NexBot Robotics 212-010 Safety Controller SIL3/PLe

NexBot Robotics

SKU: NXB-CTL-212-010 | Category: Controllers & Software > Robot Controllers > Safety Controllers

Overview

The NexBot Robotics 212-010 is a dedicated safety controller designed to manage and monitor all safety-related functions within an industrial robot system, ensuring compliance and operator protection. This controller serves as the core of a robot's safety system, processing inputs from devices like emergency stop buttons, light curtains, and safety mats to execute a safe stop condition reliably. Engineered to meet stringent international standards, the 212-010 controller is certified for SIL 3 (IEC 62061) and Performance Level 'e' (PLe, ISO 13849-1). This high level of certification provides confidence that critical safety functions will perform as expected, even in the event of a component failure. The unit features 8 dual-channel safety inputs, 4 safety outputs (OSSD pairs), and 4 standard outputs for status indication, offering flexible integration for a wide range of safety device configurations. Its fast processing architecture ensures a system response time of less than 10 ms, which is critical for minimizing stopping distances and preventing incidents in high-speed applications. Key applications for this safety controller include safeguarding robotic cells used for machine tending, automated assembly, high-speed pick-and-place, and robotic welding. By centralizing safety logic, it simplifies the overall system architecture and reduces wiring complexity compared to using multiple safety relays. Configuration is performed through our intuitive NexBot SafetyLogic software via a standard USB-C connection, allowing users to define safety zones, create logic for muting functions, and diagnose the system efficiently. The controller is housed in a compact, DIN rail-mountable enclosure for easy installation within the main robot control cabinet. Its robust design and adherence to the highest safety standards make it an essential component for any modern robotic automation project where human-robot collaboration or interaction is a factor.

Technical Specifications

Parameter	Value	Unit
Weight	0.8	kg
Material	Polycarbonate	
Voltage	24VDC	
IP Rating	IP20	
Country of Origin	KR	
Protocol	EtherNet/IP with CIP Safety	

Parameter	Value	Unit
Dimensions	150 x 110 x 50 mm	

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