

# NexBot Robotics STP113-004 NEMA 23 Stepper Motor 3.0 Nm

NexBot  
Robotics

SKU: NXB-SRV-STP113-004 | Category: Drive  
Systems > Servo Motors > Stepper Motors

## Overview

The NexBot Robotics STP113-004 is a high-performance two-phase hybrid stepper motor engineered for precise, repeatable motion control in industrial automation and robotics applications. This motor provides a robust solution for tasks requiring accurate positioning and high torque in a compact NEMA 23 frame. At its core, the STP113-004 delivers a substantial holding torque of 3.0 Nm, enabling it to reliably drive loads and overcome resistance without losing steps. This high torque-to-size ratio is critical for applications such as automated assembly, material handling, and positioning auxiliary axes on robotic workcells. The motor operates with a standard 1.8° step angle (200 steps per revolution), which provides the fine resolution needed for tasks demanding high accuracy. This precision ensures that components are placed correctly and processes are executed with minimal error, contributing to higher overall product quality and system throughput. The motor's construction is optimized for durability and long service life in demanding industrial environments. It features a laminated steel stator and an optimized rotor design to maximize torque output and efficiency while minimizing detent torque for smoother microstepping performance. Housed in a rugged casing with aluminum end caps, it is rated at IP40, providing protection against solid objects larger than 1mm. Its standard NEMA 23 mounting flange (57.2 x 57.2 mm) simplifies mechanical integration, allowing for direct installation into new designs or as a replacement component in existing machinery. Designed for operational flexibility, the STP113-004 is compatible with a wide range of industry-standard microstepping motion control systems and operates effectively within a 24-48VDC voltage range. Proper heat dissipation is recommended to maintain optimal performance during continuous high-load operation. This stepper motor is an ideal component for system integrators and maintenance teams seeking a dependable and precise motion solution for smaller robotic systems and automated equipment.

## Technical Specifications

Parameter	Value	Unit
Weight	1.2	kg
Material	Laminated Steel / Aluminum End Caps	
Voltage	24-48VDC	
IP Rating	IP40	
Country of Origin	JP	

Parameter	Value	Unit
Dimensions	57.2 x 57.2 x 113 mm	
Torque	3.0 Nm	

**Safety Notice:** This product must be installed and operated by qualified personnel in accordance with applicable safety standards (ISO 10218, IEC 61508).