NexBot Robotics STP113-001 Stepper Motor 3.2 Nm

NexBot Robotics

SKU: NXB-SRV-STP113-001 | Category: Drive Systems > Servo Motors > Stepper Motors

Overview

The NexBot Robotics STP113-001 is a high-performance stepper motor designed for precision motion control applications within industrial robotic systems. This component provides reliable, open-loop positioning for a variety of tasks requiring high accuracy and repeatability without the complexity of a closed-loop servo system. Its robust construction ensures long operational life in demanding manufacturing environments. Engineered for high torque density, the STP113-001 stepper motor delivers a substantial holding torque of 3.2 Nm, enabling it to maintain static positions under load and resist external forces, which is critical for end-of-arm tooling and auxiliary axis stability. The motor features a standard 1.8-degree step angle (200 steps per revolution), providing fine resolution for smooth and precise movements. This level of control is essential for applications such as automated inspection, component assembly, and dispensing, where even minor positional errors can impact product quality. The motor's low-inertia rotor design facilitates rapid acceleration and deceleration, reducing cycle times and increasing overall system throughput. The motor housing is constructed from black anodized aluminum, which provides excellent thermal dissipation to maintain performance during continuous operation. This efficient heat management prevents overheating and ensures consistent torque output over extended periods. The STP113-001 operates on a standard 48VDC power supply, making it compatible with a wide range of industrial power systems and motor drivers. Its NEMA 34 frame size and standardized mounting face allow for straightforward integration into existing machine designs and NexBot Robotics systems. Installation is simplified with a pre-wired cable lead, ensuring secure and reliable electrical connections. Regular inspection of the motor's mounting and connections is recommended, but the unit itself is designed for minimal maintenance throughout its service life.

Technical Specifications

Parameter	Value	Unit
Weight	3.5	kg
Material	Anodized Aluminum	

Parameter	Value	Unit
Voltage	48VDC	
IP Rating	IP54	
Country of Origin	KR	
Dimensions	86 x 86 x 113 mm	
Torque	3.2 Nm	

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