LK CubicDetector W, an intelligent water detector

Design

The LK CubicDetector is an intelligent water detector that protects your home from water and extreme
temperature and humidity damages by measuring water flooding as well as room temperature and humidity.

- Detects and alerts for water leaks when in direct contact with water.
- Measures temperature and humidity to warn from frozen pipes and mold risk.
- When used in conjunction with the CubicSecure, leaks can also trigger an automatic water supply shut-off.
- Can be used independently.

System description

The device should ideally be placed on strategic locations where water damages often occur, e.g. near dishwasher, washing machine, freezer/refrigerator and toilets etc. To maximize protection, the device can automatically shut off the water supply in the event of a leak, when paired with CubicSecure.

MyLK App

With the MyLK app and Wifi connection, you can acknowledge alarms, read temperature and humidity.

MyLK app

QR code to MyLK app.

LK CubicDetector with sensor extension (accessory).

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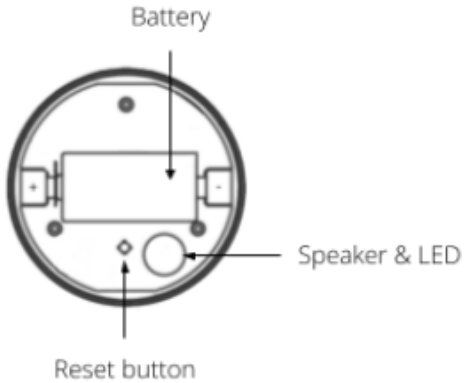
Common installation areas

Near or under:

- Washing machine
- Dishwasher
- Toilet
- Sinks
- Water heater or boiler
- Water tanks
- Water pumps
- Air conditioners
- Refrigerator or freezer
- Basement
- Bath
- Under or near appliances that use water.

Installation

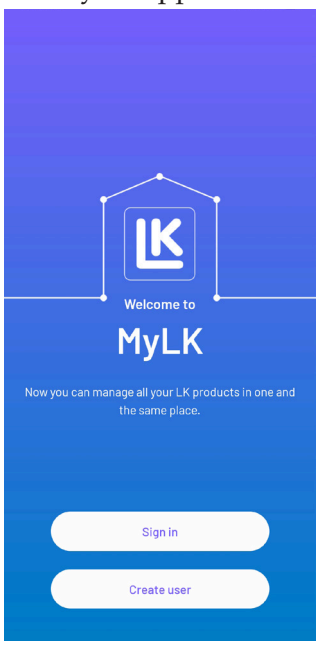
1. Remove the top cover, by holding the CubicDetector in your hand, while twisting the cover counter clockwise.
2. Pull out the battery insulator, the LED should start blinking blue.
3. When the unit flashes blue, it is ready for pairing with the MyLK app. If this is the intended use, follow the instructions in the MyLK app until the installation is complete. If the unit is to be used as a standalone device, proceed to the next step
4. Put the top cover back in place.
5. Deploy the device in the desired location.



Connecting to Wifi

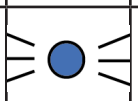
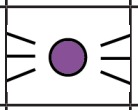
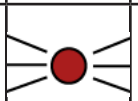
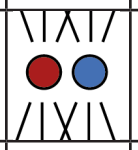
Remote monitoring of the unit's measurements and alarms via a smartphone requires the MyLK-app and a connection to a Wifi network with a frequency of 2.4 Ghz. The app is also required to be able to pair CubicDetector with CubicSecure.

1. Download and install MyLK-app from App Store or Google Play
2. Start MyLK-app and log into the app.
3. Connect the LK CubicDetector by pressing the plus sign and follow the instructions in the MyLK app.



The login page for the MyLK app.

Summary of LEDs

STATUS LED	LED	MEANING AND ACTION
OFF	-	Normal operation when powered.
BLUE, Blinking		Device is in pairing mode and is visible on Wifi list. Pair using smartphone app.
PURPLE, Blinking		Device is in abnormal operation mode. Perform a factory reset.
15s RED blinking on wakeup		Device is in offline mode, Wifi not used. Perform a Wifi reset to go back to pairing mode
10s RED + BLUE blinking		Device is in fatal fault mode Perform a factory reset or contact the Support.
Single beep every 30 min	Beep	Low battery warning (< 5%) and is in low power mode. Replace battery
Single PURPLE blink		Device is booting up.

Wifi Reset

1. Remove the top cover, by holding the CubicDetector in your hand, while twisting the cover counter clockwise.
2. Press and hold the reset button for 10 seconds.
3. Release the reset button when the LED turns purple.
4. The device will now be in pairing mode and the LED should be blinking blue.
5. Put back the top cover in place.
6. Uppdate the Wifi connection in MyLK-app.

Maintenance and service

If the LK CubicDetector is faulty, contact your local supplier for further assistance. If external parts need to be replaced, only LK spare parts should be used. See www.lksystems.se

Function

Unit	LED	MyLK-app	MEANING AND ACTION
Beeps and flashes RED 5 times, then pauses for 1 minute. This sequence is then repeated.		Water leakage alarm, notification via email and push notification.	Water is detected in direct contact with the unit or sensor/cable. - Remove the unit/accessories from the water - Check and remedy the source of the leakage - Dry the unit/accessories and reinstall them - Verify the alarm in the app
-	-	Battery warning, notification via email and push notification.	The unit's battery capacity has decreased to approximately 20–25%. - Prepare for battery replacement or replace the battery
Single beep every 30 min	-	-	Low battery warning (<5%). - Replace the battery immediately
-	-	Low temperature alarm, notification via email and push notification.	The unit has measured a temperature below the set value for the low temperature alarm. The factory setting for this value is +2°C. - Remedy the issue and verify the alarm. - The low temperature alarm is reactivated only when the temperature exceeds the set alarm temperature by 2°C (+4°C factory setting). * **
-	-	Offline alarm, notification via email and push notification.	The unit has failed on two consecutive occasions to connect to the WiFi network and transmit its measurement data (48–50 hours). Check the WiFi network and perform a WiFi reset.

*Note that it may take up to 24 hours before an adjustment/saving of the value for the low temperature alarm in the MyLK app is activated in the device.
** Note that it may take up to 30 minutes from when a temperature below the set/activated value for the low temperature alarm in the device is measured until an alarm is sent.

Technical data

Area of use	Villa, terraced house, apar ment
Storage	5 °C ... 55 °C
Environment	Indoor usage
Temperature range	-25°C … 60°C
Temperature accuracy:	±1.5°C
Humidity range	0 - 100 % RH
Humidity accuracy	± 12 %
Sound level:	85 dB
Wireless frequency	2.4 GHz Wi-Fi, (802.11bgn)
WiFi range	Up to 50 m in line-of-sight conditions and under optimal operating conditions
Data resolution:	The CubicDetector measures temperature and humidity every 30 minutes and sends it to the Cloud every 24 hours
Weight	80 grams
Dimensions	25 mm height: 67 mm width, 67 mm length
Leak sensor cable:	1219 x 27 x 8 mm
Replaceable battery:	CR123A lithium cell, up to 3 years battery life*
Warranty:	2 years

**The battery life depends on the total duration of which the device is in active Wi-Fi mode and alarm mode .*

PACKAGE CONTENTS

- CubicDetector W - 1x and CR123A Lithium cell included - 1x, RSK 188 26 88
- Accessory: CubicDetector Sensor. Optional wall mount with self-adhesive backing - 1x, Wall mount screws - 2x, Leak sensing cable - 1x, RSK 18826 87.
- CubicDetector Cable 1x - RSK 188 27 36. Leak sensing cable.

Comment

Completely interference-free operation cannot always be guaranteed with the technology available today, which allows free use of the frequency band.

Every installation should therefore be tested individually. LK CubicDetector always works independently. LK CubicDetector will still work if the unit loses contact with the Internet. The unit is still in operation and emits an alarm when a leak is detected. The contact with the MyLK app is temporarily interrupted, and it then does not receive notifications or alarms until contact is established with the Internet

Environment

LK Systems is affiliated with El-Kretsen for collecting and recycling electronics and batteries. Used batteries should be sorted as batteries or small batteries and deposited for battery recycling. When the system has reached the end of its life, it should be sorted as electronics or other electronics and deposited with a recycling centre.

Guarantee

LK Systems AB is responsible for faults in products that appear within two years from the delivery of the product to the buyer. If LK is responsible for the fault in the product, LK has the right to replace the product with either a new or repaired product. The liability period for replacement or repair of a product or spare part does not exceed the liability period for the original product. The seller is not responsible for faults resulting from accidents, incorrect installation, incorrect installation, incorrect care, abuse or other irregular use. LK Systems AB is not responsible for any loss or damage caused by a non-functioning product. Its responsibility is strictly limited to the replacement of the product.

CE approval

EU Declaration of Conformity, Radio Equipment
Hereby, LK Systems declares that the radio equipment type CubicDetector - QCD01 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available on
www.lksystems.se/sv/teknisk-dokumentation/