

NexBot Robotics ABS141-010

22-Bit Absolute Encoder

NexBot
Robotics

SKU: NXB-SNS-ABS141-010 | Category: Drive Systems > Encoders > Absolute Encoders

Overview

The NexBot Robotics ABS141-010 is a high-precision absolute encoder designed to provide accurate and reliable position feedback for industrial robotic applications. This component is critical for ensuring precise motion control, enabling robots to perform complex tasks with high repeatability. Its primary function is to report the exact angular position of a robot joint at all times, even after a power cycle, eliminating the need for a homing sequence and reducing startup times. Key to its performance is the 22-bit single-turn resolution, which translates to over four million distinct positions per revolution. This level of granularity allows for exceptionally smooth and accurate path following, making it ideal for applications such as arc welding, precision assembly, material handling, and quality inspection where even minor deviations can impact product quality. The absolute positioning capability ensures that the system always knows its state, enhancing safety and operational efficiency. This ensures that position data is delivered to the robot controller in real time, which is essential for dynamic and coordinated multi-axis movements. The robust, compact housing is manufactured from anodized aluminum and carries an IP67 rating, providing complete protection against dust ingress and temporary immersion in water. This durability makes the ABS141-010 encoder suitable for use in harsh industrial environments where exposure to contaminants and moisture is common. Installation is streamlined with a standard mounting pattern and M12 connector. The encoder is engineered for a long operational life, providing a dependable feedback solution that minimizes downtime and maintenance requirements for compatible NexBot Robotics systems.

Technical Specifications

Parameter	Value	Unit
Weight	0.35	kg
Material	Anodized Aluminum	
Voltage	24VDC	
IP Rating	IP67	
Country of Origin	KR	
Protocol	EtherCAT	
Dimensions	58 x 58 x 45 mm	

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