

NexBot Robotics NET533-013

M12 Fieldbus Connector

NexBot
Robotics

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Overview

The NexBot Robotics NET533-013 is a field-wireable M12 fieldbus connector designed to provide secure and reliable data communication for robotic systems operating in demanding industrial environments. This component is essential for establishing robust connections between robot controllers, I/O modules, sensors, and other peripheral devices, ensuring consistent performance and minimizing downtime caused by network interruptions. A primary feature of the NET533-013 connector is its rugged construction, which is critical for longevity in factory settings. The housing is made from nickel-plated brass, offering excellent resistance to corrosion from oils, coolants, and cleaning agents. This durability is complemented by an IP67 ingress protection rating. This specification guarantees that the connector is completely sealed against dust and can withstand temporary immersion in water, making it an ideal choice for applications involving liquid sprays, high humidity, or frequent washdowns. The robust sealing protects the internal contacts from contamination, which is a common cause of signal degradation and network failure. For electrical integrity, the connector features a 5-pin, A-coded M12 interface, a widely adopted standard in industrial automation for sensor and network connections. It is designed for a nominal operating voltage of 24VDC. The screw-locking mechanism provides a secure, vibration-resistant coupling that will not loosen over time, even when mounted on a robot arm subject to constant motion and high acceleration. This secure physical connection is crucial for maintaining the integrity of fieldbus protocols like DeviceNet, ensuring that data packets are transmitted without error. The connector's internal shielding also provides protection against electromagnetic interference (EMI) and radio-frequency interference (RFI), preserving signal quality in electrically noisy environments where welding equipment or large motors are present. Installation is straightforward thanks to the field-wireable design, which allows technicians to terminate cables on-site without specialized tooling. This flexibility simplifies maintenance and allows for the creation of custom-length cables tailored to the specific layout of a robotic cell. The NET533-013 connector is a fundamental building block for creating a dependable communication backbone for articulated and collaborative robot applications, from automated assembly and material handling to packaging and quality inspection. Its combination of standardized design, environmental resistance, and secure connection technology makes it a reliable component for any integrated robotics system.

Technical Specifications

Parameter	Value	Unit
Weight	0.05	kg
Material	Nickel-plated Brass	

Parameter	Value	Unit
Voltage	24VDC	
IP Rating	IP67	
Country of Origin	DE	
Protocol	DeviceNet	
Dimensions	52 x 15 x 15 mm	

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