

NexBot Vision SD131-003

Single-Axis Servo Drive (30A)

NexBot Robotics

SKU: NXB-SRV-SD131-003 | Category: Drive Systems > Servo Drives > Single-Axis Servo Drives

Overview

The NexBot Vision SD131-003 is a high-performance single-axis servo drive engineered to provide precise, dynamic control for individual robot joints and auxiliary motion axes in automated systems. This drive is optimized for applications requiring high-speed response and exceptional positioning accuracy, making it an ideal component for advanced manufacturing and material handling tasks. Key to its performance is a sophisticated control architecture featuring advanced auto-tuning algorithms and vibration suppression filters. This allows the drive to adapt to varying loads and mechanical resonances, significantly reducing settling times and improving overall machine throughput. With a continuous current rating of 30A and a peak output of up to 90A, the SD131-003 provides ample power to actuate a wide range of servo motors, enabling rapid acceleration and deceleration for heavy payloads. This capability is critical in applications such as robotic welding, high-speed pick-and-place, and CNC machining where both speed and precision are paramount. The drive operates on a 480VAC 3-phase power supply, making it suitable for standard industrial power systems. This high-speed fieldbus ensures synchronized multi-axis motion, which is essential for the coordinated movements of complex articulated robots. Safety is addressed with an integrated Safe Torque Off (STO) function (SIL 3, PLe), which allows for the safe shutdown of motor torque without requiring external power contactors, simplifying safety circuit design. Designed for integration into control cabinets, the SD131-003 has a compact, panel-mount form factor and an IP20 rating. Pluggable connectors for power, motor, and I/O signals facilitate straightforward installation and maintenance, minimizing downtime during system setup or component replacement.

Technical Specifications

Parameter	Value	Unit
Weight	2.8	kg
Material	Anodized Aluminum	
Voltage	480VAC	
IP Rating	IP20	
Country of Origin	SE	
Protocol	EtherCAT	
Dimensions	225 x 85 x 190 mm	

Parameter	Value	Unit
Torque	3 Nm	

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