

NexBot Robotics

ELC412-001 Electric Gripper 120mm Stroke

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Robotics

SKU: NXB-GEN-ELC412-001 | Category: End-of-Arm Tooling > Grippers > Electric Grippers

Overview

The NexBot Robotics ELC412-001 is a versatile electric gripper designed for precision handling and pick-and-place applications in automated manufacturing environments. This end-of-arm tooling component provides reliable, software-defined performance for tasks requiring consistent and adaptable part manipulation. The core of the ELC412-001 is its servo-electric drive system, which enables precise, independent control over finger position, speed, and gripping force. With an adjustable gripping force range from 50N to 400N, this gripper can securely handle both delicate electronic components and heavier, ruggedly machined parts without causing damage or slippage. This wide force range eliminates the need for tool changes between tasks involving different part sensitivities, increasing production uptime. The parallel-acting fingers provide a generous 120 mm total stroke, accommodating a diverse range of part sizes and geometries. Engineered for high-throughput applications, the ELC412-001 features exceptional positioning repeatability of ± 0.02 mm. This level of precision ensures that parts are consistently placed in the correct orientation, which is critical for success in automated assembly, machine tending, and quality inspection processes. The gripper's integrated controller simplifies system architecture, connecting directly via IO-Link for streamlined communication and real-time diagnostics on grip status, position, and force. The housing is machined from durable 6061-T6 aluminum and is rated to IP54, providing protection against dust and light water spray in typical industrial settings. Installation is straightforward, utilizing a standard ISO 9409-1-50-4-M6 tool mounting flange for direct attachment to compatible robot wrists.

Technical Specifications

Parameter	Value	Unit
Weight	3.2	kg
Material	Aluminum 6061-T6	
Voltage	24VDC	
IP Rating	IP54	

Parameter	Value	Unit
Country of Origin	JP	
Protocol	IO-Link	
Dimensions	185 x 110 x 95 mm	
Repeatability	±0.02 mm	
Torque	1 Nm	

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