NexBot Robotics AC111-001 Ac Servo Motor 4.5 Nm

NexBot Robotics

SKU: NXB-SRV-AC111-001 | Category: Drive Systems > Servo Motors > AC Servo Motors

Overview

The NexBot Robotics AC111-001 is a high-performance AC servo motor engineered for demanding industrial automation and robotics applications requiring precise and dynamic motion control. This motor provides a robust solution for driving robot joints and auxiliary axes where accuracy and responsiveness are critical. Built with a high-energy permanent magnet rotor, the AC111-001 servo motor delivers a continuous torque of 4.5 Nm from a compact frame, offering excellent torque density to minimize weight and space requirements on the robot arm. Its low-inertia design enables rapid acceleration and deceleration, which is essential for reducing cycle times in applications like high-speed pick-and-place, automated assembly, and material handling. The motor's construction ensures smooth, cog-free operation even at very low speeds, providing the fluid motion necessary for tasks such as dispensing and welding. Durability is central to its design. The motor is housed in a rugged die-cast aluminum body and is environmentally sealed to an IP65 rating, protecting it against dust ingress and low-pressure water jets from any direction. This makes it suitable for deployment in challenging factory environments. The integrated high-resolution position feedback system allows for precise closed-loop control, ensuring that the robot's movements are consistently accurate and repeatable. This AC servo motor operates on a standard 400VAC supply. Integration is streamlined through standardized mounting flanges and power terminals, facilitating straightforward installation and replacement during scheduled maintenance.

Technical Specifications

Parameter	Value	Unit
Weight	3.8	kg
Material	Die-cast Aluminum	
Voltage	400VAC	
IP Rating	IP65	
Country of Origin	JP	

Parameter	Value	Unit
Protocol	PROFINET	
Dimensions	182 x 100 x 100 mm	
Torque	4.5 Nm	

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