

Telemecanique XUK2ARCNL2T

Telemecanique Sensors XUK2ARCNL2T Thru-Beam Photoelectric Sensor Transmitter User Manual

Model: XUK2ARCNL2T

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Telemecanique Sensors XUK2ARCNL2T Thru-Beam Photoelectric Sensor Transmitter. Please read this manual thoroughly before using the product and retain it for future reference. The XUK2ARCNL2T is a compact photoelectric sensor transmitter designed for non-contact object detection in various industrial applications, including packaging, conveying, and assembly lines. This unit functions as the light-emitting component of a thru-beam sensing system; a separate receiver unit is required for complete operation.

2. SAFETY INFORMATION

Observe the following safety precautions to prevent injury and damage to the equipment:

- Ensure all power is disconnected before installation, wiring, or maintenance.
- Installation and wiring must be performed by qualified personnel in accordance with local electrical codes and regulations.
- Do not exceed the specified voltage and current ratings.
- Avoid direct exposure to the sensor's light beam, although it is generally safe for human eyes.
- Do not modify the sensor. Unauthorized modifications may void the warranty and create safety hazards.
- Protect the sensor from severe mechanical shock, excessive vibration, and extreme temperatures outside its operating range.

3. PRODUCT OVERVIEW

The Telemecanique Sensors XUK2ARCNL2T is a thru-beam photoelectric sensor transmitter. It features a

compact 50 x 50 mm body, an integrated 2-meter electrical cable, and indicators for operational status.



Figure 1: Telemecanique XUK2ARCNL2T Thru-Beam Photoelectric Sensor Transmitter. This image shows the blue compact body of the sensor transmitter, with the Telemecanique logo visible on the side. The top features a clear cover over adjustment screws and status indicators. The red light-emitting lens is visible on the front face, and the integrated electrical cable extends from the rear.

Key Features:

- **Thru-Beam Technology:** Provides reliable detection of objects regardless of color, with high resistance to environmental particles like dust and grime.
- **Compact Design:** 50 x 50 mm body for easy integration into various setups.
- **Input/Output:** AC/DC input, 5-wire relay AC/DC output with one programmable normally open (NO) and one normally closed (NC) contact.

- **Integrated Cable:** 2-meter electrical cable for connection.
- **Sensing Distance:** Capable of sensing objects up to 60 meters away when paired with a compatible receiver.

4. SETUP AND INSTALLATION

4.1. Mounting

The sensor transmitter should be securely mounted in a location where its light beam can be directed towards the corresponding receiver unit without obstruction. Ensure the mounting surface is stable and free from vibration.

1. Select a suitable mounting position, considering the required sensing distance and alignment with the receiver.
2. Use appropriate fasteners to secure the sensor body. The compact design allows for flexible mounting options.
3. Ensure the optical axis of the transmitter is aligned precisely with the optical axis of the receiver. Fine adjustments may be necessary during operation to optimize performance.

4.2. Wiring

The XUK2ARCNL2T transmitter features a 2-meter, 5-wire electrical cable. Connect the wires according to the following scheme. Refer to the specific wiring diagram provided with your product for exact color codes, as these can vary by region or production batch.

| Wire Function | Description |
|------------------------------|--|
| Power Input (AC/DC) | Connect to the appropriate AC or DC power supply. |
| Common (Ground) | Connect to the common or ground of the power supply. |
| Normally Open (NO) Contact | Output contact that closes when an object is detected. |
| Normally Closed (NC) Contact | Output contact that opens when an object is detected. |
| Relay Output (Common) | Common terminal for the relay output contacts. |

Important Note: This product is a transmitter only. A compatible receiver unit (sold separately) is required to complete the thru-beam sensing system and provide the detection output.

5. OPERATION

Once the transmitter and receiver are correctly installed and wired, and power is supplied, the thru-beam system is ready for operation.

- The transmitter continuously emits a light beam towards the receiver.
- When an object interrupts this beam, the receiver detects the interruption and changes the state of its output contacts.
- The XUK2ARCNL2T transmitter itself does not provide a detection output; it only emits the beam. The detection logic is handled by the receiver unit.
- The thru-beam technology is highly effective for detecting various materials and colors, even in challenging environments with dust or grime, due to its direct light path and strong signal.

Sensitivity Adjustment:

Some receiver units may offer sensitivity adjustments. Refer to the receiver's manual for details on optimizing the detection threshold for your specific application and environment.

6. MAINTENANCE

The Telemecanique Sensors XUK2ARCNL2T is designed for minimal maintenance. Regular inspection and cleaning are recommended to ensure optimal performance.

- **Cleaning:** Periodically clean the optical surfaces of the transmitter (and receiver) with a soft, lint-free cloth. If necessary, use a mild, non-abrasive cleaning solution. Avoid harsh chemicals that could damage the plastic components.
- **Inspection:** Regularly check the sensor and its cable for any signs of physical damage, wear, or loose connections.
- **Alignment:** Verify that the transmitter and receiver remain properly aligned. Misalignment can lead to intermittent or failed detection.

Always disconnect power before performing any cleaning or inspection tasks.

7. TROUBLESHOOTING

If you encounter issues with your XUK2ARCNL2T transmitter, consider the following common problems and solutions:

- **No Light Emission from Transmitter:**
 - Check power supply connections to the transmitter.
 - Verify the power source is active and within the specified voltage range.
 - Inspect the cable for damage.
- **Intermittent Detection (Receiver Issue):**
 - Ensure proper alignment between the transmitter and receiver.
 - Clean the optical surfaces of both units.
 - Check for environmental obstructions or excessive dust/grime in the beam path.
 - Verify the receiver's sensitivity settings (if applicable).
- **False Detection (Receiver Issue):**
 - Ensure no reflective surfaces are causing the beam to bounce back to the receiver when no object is present.
 - Adjust receiver sensitivity if too high.

For persistent issues, contact Telemecanique Sensors technical support.

8. SPECIFICATIONS

| Attribute | Value |
|--------------|--|
| Model Number | XUK2ARCNL2T |
| Product Type | Thru-Beam Photoelectric Sensor Transmitter |

| Attribute | Value |
|--------------------------|--|
| Body Dimensions | Compact 50 x 50 mm |
| Input Type | AC/DC |
| Output Type | 5-Wire Relay AC/DC Output |
| Contacts | 1 Normally Open (NO), 1 Normally Closed (NC) |
| Connection | 2-meter Electrical Cable |
| Sensing Technology | Thru-Beam |
| Maximum Sensing Distance | Up to 60 m (with compatible receiver) |
| Product Dimensions | 5.3 x 4 x 1.7 inches; 7.2 ounces |
| Manufacturer | Telemecanique Sensors |

9. WARRANTY AND SUPPORT

For warranty information, please refer to the official Telemecanique Sensors warranty policy available on their website or contact your authorized distributor. Keep your purchase receipt as proof of purchase. For technical support, product inquiries, or to locate an authorized service center, please visit the official Telemecanique Sensors website or contact their customer service department. You can also visit the [Telemecanique Store on Amazon](#) for additional resources.