

NexBot Drives INC142-006 Incremental Encoder

**NexBot
Robotics**

SKU: NXB-SNS-INC142-006 | Category: Drive
Systems > Encoders > Incremental Encoders

Overview

The NexBot Drives INC142-006 is a high-precision incremental encoder designed to provide accurate position and velocity feedback for demanding industrial robotic applications. It serves as a critical component in closed-loop motion control systems, ensuring that robot movements are executed with exceptional accuracy and repeatability. This encoder delivers a high resolution of 8192 Pulses Per Revolution (PPR), which translates into extremely fine control over joint angles and tool paths. This level of precision is essential for tasks such as intricate welding, precise material handling, and complex assembly operations where even minor deviations can impact product quality. The higher resolution allows for smoother velocity control, reducing vibration and improving the overall performance of the robot arm. Engineered for reliability in industrial settings, the INC142-006 features a rugged anodized aluminum housing with an IP65 ingress protection rating. This ensures dependable operation by protecting the internal optics and electronics from dust, debris, and low-pressure water jets commonly found in manufacturing environments. Operating on a standard 24VDC power supply, it integrates seamlessly into existing control cabinets and electrical systems. The A/B/Z quadrature output with a line driver ensures a strong, noise-immune signal transmission, which is critical for maintaining signal integrity over the required cable lengths within a robot cell. Installation is straightforward, with a standard flange mount and a 6 mm solid shaft designed for direct coupling to a motor shaft. As a core feedback device, this encoder is instrumental in preventing positioning errors, enabling robots to perform consistently and reliably cycle after cycle. It is an essential component for maintaining the operational accuracy of NexBot robotics systems.

Technical Specifications

Parameter	Value	Unit
Weight	0.35	kg
Material	Anodized Aluminum	
Voltage	24VDC	
IP Rating	IP65	
Country of Origin	US	
Protocol	PROFINET	

Parameter	Value	Unit
Dimensions	58 x 58 x 52 mm	

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