Allen-Bradley 1734-IB8S

Allen Bradley 1734-Ib8s Ser B, Point Guard I/O Safety Input Module 1734-Ib8s Series B User Manual

Model: 1734-IB8S | Brand: Allen-Bradley

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Allen Bradley 1734-Ib8s Ser B, Point Guard I/O Safety Input Module 1734-Ib8s Series B. Please read this manual thoroughly before using the device to ensure safe and efficient operation.

The Allen Bradley 1734-IB8S Series B is a Digital Input Module 24VDC 8-Ch Sink Safety, designed for industrial automation applications.

2. PRODUCT OVERVIEW

The Allen Bradley 1734-IB8S Series B is a Digital Input Module designed for industrial automation applications. It features 8 safety-rated sink inputs for 24V DC systems.

Figure 2.1: Allen Bradley 1734-IB8S Series B module in its factory sealed box, showing the product label with CAT 1734-IB8S and serial number.

Figure 2.2: Close-up view of the product packaging for the 1734-IB8S module, emphasizing the factory seal and key identification numbers like CAT 1734-IB8S and the barcode 10612598350619.

Key features include:

- 8 Safety-Rated Sink Inputs
- 24V DC Operating Voltage (11VDC - 28.8VDC)
- Input Delay Time, On to Off: 16.2 ms max
- On-State Current Min/Max: 3.3 mA/5 mA
- Maximum Off-State Current: 1.3 mA

- PointBus Current: 175 mA

3. SETUP AND INSTALLATION

Proper installation is crucial for the safe and reliable operation of the 1734-IB8S module. Follow these steps carefully:

1. **Power Disconnection:** Ensure all power to the control system is disconnected before beginning installation.

2. **Mounting:** Mount the module onto a compatible POINT I/O backplane or DIN rail. Ensure it is securely latched.

3. **Wiring:** Connect the 24V DC power supply to the module's power terminals. Wire the safety input devices to the designated input channels. Refer to the system wiring diagrams for specific connections.

4. **Grounding:** Ensure proper grounding of the module and associated equipment to prevent electrical hazards and ensure signal integrity.

5. **Verification:** Double-check all wiring connections for correctness and security before reapplying power.

Note: Always consult the complete system documentation for detailed wiring diagrams and safety guidelines.

4. OPERATING INSTRUCTIONS

Once installed and powered, the 1734-IB8S module operates as part of the larger control system. Its primary function is to monitor the state of 8 safety-rated sink inputs.

- **Input Monitoring:** The module continuously monitors the voltage levels on its input channels.
- **Status Indicators:** Observe the LED indicators on the module for real-time status of each input channel. Typically, an illuminated LED indicates an active input.
- **System Integration:** The input status is communicated to the programmable logic controller (PLC) or safety controller via the PointBus.
- **Safety Functionality:** As a safety-rated module, it is designed to meet specific safety integrity levels (SIL) or performance levels (PL) when integrated into a safety system. Refer to the safety manual for detailed safety function implementation.

Important: Do not attempt to bypass or modify safety circuits. Always follow established safety procedures.

5. MAINTENANCE

The 1734-IB8S module is designed for minimal maintenance. However, periodic checks can help ensure long-term reliability.

- **Visual Inspection:** Periodically inspect the module for any signs of physical damage, loose connections, or excessive dust accumulation.
- **Cleaning:** If necessary, gently clean the module's exterior with a soft, dry cloth. Do not use solvents or abrasive cleaners.
- **Connection Integrity:** Ensure all wiring connections remain secure and free from corrosion.
- **Environmental Conditions:** Verify that the operating environment remains within the specified temperature and humidity ranges.

Caution: Always disconnect power before performing any maintenance or cleaning procedures.

6. TROUBLESHOOTING

This section provides guidance for common issues encountered with the 1734-IB8S module.

Problem	Possible Cause	Solution
Module LEDs are off	No power to module or backplane.	Check power supply connections and ensure backplane power is active.
Input LED not illuminating	Input device not active, wiring error, or faulty input device.	Verify input device operation. Check wiring for breaks or shorts. Test input device.
Module not communicating with PLC	Incorrect module configuration, PointBus issue, or PLC programming error.	Verify module configuration in PLC software. Check PointBus connections. Review PLC program logic.

If troubleshooting steps do not resolve the issue, contact Allen-Bradley technical support.

7. SPECIFICATIONS

Detailed technical specifications for the Allen Bradley 1734-IB8S Series B module:

- **Model Number:** 1734-IB8S
- **Series:** B
- **Input Type:** Digital Sink Safety-Rated
- **Number of Channels:** 8
- **Operating Voltage:** 24V DC (Range: 11VDC - 28.8VDC)
- **Input Delay Time (On to Off):** 16.2 ms max
- **On-State Current (Min/Max):** 3.3 mA / 5 mA
- **Maximum Off-State Current:** 1.3 mA
- **PointBus Current:** 175 mA
- **Product Dimensions:** 8 x 8 x 7 inches
- **Item Weight:** 15.87 ounces
- **Manufacturer:** Allen Bradley

8. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, and service, please refer to the official Allen-Bradley or Rockwell Automation website, or contact your authorized distributor.

Online Resources: Visit the Rockwell Automation website for product documentation, software downloads, and support forums.

Technical Support: Contact Allen-Bradley technical support for assistance with product issues, configuration, or advanced troubleshooting.

Related Documents - 1734-IB8S

[POINT Guard I/O Safety Modules User Manual](#)

User manual for Allen-Bradley POINT Guard I/O Safety Modules (1734-IB8S, 1734-OB8S, 1734-IE4S, 1734-OBV2S), detailing installation, configuration, and operation for industrial safety applications.

[POINT I/O 2 Current and 2 Voltage Input Analog Modules Installation Instructions](#)

Installation instructions for Rockwell Automation's POINT I/O 2 Current and 2 Voltage Input Analog Modules (Series C), including catalog numbers 1734-IE2C, 1734-IE2CK, 1734-IE2V, and 1734-IE2VK. Covers installation, wiring, status indicators, specifications, and hazardous location approvals.

[Allen-Bradley POINT I/O Source Input Modules Installation Instructions](#)

This document provides installation instructions for Allen-Bradley POINT I/O Source Input Modules, including catalog numbers 1734-IV2, 1734-IV4, 1734-IV8, and 1734-IV8K, Series C. It covers topics such as environment and enclosure, hazardous location approvals, wiring, communication, status indicators, and specifications.

[Allen-Bradley POINT I/O Output Module Installation Instructions](#)

This document provides essential installation instructions for the Allen-Bradley POINT I/O Output Module, covering setup, wiring, and status indicators for models 1734-OB2, 1734-OB4, 1734-OB4K, 1734-OB8, and 1734-OB8K.

[Allen-Bradley POINT I/O Protected Output Module Installation Guide](#)

Comprehensive installation guide for the Allen-Bradley POINT I/O Protected Output Module, Series C (Catalog Number 1734-OB2EP). Covers setup, wiring, communication, status indicators, and technical specifications for industrial automation.

[Allen-Bradley MicroLogix 1200 RTD/Resistance Input Module Installation Instructions (1762-IR4)](#)

Comprehensive installation guide for the Allen-Bradley MicroLogix 1200 RTD/Resistance Input Module (Catalog Number 1762-IR4). Covers module overview, description, installation procedures, wiring diagrams, specifications, hazardous location approvals, and support resources.