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## YUMINST LK08-T1-ST

# YUMINST FLEXLEAK Water Leak Detection System User Manual

Model: LK08-T1-ST Sensor Strip & LK15-C1-4CH-B Alarm Module



## 1. INTRODUCTION AND OVERVIEW

The YUMINST FLEXLEAK Water Leak Detection System is an advanced early warning solution designed to detect water leaks rapidly and prevent potential property damage. This system utilizes a thin, flexible sensor strip (Model LK08-T1-ST) paired with a multi-channel alarm module (Model LK15-C1-4CH-B) to provide immediate notification upon water detection.

Key features include:

- **Early Warning System:** Notifies users immediately when a leak is detected, helping to avoid costly repairs.
- **Flexible Sensor Strip:** The LK08-T1-ST sensor film is thin and flexible, allowing for easy installation in various environments.
- **Rapid Detection:** Water leak detection occurs within 1 to 3 seconds of contact.
- **Reusable Sensor:** The sensor can be cleaned and reused after a leak event.
- **Expandable System:** The alarm module supports up to 4 channels, each extendable to 100 meters with additional sensor film and connectors.

## 2. PRODUCT COMPONENTS

The YUMINST FLEXLEAK system typically includes the following components:

- FLEXLEAK Water Leak Detection Sensor Strip (LK08-T1-ST) - Basic 10m length.
- Leak Alarm Module (LK15-C1-4CH-B) - 4-channel unit.
- Connectors: Start Connectors (LK15WC-STS01), End Connectors (LK15WC-EDS03), Jump Connectors (LK15WC-JP01), Corner Connectors (LK15WC-JP02).
- Double-sided adhesive tape for sensor film installation.



Figure 2.1: Overview of YUMINST FLEXLEAK Water Leak Detection System components, including the alarm module, sensor film, and various connectors.



Figure 2.2: The FLEXLEAK Liquid Leak Detecting Sensor (LK08-T1-ST) shown with a roll of double-sided adhesive tape for installation.



## Leak Alarm Module – 4 Channel (LK15-C1-4CH-B) Controllers for detecting water leaks

Figure 2.3: The Leak Alarm Module (LK15-C1-4CH-B), a 4-channel controller for detecting water leaks.



Water-proof start connectors : LK015WC-ST501



Water-proof finishing connectors : LK15WC-EDS03



Water-proof jump connectors : LK15WC-JP01



Water-proof corner connectors : LK15WC-JP02

Figure 2.4: Various water-proof connectors: Start (LK015WC-ST501), Finishing (LK15WC-EDS03), Jump (LK15WC-JP01), and Corner (LK15WC-JP02) connectors.

### 3. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance of the YUMINST FLEXLEAK system. Follow these steps carefully:

#### 3.1 Coupling the Sensor Film with Connectors

1. **Prepare the Sensor Film:** Take off approximately 4 cm of the double-sided tape from the end of the sensor film.
2. **Open the Connector:** Separate the top and bottom casing of the desired connector (Start, End, Jump, or Corner) by loosening the bolts.
3. **Insert Sensor Film:** Carefully place the sensor film into the connector guide. Ensure the film aligns with the reference red line inside the connector.
4. **Tighten Bolts:** Securely tighten the bolts to close the connector casing. A manual driver is recommended for this step.
5. **Secure with Tape:** Stick the double-sided tape onto the bottom cover of the connector to ensure a firm attachment.

6. **Completion:** The sensor film is now coupled with the connector.

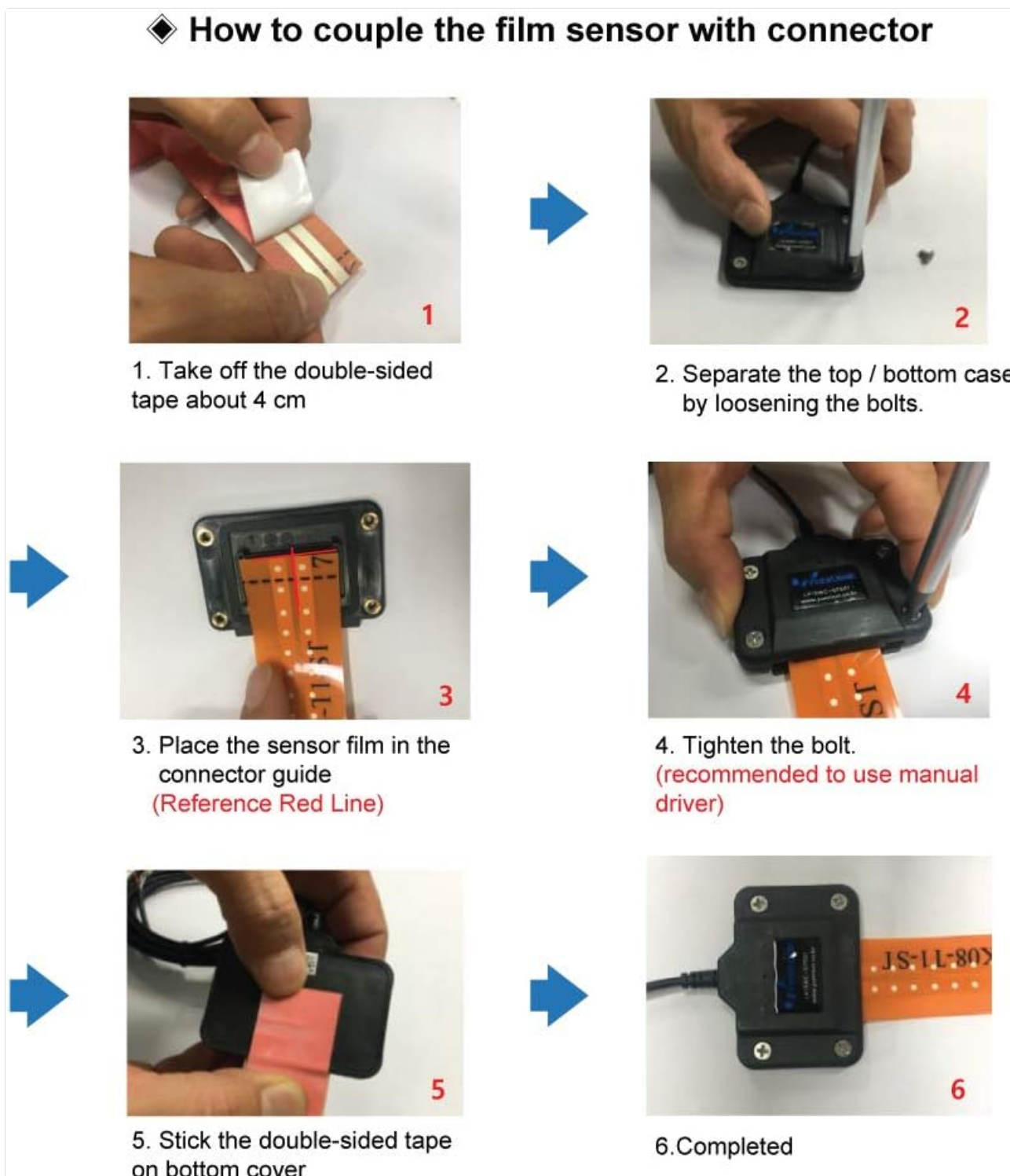


Figure 3.1: Step-by-step guide on how to couple the FLEXLEAK sensor film with a connector.

### 3.2 Linking the Alarm Module

The alarm module (LK15-C1-4CH-B) can detect leaks across up to four independent channels. Each channel requires a Start Connector (LK15WC-ST501) at the beginning of the sensor film run and an End Connector (LK15WC-EDS03) at the end.

- **Power Connection:** Connect the alarm module to a power source. The required input voltage is DC18 ~ 36V. A power adapter must be purchased separately.
- **Sensor Input Connection:** Connect the lead cable from the Start Connector of each sensor film channel to the corresponding sensor input terminal (1CH, 2CH, 3CH, 4CH) on the alarm module.
- **Lead Cable Specifications:** The lead cable for data transmission should be STP 2Pair 24AWG CAT 5. The

total length of the lead cable and sensor film connected to the alarm module should not exceed 50 meters per channel.

- **Shielded Line:** When extending the lead cable, ensure the shielded line is connected to the COM terminal on the alarm module.

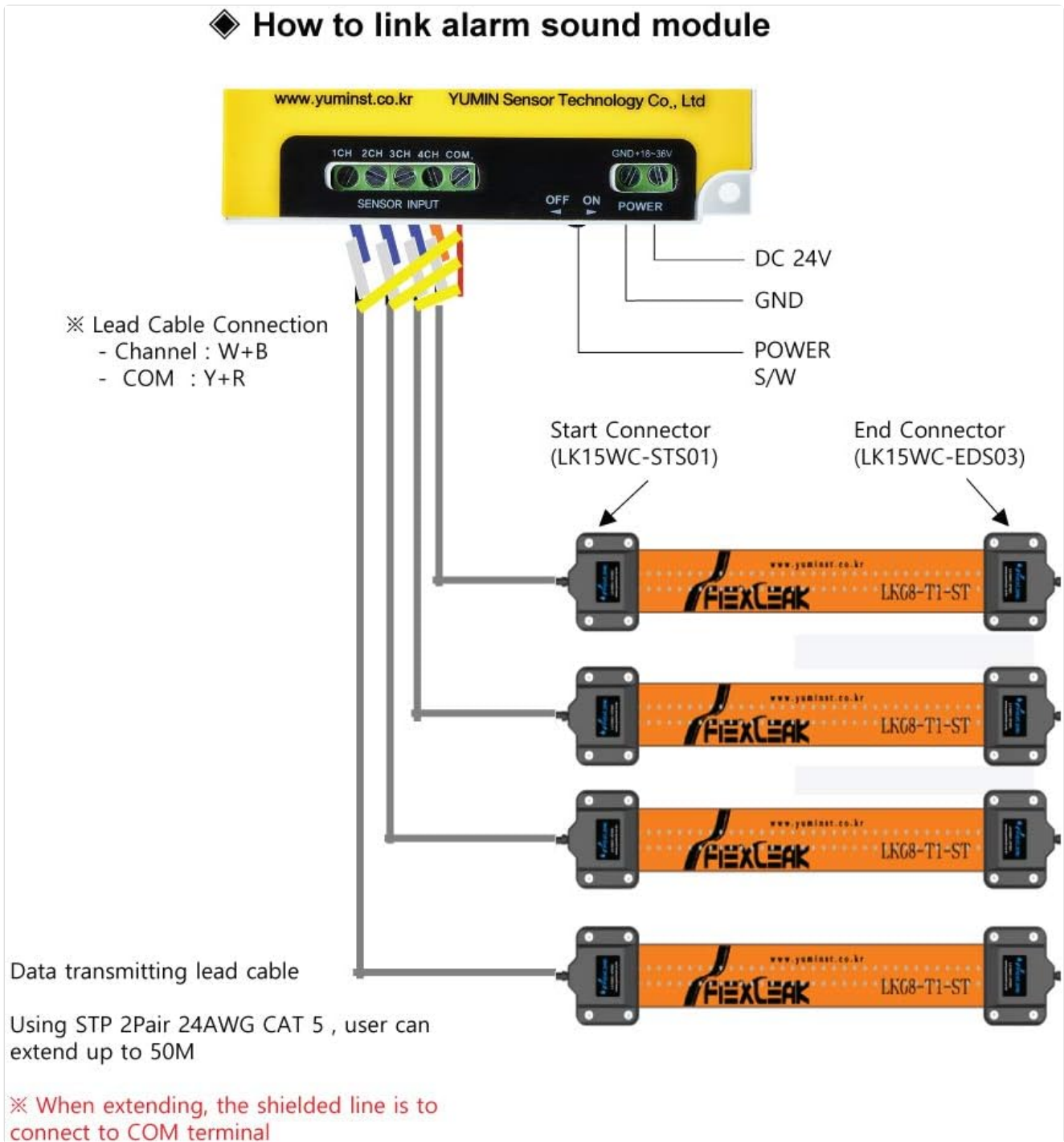


Figure 3.2: Wiring diagram illustrating how to link the sensor film (LKG8-T1-ST) via Start and End Connectors to the 4-channel Leak Alarm Module.

### 3.3 System Expansion

The sensor film can be extended beyond the basic 10m length. An extension of the sensor film can be installed by separately purchasing jump connectors (LK15WC-JP02) and additional sensor film. Each channel of the alarm module can be extended up to 100 meters.



Figure 3.3: Examples of the FLEXLEAK system installed in various environments, including server rooms, near pipes, and along walls.

## 4. OPERATION

Once properly installed and powered, the YUMINST FLEXLEAK system operates continuously to monitor for water leaks.

- **Leak Detection:** When the sensor film comes into contact with water, the system detects the leak within 1 to 3 seconds.
- **Alarm Activation:** Upon detection, the alarm module will trigger an audible and/or visual alarm, indicating the presence of a leak.
- **Alarm Deactivation:** The alarm will automatically stop once the leakage area is dry, indicating that the water has been removed or evaporated.
- **Control Method:** The system supports control via an App, though specific app functionalities are not detailed in this manual.

## 5. MAINTENANCE

The YUMINST FLEXLEAK sensor strip is designed for durability and reusability.

- **Sensor Cleaning:** After a leak event, the sensor film can be cleaned. Ensure the sensor is completely dry before re-deploying it to prevent false alarms.
- **Regular Inspection:** Periodically inspect the sensor film and connectors for any physical damage or dislodgement to ensure continuous protection.

## 6. TROUBLESHOOTING

This section addresses common issues you might encounter with your YUMINST FLEXLEAK system.

Problem	Possible Cause	Solution
System not alarming when water is present.	<ul style="list-style-type: none"> <li>• No power to the alarm module.</li> <li>• Loose connection between sensor film and alarm module.</li> <li>• Sensor film or connectors are damaged.</li> </ul>	<ul style="list-style-type: none"> <li>• Verify power supply (DC18 ~ 36V) to the alarm module.</li> <li>• Check all cable connections to ensure they are secure.</li> <li>• Inspect sensor film and connectors for visible damage. Replace if necessary.</li> </ul>
Alarm sounds continuously without water presence.	<ul style="list-style-type: none"> <li>• Sensor film is still wet from a previous leak.</li> <li>• Moisture or condensation on the sensor film.</li> <li>• Faulty sensor or connection.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure the sensor film is completely dry. Clean and dry thoroughly.</li> <li>• Check for sources of condensation or high humidity near the sensor.</li> <li>• If the issue persists after drying, inspect connections or consider replacing the sensor film.</li> </ul>
Difficulty extending sensor film.	<ul style="list-style-type: none"> <li>• Incorrect type of jump connector used.</li> <li>• Exceeding maximum length per channel.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure you are using LK15WC-JP02 jump connectors for extensions.</li> <li>• Verify total length does not exceed 100m per channel (sensor film) and 50m (lead cable + sensor film).</li> </ul>

## 7. SPECIFICATIONS

Feature	Detail
Manufacturer	YUMIN Sensor Technology Co., Ltd.
Model (Sensor Strip)	LK08-T1-ST
Model (Alarm Module)	LK15-C1-4CH-B
Sensor Film Length (Basic)	10 meters (32.8 feet)
Max. Extension per Channel	100 meters (sensor film)
Max. Lead Cable + Sensor Film Length	50 meters (per channel)

Feature	Detail
Power Source	Corded Electric
Input Voltage	DC18 ~ 36V (Power adapter sold separately)
Control Method	App
ASIN	B086YL72MS
Date First Available	April 10, 2020
Global Trade Identification Number (GTIN)	08809729140040

## 8. WARRANTY AND SUPPORT

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Warranty information for the YUMINST FLEXLEAK Water Leak Detection System is not explicitly provided in this manual. For details regarding warranty coverage, technical support, or replacement parts, please contact YUMIN Sensor Technology Co., Ltd. directly or refer to the product's purchase documentation.

