

NexBot Robotics

DC112-001 DC Servo Motor 48VDC 1.5 Nm

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Robotics

SKU: NXB-SRV-DC112-001 | Category: Drive Systems > Servo Motors > DC Servo Motors

Overview

The NexBot Robotics DC112-001 is a high-precision DC servo motor engineered for reliable, dynamic performance in demanding industrial automation applications. This component is specifically designed to integrate seamlessly into NexBot Robotics systems, providing the power and accuracy required for complex motion profiles. Its core function is to convert electrical energy into precise mechanical motion, enabling robotic joints to achieve their programmed positions with high fidelity. The key benefit of the DC112-001 servo motor is its high torque density, which delivers a continuous torque of 1.5 Nm from a compact and lightweight package. This allows for the design of smaller, more agile robotic arms without compromising on power, which is critical for applications in confined spaces. The motor's design emphasizes smooth operation, featuring low cogging torque to ensure fluid, consistent motion even at very low speeds. This characteristic is essential for tasks requiring delicate handling, such as electronics assembly or intricate material finishing. Constructed with a rugged, anodized aluminum housing, the motor is built to withstand the rigors of industrial environments. It carries an IP65 rating, certifying its resistance to dust ingress and low-pressure water jets, ensuring operational longevity and reducing downtime for maintenance. The motor operates on a standard 48VDC power supply, making it compatible with common industrial power systems. Its integrated high-resolution position feedback system provides accurate real-time data to the robot's motion system, enabling closed-loop control for superior accuracy and repeatability. Typical applications for this servo motor include wrist and end-of-arm tooling axes in pick-and-place, assembly, dispensing, and inspection robots where precision and speed are paramount.

Technical Specifications

Parameter	Value	Unit
Weight	2.8	kg
Material	Anodized Aluminum 6061-T6	
Voltage	48VDC	

Parameter	Value	Unit
IP Rating	IP65	
Country of Origin	CH	
Protocol	PROFINET	
Dimensions	185 x 90 x 90 mm	
Torque	1.5 Nm	

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