

Turck VB 40-B1161

TURCK VB 40-B1161 (U7002) Junction Box User Manual

Model: VB 40-B1161

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and effective use of the TURCK VB 40-B1161 (U7002) Junction Box. This industrial-grade junction box is designed for robust electrical connections in various applications, featuring multiple ports for efficient signal and power distribution.

The VB 40-B1161 is a 4-port device operating on 10-48 VDC, providing 4 AMPS per port. It incorporates a 7/8" MINIFAST side exit home run connection and M12 EUROFAST I/O ports, all housed within a durable plastic enclosure.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the equipment:

- Ensure power is disconnected before installation, maintenance, or troubleshooting.
- Verify that the power supply voltage (10-48 VDC) matches the product specifications.
- Do not exceed the maximum current rating of 4 AMPS per port.
- Only qualified personnel should perform installation and wiring.
- Protect the unit from excessive moisture, dust, and extreme temperatures.
- Do not open the housing unless specifically instructed by the manufacturer.

3. PRODUCT DESCRIPTION

The TURCK VB 40-B1161 (U7002) is a robust junction box designed for industrial automation environments. It facilitates the connection and distribution of signals and power from a main cable (home run) to multiple devices via individual ports.

Key Features:

- **Model Number:** VB 40-B1161 (U7002)
- **Voltage Range:** 10-48 VDC
- **Current Rating:** 4 AMPS per port
- **Number of Ports:** 4
- **Home Run Connection:** 7/8" MINIFAST Side Exit
- **I/O Connections:** M12 EUROFAST

- **Housing Material:** Durable Plastic



Figure 3.1: The TURCK VB 40-B1161 Junction Box as received in its protective packaging.



Figure 3.2: Detailed view of the 7/8" MINIFAST side exit home run connector, showing the robust pin configuration for main power and signal input.



Figure 3.3: Product label displaying the ID Number U7002 and Part Number VB 40-B1161, along with the TURCK brand logo and manufacturing details.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of the junction box:

1. **Mounting:** Securely mount the junction box in a suitable location using appropriate fasteners. Ensure the mounting surface is stable and free from excessive vibration.
2. **Power Connection (Home Run):** Connect the main power and signal cable to the 7/8" MINIFAST side exit connector. Ensure the connector is fully seated and tightened to maintain environmental sealing.
3. **I/O Device Connections:** Connect your M12 EUROFAST compatible devices (sensors, actuators, etc.) to the four available M12 ports. Each port can supply up to 4 AMPS.
4. **Wiring Verification:** Double-check all wiring connections for correct polarity and secure fit. Refer to your system's wiring diagrams for specific pin assignments.
5. **Power On:** Once all connections are verified, apply power (10-48 VDC) to the system.

Note: For detailed wiring schematics, consult the specific documentation provided with your system's overall design or contact TURCK technical support.

5. OPERATING INSTRUCTIONS

The TURCK VB 40-B1161 Junction Box operates as a passive distribution point for power and signals. Once properly installed and powered, it will distribute the incoming power and signals from the home run cable to the connected M12 devices.

- **Power Distribution:** The unit distributes the 10-48 VDC input voltage to all connected M12 ports.
- **Signal Routing:** Signals from the home run cable are routed to the appropriate pins on the M12 ports, and vice-versa, depending on the application.
- **Current Capacity:** Each M12 port is rated for a maximum of 4 AMPS. Ensure the total current draw of devices connected to a single port does not exceed this limit.

No user interaction is typically required during normal operation beyond ensuring secure connections and proper power supply.

6. MAINTENANCE

The TURCK VB 40-B1161 Junction Box is designed for minimal maintenance. However, periodic checks can help ensure long-term reliability:

- **Visual Inspection:** Regularly inspect the housing for any signs of physical damage, cracks, or discoloration.
- **Connection Integrity:** Check all cable connections (MINIFAST and EUROFAST) to ensure they are tight and free from corrosion. Loose connections can lead to intermittent operation or power loss.
- **Cleaning:** If necessary, gently clean the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure power is off before cleaning.
- **Environmental Check:** Verify that the operating environment remains within specified temperature and humidity ranges.

No internal user-serviceable parts are present. Do not attempt to open the unit.

7. TROUBLESHOOTING

If you encounter issues with your TURCK VB 40-B1161 Junction Box, consider the following:

Problem	Possible Cause	Solution
No power to connected devices	<ul style="list-style-type: none">• No input power to the junction box.• Loose or faulty home run cable connection.• Incorrect input voltage.• Overcurrent on a port.	<ul style="list-style-type: none">• Verify power supply is active and connected.• Check 7/8" MINIFAST connection.• Ensure input voltage is within 10-48 VDC.• Disconnect devices and test ports individually. Reduce load if necessary.
Intermittent signal/power	<ul style="list-style-type: none">• Loose M12 EUROFAST connections.• Damaged cables.• Environmental interference.	<ul style="list-style-type: none">• Tighten all M12 connections.• Inspect cables for cuts or damage; replace if necessary.• Ensure proper grounding and shielding if applicable.
Physical damage to housing	<ul style="list-style-type: none">• Impact or improper handling.	<ul style="list-style-type: none">• Discontinue use if damage compromises integrity. Contact TURCK support for replacement.

If problems persist after following these steps, contact TURCK technical support.

8. SPECIFICATIONS

Attribute	Value
Model Number	VB 40-B1161 (U7002)
Manufacturer	TURCK
Input Voltage	10-48 VDC
Current per Port	4 AMPS (max)
Number of Ports	4
Home Run Connection	7/8" MINIFAST Side Exit
I/O Connection Type	M12 EUROFAST

Attribute	Value
Housing Material	Plastic
Product Dimensions	8 x 3 x 8 inches
Weight	3.84 ounces
ASIN	B01130RBNE
Date First Available	July 6, 2015


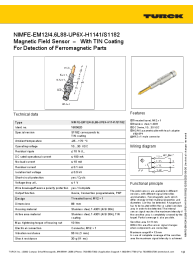
9. WARRANTY AND SUPPORT


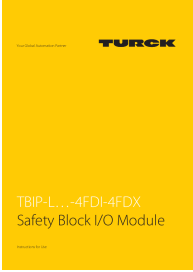


Specific warranty information for the TURCK VB 40-B1161 (U7002) Junction Box is typically provided at the point of purchase or can be obtained directly from TURCK. Please retain your proof of purchase for warranty claims. For technical support, product inquiries, or warranty service, please contact TURCK directly:

- **Manufacturer:** TURCK
- **Support Phone:** [1-800-544-7769](tel:1-800-544-7769)
- **Product ID Reference:** [U7002](#)
- **Website:** Refer to the official TURCK website for the most current contact information and resources.

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Related Documents - VB 40-B1161

	<p>TURCK FEN20-4IOL IO-Link Master Module: Instructions for Use</p> <p>Comprehensive instructions for the TURCK FEN20-4IOL IO-Link Master Module, covering its features, system architecture, installation, commissioning, and operation for industrial automation applications.</p>
	<p>TURCK NIMFE-EM12/4.6L88-UP6X-H1141/S1182 Magnetic Field Sensor - Technical Data & Mounting</p> <p>Detailed technical specifications, features, wiring diagram, functional principle, and mounting instructions for the TURCK NIMFE-EM12/4.6L88-UP6X-H1141/S1182 magnetic field sensor with TIN coating for detecting ferromagnetic parts.</p>

	<p>TBPB-L5-4FDI-4FDX Safety Block I/O Module: Instructions for Use</p> <p>This document provides instructions for use for the TURCK TBPB-L5-4FDI-4FDX Safety Block I/O Module. It covers product description, safety information, installation, configuration, operation, and technical data for industrial automation applications.</p>
	<p>TBIP-L...-4FDI-4FDX Safety Block I/O Module - Instructions for Use</p> <p>This document provides instructions for the TURCK TBIP-L...-4FDI-4FDX Safety Block I/O Module. It covers product identification, safety guidelines, intended use, technical specifications, mounting, connection, configuration, and operation.</p>
	<p>TURCK TP-306A-CF-H1141-L5500 Temperature Sensor Probe Datasheet</p> <p>Detailed technical datasheet for the TURCK TP-306A-CF-H1141-L5500 temperature sensor probe, featuring Pt100 technology, IP67 protection, and M12 connection. Includes specifications, features, and accessories.</p>
	<p>Turck IM12-AI01... Isolating Transducer Quick Start Guide</p> <p>Quick start guide for the Turck IM12-AI01... Isolating Transducer, providing essential information on installation, connection, operation, safety, and technical specifications for industrial applications.</p>