

# NexBot Robotics

## 342-001 Vibration Sensor, Triaxial, 10 kHz

NexBot Robotics

SKU: NXB-SNS-342-001 | Category: Sensors & Vision > Temperature & Environment Sensors > Vibration Sensors

### Overview

The NexBot Robotics 342-001 is a high-frequency, triaxial vibration sensor designed for predictive maintenance and condition monitoring on industrial robotic systems. This sensor provides critical data on the operational health of robot joints and end-effectors, enabling maintenance teams to detect potential failures before they cause unplanned downtime. Its primary function is to measure acceleration and vibration across three axes (X, Y, and Z) simultaneously, offering a complete picture of mechanical stress and wear. Key features include a wide frequency response from 0.5 Hz up to 10 kHz, which is essential for identifying a broad spectrum of mechanical issues, from low-frequency imbalances to high-frequency gear mesh faults. The sensor's high sensitivity of 100 mV/g ensures that even subtle changes in vibration signatures are captured, allowing for early and accurate diagnostics. The robust 316L stainless steel housing and an IP67 ingress protection rating make the 342-001 sensor suitable for deployment in demanding industrial settings where dust, moisture, and cleaning agents are common. In robotic applications, this sensor is invaluable for monitoring the health of high-load joints, detecting anomalies in welding or dispensing tool performance, and ensuring overall system stability. By integrating this sensor into a condition-based monitoring program, facilities can transition from reactive repairs to a proactive maintenance strategy, extending the life of their automation assets and maximizing production uptime. The integrated IO-Link protocol simplifies wiring and provides advanced diagnostic data directly to the control system, reducing integration complexity. Installation is straightforward via a standard M5 tapped hole, and it connects using a common M12 4-pin connector.

### Technical Specifications

Parameter	Value	Unit
Weight	0.095	kg
Material	Stainless Steel 316L	
Voltage	24VDC	

Parameter	Value	Unit
IP Rating	IP67	
Country of Origin	IT	
Protocol	IO-Link	
Dimensions	25 x 25 x 58 mm	

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