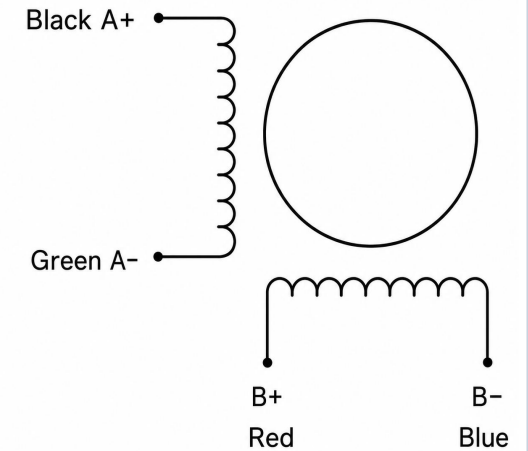
Note: Gearbox data are for reference only. Ratios, shafts, and lead-wire options can be customized upon request.

Outline Dimensions and Wiring

Dimensions in mm



WIRING / CONNECTION



KEY DIMENSIONS

Item	Dimension
Motor frame	28 × 28 mm
Motor body length	33 mm
Gearbox face	33.86 × 54 mm
Output shaft diameter	$\varnothing 8$ mm
Lead wire length	600 ± 10 mm

Drawing dimensions are for reference only. Shaft, lead-wire, connector, and mounting details can be customized.