



Manuals.plus /

› Telemecanique /

› Telemecanique Sensors XUB0APSNM12 Photoelectric Sensor Instruction Manual

Telemecanique XUB0APSNM12

Telemecanique Sensors XUB0APSNM12 Photoelectric Sensor Instruction Manual

Model: XUB0APSNM12

1. INTRODUCTION

This manual provides essential information for the safe and effective use of the Telemecanique Sensors XUB0APSNM12 Photoelectric Sensor. Please read this manual thoroughly before installation, operation, or maintenance. Retain this manual for future reference.

The XUB0APSNM12 is a photoelectric sensor designed for industrial automation applications. It utilizes light to detect the presence or absence of objects.

2. SAFETY INFORMATION

WARNING: This product may expose you to chemicals including Diisononyl phthalate (DINP), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

- Always disconnect power before installing, servicing, or removing the sensor.
- Ensure proper grounding to prevent electrical shock.
- Do not exceed the specified voltage and current ratings.
- Installation and maintenance should only be performed by qualified personnel.
- Protect the sensor from physical damage, excessive vibration, and extreme temperatures.

3. PRODUCT FEATURES

The Telemecanique Sensors XUB0APSNM12 Photoelectric Sensor offers the following key features:

- Photoelectric sensing technology.
- Utilizes light to detect objects.
- Operates by reflecting light from a target or through a beam that sends light to a receiver.
- PNP output type.

- Compact 18 mm cylindrical design.



Figure 3.1: Front view of the Telemecanique XUB0APSNM12 Photoelectric Sensor. The sensor features a blue cylindrical body with a clear cap on one end and a red lens on the other, secured by a black hexagonal nut.

4. SETUP AND INSTALLATION

Follow these steps for proper setup and installation of the XUB0APSNM12 sensor:

1. **Mounting:** Securely mount the sensor in the desired location using appropriate mounting hardware. Ensure the sensor's detection axis is aligned with the target path.
2. **Wiring:** Connect the sensor according to the wiring diagram provided with your specific application. Ensure correct polarity for power supply (typically +V, 0V) and proper connection for the PNP output.
3. **Power Supply:** Connect the sensor to a stable power supply within the specified voltage range.
4. **Alignment (for thru-beam or retro-reflective types):** If using a thru-beam or retro-reflective setup, align the emitter and receiver (or reflector) precisely to ensure reliable detection.

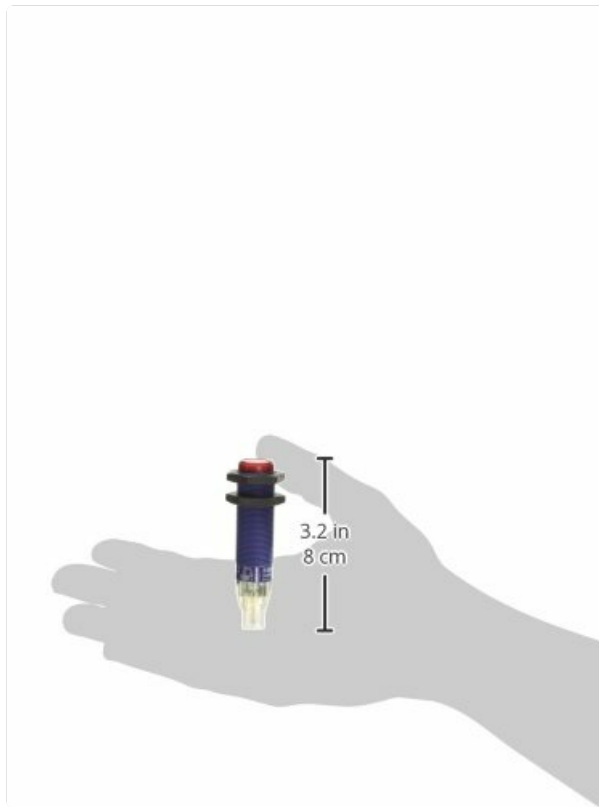


Figure 4.1: Side view of the Telemecanique XUB0APSNM12 Photoelectric Sensor held in a hand, illustrating its compact size. The image indicates a length of approximately 3.2 inches (8 cm).

5. OPERATING INSTRUCTIONS

Once installed and powered, the XUB0APSNM12 sensor operates automatically. Its function is to detect the presence or absence of an object within its sensing range and provide a corresponding output signal.

- **Detection Principle:** The sensor emits a light beam. When an object enters the detection area, it either reflects the light back to the sensor (diffuse reflective) or interrupts the light beam between the emitter and receiver (thru-beam), or reflects the light from a reflector (retro-reflective).
- **Output Signal:** The sensor's PNP output will change state (e.g., switch from low to high or vice versa) upon detection of an object, signaling its presence to a connected control system (e.g., PLC).
- **Indicator LED:** Many photoelectric sensors include an indicator LED that illuminates when an object is detected, providing visual confirmation of operation. Refer to the sensor's specific datasheet for LED behavior.

6. MAINTENANCE

The Telemecanique XUB0APSNM12 Photoelectric Sensor is designed for low maintenance. However, regular checks can ensure optimal performance:

- **Cleaning:** Periodically clean the sensor lens and housing with a soft, dry cloth. Avoid abrasive cleaners or solvents that could damage the sensor.
- **Inspection:** Visually inspect the sensor and its wiring for any signs of damage, wear, or loose connections.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent sensor degradation.

7. TROUBLESHOOTING

If you encounter issues with your XUB0APSNM12 sensor, consider the following:

Problem	Possible Cause	Solution
Sensor not detecting objects	No power Misalignment (thru-beam/retro-reflective) Dirty lens Object too far/too close Incorrect wiring	Check power supply Re-align emitter/receiver/reflector Clean sensor lens Adjust sensing distance Verify wiring connections
Erratic detection	Interference from ambient light Vibration Reflective surfaces nearby	Shield sensor from strong light sources Secure mounting to reduce vibration Mask or reposition reflective surfaces
No output signal	Faulty wiring Damaged sensor Overload on output	Check wiring for breaks or shorts Replace sensor if damaged Check load impedance and current draw

8. SPECIFICATIONS

Attribute	Value
Model Number	XUB0APSNM12
Product Type	Photoelectric Sensor
Output Type	PNP
Body Diameter	18 mm
Dimensions (L x W x H)	3.7 x 1.7 x 2.7 inches (approx. 9.4 x 4.3 x 6.9 cm)
Item Weight	1.44 ounces (approx. 40.8 grams)
Manufacturer	Telemecanique Sensors
First Available Date	May 7, 2013

9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact Telemecanique Sensors directly or refer to their official website. Keep your purchase receipt as proof of purchase.

Telemecanique Sensors Official Website: <https://www.se.com/ww/en/brands/telemecanique-sensors/>

For further assistance, you may also contact the seller or distributor from whom you purchased the product.

