

User Manual: NexBot Robotics AC811-004 Aluminum Servo Mounting Bracket

SKU: NXB-SRV-AC811-004 | Version: 1.0 | Brand: NexBot Robotics

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1. Safety Information

READ ALL SAFETY INSTRUCTIONS BEFORE OPERATION. Failure to follow safety procedures may result in serious injury or equipment damage.

DANGER: Isolate all hazardous energy before servicing NexBot Robotics AC811-004 Aluminum Servo Mounting Bracket; stored electrical or mechanical energy may remain present after shutdown.

WARNING: Operate NXB-SRV-AC811-004 only within its intended Accessories & Mounting > Brackets & Adapters > Servo Mounting Brackets duty profile and published specification limits.

CAUTION: Use only approved tools, mating parts, and installation hardware to prevent premature wear or unsafe operation.

NOTICE: Protect the product from contamination, impact, and environmental exposure beyond the documented enclosure rating during installation and service.

2. Product Overview

The NexBot Robotics AC811-004 is a precision-engineered mounting bracket designed to securely affix servo units to specific joints of NexBot industrial robot arms. This component provides a stable and rigid interface between the servo body and the robot's structural frame, which is critical for maintaining positional accuracy and repeatability during high-speed operations. Its primary function is to eliminate flex and vibration at the mounting point, ensuring that the servo's output is translated into precise motion without loss of fidelity. Constructed from a solid billet of aerospace-grade Aluminum 6061-T6, this bracket offers an exceptional strength-to-weight ratio. Weighing just 0.45 kg, it provides robust support without adding unnecessary mass to the robot arm, which helps maintain high acceleration and deceleration profiles. The entire component is protected by a Type II anodized finish, providing excellent resistance to corrosion, chemicals, and abrasion commonly found in industrial settings. This durable coating ensures a long service life even in demanding production environments. Every AC811-004 bracket is CNC-machined to exacting tolerances, with overall dimensions of 110 x 75 x 20 mm. This precision manufacturing process guarantees a perfect fit with compatible servo models and robot joint interfaces. The design incorporates integrated webbing and stiffening ribs to further enhance rigidity and dampen harmonic vibrations, protecting sensitive servo internals and contributing to smoother overall robot motion. This makes the mount ideal for applications such as intricate assembly, material handling, and automated inspection where precision is paramount. Installation is streamlined with pre-drilled and tapped holes that match standard NexBot servo patterns, ensuring correct alignment and reducing integration time.

3. Getting Started

1. Confirm product identity

Verify the installed item is NexBot Robotics AC811-004 Aluminum Servo Mounting Bracket with SKU NXB-SRV-AC811-004. Cross-check the unit against project documentation before applying power or connecting it to the host system.

2. Review operating context

Understand how the product is used within the Accessories & Mounting > Brackets & Adapters > Servo Mounting Brackets workflow, including any upstream and downstream dependencies, service intervals, and operator responsibilities.

3. Complete initial startup

Power up the unit under controlled conditions, observe indicator states, and verify the product initializes cleanly with the expected site-rated supply operating setup.

4. Operation

Normal operation

Run NexBot Robotics AC811-004 Aluminum Servo Mounting Bracket within the documented workload, environmental, and service conditions. Track alarms, unusual noise, heat, or vibration so corrective action can be scheduled before unplanned downtime occurs.

Interface and controls

Use the supported electrical and control interfaces to commission, monitor, and troubleshoot the device. Validate all signal mappings and control behavior after maintenance or part replacement, especially where PROFINET communication is required.

Tip: Capture a baseline of healthy status indicators after commissioning so later diagnostics can be compared quickly.

Load and application limits

Keep the product within the published ratings for speed, force, load, and environmental exposure. Where applicable, confirm mounting, routing, and attached tooling do not compromise access, cooling, or serviceability.

Change management

Whenever hardware, firmware, wiring, or connected tooling changes, repeat the relevant verification and commissioning checks before returning the equipment to production service.

Tip: Update maintenance records immediately after any wiring, parameter, or parts change.

5. Maintenance Schedule

Interval	Task	Notes
Daily	Inspect NexBot Robotics AC811-004 Aluminum Servo Mounting Bracket for visible wear, damage, contamination, loose hardware, and abnormal status indicators.	Record any abnormalities before the next production cycle begins.
Monthly	Verify mounting integrity, connector condition, and cable routing or strain relief points.	Retorque or reseal hardware only to the documented service specification.
Quarterly	Review diagnostic logs, event history, and operational trends for early signs of degradation.	Escalate recurring warnings before they develop into hard faults.
Annually	Perform a full service inspection covering mechanical condition, electrical connections, and functional verification.	Coordinate annual service with planned downtime to minimize production disruption.

6. Troubleshooting

Symptom	Possible Cause	Solution
Unit does not initialize or remain ready	Incoming supply, controls wiring, or commissioning parameters do not match the documented site-rated supply configuration.	Verify power quality, wiring continuity, protective devices, and startup parameters before restarting the unit.
	Loose connectors, damaged cabling, or	Inspect physical connections, confirm interface settings, and

Symptom	Possible Cause	Solution
Intermittent communication or status loss	interface mismatch on PROFINET.	replace damaged cables or connectors as needed.
Unexpected wear, vibration, or overheating	Mechanical loading, contamination, misalignment, or duty cycle exceeds the intended application conditions.	Inspect the installation, restore proper alignment and cooling, and verify the product is being used within its published operating limits.
Connected equipment performance is inconsistent	The installed product is not configured correctly for the host system or compatible robot series (R-20, R-50, C-10).	Validate the configuration, confirm compatibility, and rerun the functional verification procedure after any corrections.

7. Technical Specifications

Parameter	Value	Unit
Weight	0.45	kg
Material	Aluminum 6061-T6, Anodized	
Country of Origin	CH	
Protocol	PROFINET	
Dimensions	110 x 75 x 20 mm	
Torque	4 Nm	