

User Manual: NexBot Robotics FLR022-001 Collaborative Robot Arm 10kg Payload

SKU: NXB-ROB-FLR022-001 | 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.

2. Product Overview

The NexBot Robotics FLR022-001 is a 6-axis collaborative robot arm engineered for medium-payload applications requiring precision, flexibility, and safe human-robot collaboration. This cobot is designed to augment human labor by automating repetitive or physically demanding tasks, thereby increasing productivity and improving workplace ergonomics. With a substantial 10 kg payload capacity, this robot is adept at handling a wide range of parts and tools, making it ideal for tasks like machine tending, pick-and-place operations, and light assembly. Key to its performance is an extensive 1300 mm reach, which provides a large, flexible work envelope. This allows the robot to service multiple stations or handle larger workpieces without needing frequent repositioning, maximizing its utility on the factory floor. The FLR022-001 delivers exceptional position repeatability of ± 0.03 mm, ensuring that tasks are performed with consistent and reliable accuracy. This level of precision is critical for quality control in applications such as gluing, dispensing, intricate assembly, and inspection. Designed with integrated safety features, this robot can operate safely alongside human workers without extensive physical guarding, following a comprehensive risk

assessment. Advanced force and torque sensing capabilities allow the robot to detect unexpected contact and stop safely, minimizing risk in a shared workspace. Its intuitive programming interface allows for rapid deployment and easy task modification, reducing the need for specialized robotics expertise and lowering overall integration costs. The robot's lightweight construction and straightforward mounting system simplify installation on floors, workbenches, or other stable industrial surfaces, enabling quick integration into existing production lines.

3. Getting Started

4. Operation

5. Maintenance Schedule

Interval	Task	Notes
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6. Troubleshooting

Symptom	Possible Cause	Solution
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7. Technical Specifications

Parameter	Value	Unit
Weight	33.5	kg
Material	Aluminum Alloy, ABS Plastic	
Voltage	48VDC	
IP Rating	IP54	
Country of Origin	DE	
Protocol	EtherNet/IP, PROFINET, Modbus TCP	
Reach	1300 mm	
Payload	10 kg	
Axes	6	
Repeatability	±0.03 mm	