EQBVZZRD BARD-600

EQBVZZRD BARD-600 Safety Barrier Instruction Manual

Model: BARD-600

1. Product Overview

The EQBVZZRD BARD-600 is a safety barrier designed to provide intrinsic safety in industrial environments. It limits the energy available to electrical equipment in hazardous areas, preventing ignition of explosive atmospheres. This device is crucial for maintaining safety in applications such as petroleum, electric power, and food processing industries.
Its compact design and robust construction ensure reliable performance and ease of integration into existing safety systems.

2. Safety Information

Important: Read all instructions carefully before installation and operation. Failure to follow these instructions may result in equipment damage, personal injury, or death.

- Installation and maintenance must only be performed by qualified personnel familiar with intrinsic safety principles and local electrical codes.
- Ensure the power supply is disconnected before performing any wiring or maintenance.
- The safety barrier must be installed in a non-hazardous (safe) area, separating it from the hazardous area equipment.
- Verify that the barrier's specifications (voltage, current, power) are compatible with the connected hazardous area equipment.
- Do not modify the safety barrier. Any unauthorized modifications will void the warranty and compromise safety.
- Proper grounding is essential for intrinsic safety. Ensure all grounding connections are secure and meet regulatory requirements.

3. Product Features

- **High Stability:** Constructed from sturdy materials, ensuring durability and adaptability to various harsh industrial environments.
- **Wide Range of Applications:** Suitable for use in diverse fields including petroleum, electric power, and food

processing, contributing to production safety.

- **Compact Design:** Small footprint facilitates easy installation and integration into control systems.

4. Setup and Installation

The BARD-600 safety barrier is designed for easy installation, typically on a DIN rail within a control cabinet located in a safe area.

1. **Mounting:** Securely mount the safety barrier onto a standard DIN rail in a suitable enclosure within the safe area.
2. **Wiring Connections:**
    - Identify the terminals for the hazardous area (e.g., "H" or "Hazardous Area") and the safe area (e.g., "S" or "Safe Area").
    - Connect the field device wiring from the hazardous area to the designated hazardous area terminals on the barrier.
    - Connect the control system wiring from the safe area to the designated safe area terminals on the barrier.
    - Ensure all connections are tight and secure to prevent loose contacts, which can compromise safety and performance.
3. **Grounding:** Connect the barrier's ground terminal (GND) to a reliable earth ground. This is critical for intrinsic safety. Refer to the wiring diagram for specific grounding points.
4. **Verification:** After wiring, double-check all connections against the system's wiring diagrams and the barrier's specifications to ensure correct polarity and proper termination.

Figure 1: Side view of the EQBVZZRD BARD-600 Safety Barrier, showing its compact form factor and terminal connections. This view highlights the robust construction suitable for industrial environments.

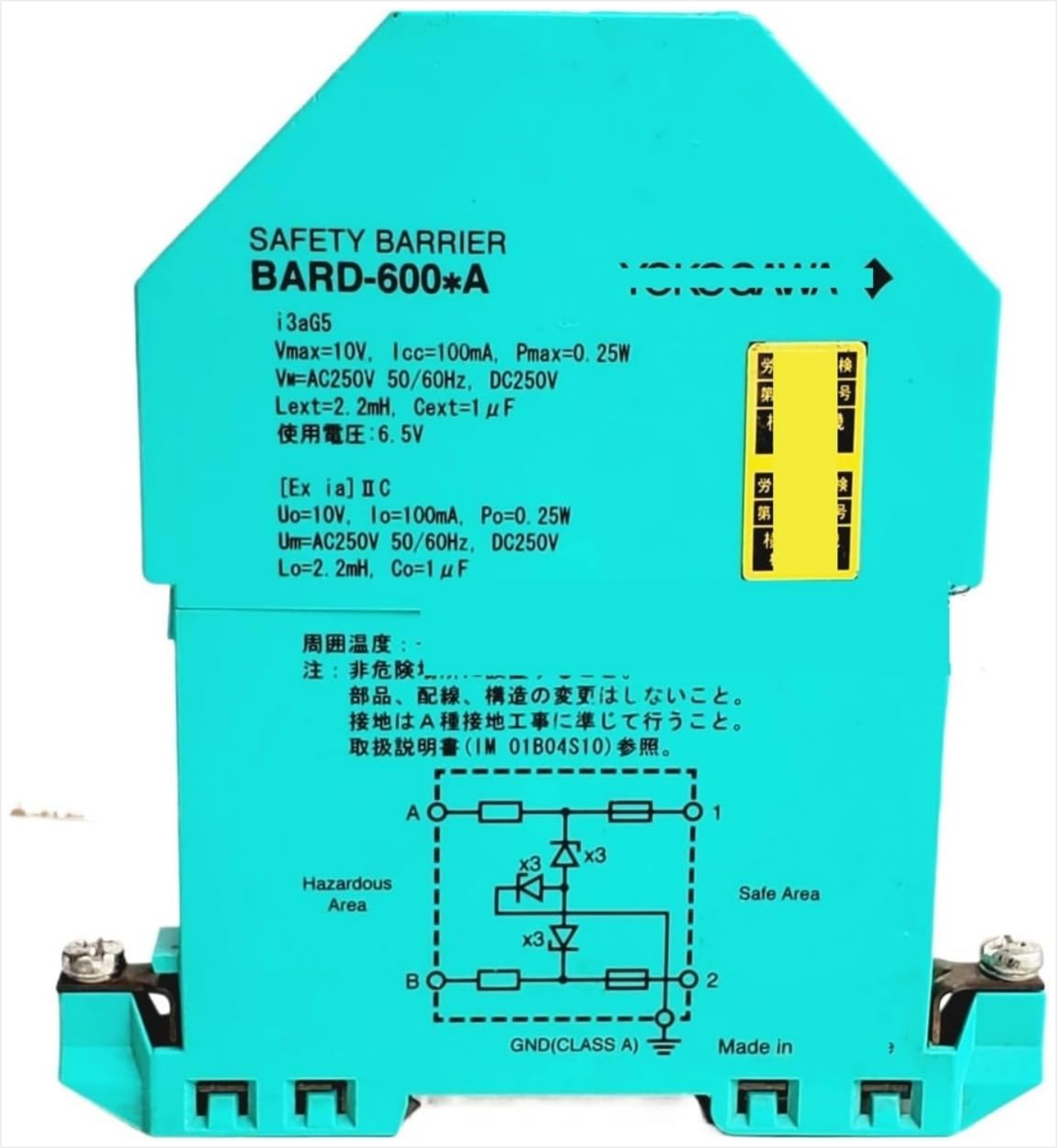

Figure 2: Top view of the EQBVZZRD BARD-600 Safety Barrier, displaying critical technical specifications and a simplified internal wiring diagram. The diagram illustrates the separation between hazardous and safe areas and the internal diode network for energy limitation.

5. Operating Principles

The BARD-600 safety barrier operates on the principle of intrinsic safety, limiting the electrical energy that can be transferred from a safe area to a hazardous area. It typically uses a combination of resistors, Zener diodes, and fuses to restrict voltage and current to levels incapable of igniting a specific hazardous atmosphere.

- Once installed and correctly wired, the barrier functions passively, continuously ensuring that connected equipment in the hazardous area remains intrinsically safe.
- No user interaction is required for its primary safety function during normal operation.
- The barrier acts as an interface, allowing signals and power to pass through while preventing excessive energy from

reaching the hazardous zone.

6. Maintenance

Regular inspection and maintenance are crucial to ensure the continued integrity and safety performance of the BARD-600 safety barrier.

- **Visual Inspection:** Periodically inspect the barrier for any signs of physical damage, corrosion, or discoloration.
- **Connection Checks:** Ensure all wiring connections remain tight and secure. Loose connections can lead to intermittent operation or compromise safety.
- **Environmental Conditions:** Verify that the operating environment remains within the specified temperature and humidity ranges.
- **Cleaning:** If necessary, gently clean the exterior of the barrier with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **System Testing:** Conduct periodic functional tests of the entire intrinsically safe system as per relevant industry standards and safety regulations.

7. Troubleshooting

If issues arise with the intrinsically safe circuit, consider the following troubleshooting steps:

- **No Power/Signal:**
  - Check the power supply to the safe area equipment connected to the barrier.
  - Verify all wiring connections to and from the barrier are correct and secure.
  - Inspect for any blown fuses within the barrier (if applicable and accessible by qualified personnel).
- **Intermittent Operation:**
  - Re-check all terminal connections for tightness.
  - Ensure proper grounding is maintained.
- **System Faults:** If the connected hazardous area equipment reports a fault, first isolate the hazardous area equipment and then check the barrier. Do not attempt to repair the barrier internally.
- **Consult Documentation:** Refer to the specific documentation for the connected hazardous area device and the overall intrinsic safety system for further troubleshooting guidance.
- **Professional Assistance:** If the problem persists, contact a qualified intrinsic safety specialist or the manufacturer for support.

8. Specifications

Manufacturer	EQBVZZRD
Model Number	BARD-600
Part Number	EQBVZZRD
Item Weight	1.1 pounds
Package Dimensions	0.39 x 0.39 x 0.39 inches

Item Package Quantity	1
Number Of Pieces	1
ASIN	B0FDQNTF37
Date First Available	June 19, 2025

Note: Refer to the product label (Figure 2) for detailed electrical intrinsic safety parameters (Vmax, Icc, Pmax, etc.) specific to the BARD-600 model.

9. Warranty and Support

Specific warranty information for the EQBVZZRD BARD-600 Safety Barrier was not provided in the product details. For warranty claims, technical support, or further inquiries, please contact the manufacturer directly using the contact information provided at the point of purchase or on the manufacturer's official website.