

## WLD-ECHO – User Manual

Water Leak detector with external sensing cables, an audible alarm, and a relay output. Powered by an external power supply or batteries, supporting two sensing cable zones.

## Safety Warnings

The device complies with applicable standards valid in the Czech Republic, has undergone live testing, and is delivered in operational condition. To ensure safe operation, all safety and maintenance instructions listed below must be observed.

Improper use of the device may compromise the safety protections provided by the manufacturer.

The device must not be used if:

- It is visibly damaged.
- It does not operate correctly.
- There are loose parts inside the device.
- It has been exposed to long-term humidity or has become wet.
- It has been repaired or modified by unauthorised personnel.
- The power adapter or its supply cable is visibly damaged.

The power socket or other means of disconnecting the device from the power supply must always remain easily accessible.

The manufacturer is liable for the device only if it is powered by the supplied or an approved power source.

If you experience any difficulties during installation or initial start-up of the device, please do not hesitate to contact our technical support team for assistance.

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Before contacting technical support, please prepare the exact model designation of your device (as stated on the manufacturing label) and the firmware version (see below), if available.

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## Product Overview

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WLD-ECHO is a WLD (Water Leak Detection) detector with two zone inputs for external rope-type sensing cables. A few drops of water detected anywhere along the entire length of a sensing cable (up to 185 m) trigger an audible alarm (built-in buzzer) and activate a relay output (NO contact). The detector is powered either by batteries (2 × AA) or by an external power supply 5–30 V DC (12 V DC nominal).

Two high-sensitivity WLD sensing cables can be connected to the two WLD zone inputs. Fast liquid detection enables leaks to be detected along the entire length of each sensing cable.

Water detection is very fast, as even a few drops of any conductive liquid are sufficient to trigger an alarm. No standing water level is required, which is essential for long-term, reliable early warning. Thanks to early alarm signalling, WLD-ECHO helps prevent damage before a critical amount of water, ethylene glycol, or another conductive liquid accumulates.

In addition to water detection (flooding), disconnection or damage of a WLD sensing cable is also indicated. WLD Zone 2 can be disabled when not in use. Thanks to the relay output with a dry contact, WLD-ECHO can be connected to any security or monitoring system with a dry contact input.

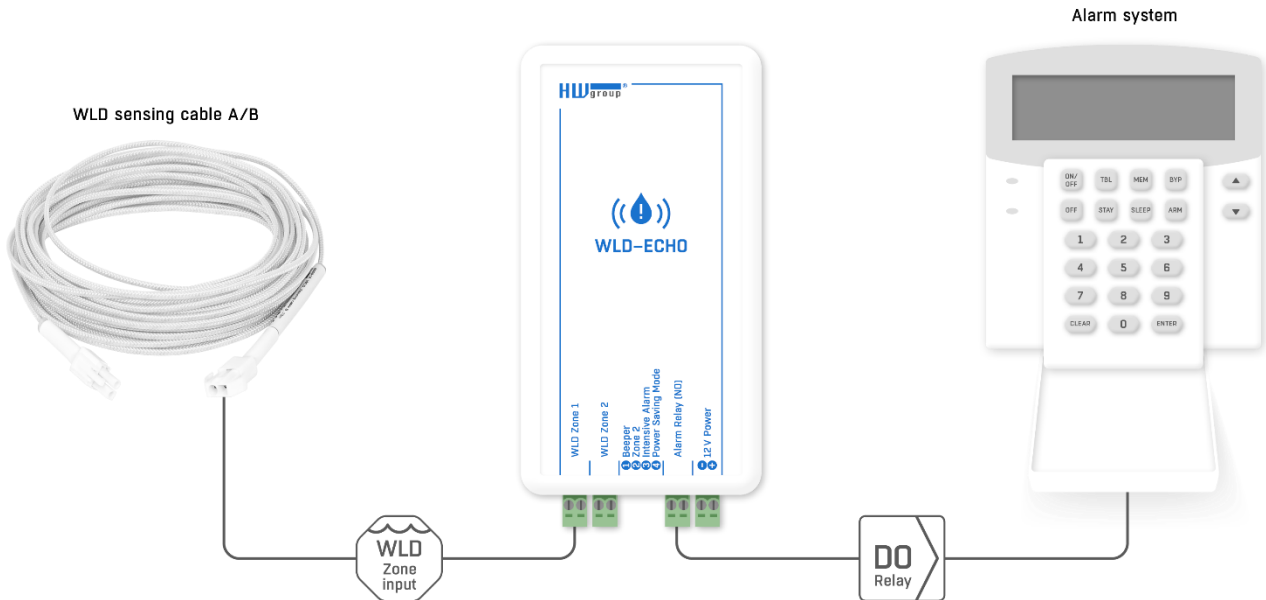
## Basic Features

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- Two independent WLD sensing zones (up to 185 m each)
- WLD-ECHO status indication: OK / Flooded / Sensing cable disconnected
- Relay output: Water detection / Sensing cable disconnected
- Powered by 2 × AA batteries or an external power supply
- Designed for quick and easy installation
- Compatible with WLD-Sensing cable A or B
- The WLD sensing cable can be extended using a non-sensing extension cable
- Wide range of accessories available (Cover Strip, Poro tape, etc.)

# Applications

## WLD-ECHO – Alarm System

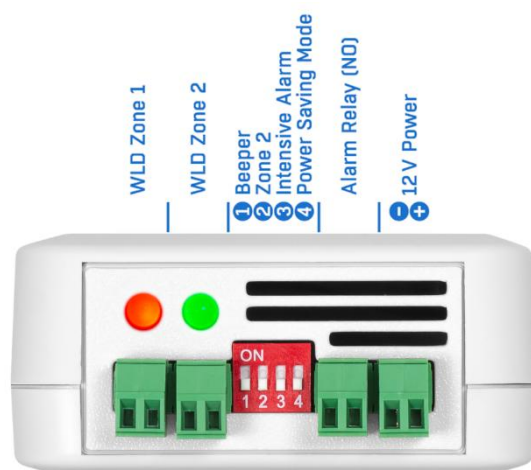


- Museums
- Archives and libraries
- Data centers with raised floors
- Server rooms and electrical closets
- Storage rooms for various goods
- Hotels
- Elevator shafts
- Water heaters and boilers
- Restrooms and bathrooms
- Laundry rooms
- Kitchens and break rooms
- Showrooms and exhibition areas
- Wooden houses
- Other indoor applications

## Wiring and DIP Switches

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- **WLD Zone 1**  
Sensing cable zone 1
- **WLD Zone 2**  
Sensing cable zone 2
- DIP switch
- **Alarm Relay (NO)**
- **12 V Power**  
External power supply 5–30 V DC (12 V DC nominal), typ. 20 mA



### ⚠ Warning

Use only compatible WLD sensing cables supplied or approved by HW group. Before applying power, check all wiring connections.

### DIP Switch Settings and Functions

- DIP switch **1 – Beeper**  
ON = Internal buzzer activated during an alarm
- DIP switch **2 – Zone 2**  
ON = WLD zone 2 enabled (sensing cable required)
- DIP switch **3 – Intensive Alarm**  
ON = Intensive (faster) alarm mode (**battery-powered** operation **only**)

#### Intensive Alarm = OFF

- Battery-saving mode
- Sampling every minute, Alarm delay up to 6 minutes

#### Intensive Alarm = ON

- Operation identical to external power supply mode
- Fast alarm response

- DIP switch **4 – Power Saving Mode**  
ON = No green LED indication when operating on batteries

## Alarm Relay (NO)

The Alarm Relay (NO) output is designed for connection to any DI (dry contact) input.

- Relay **open (0)** = Water not detected
- Relay **closed (1)** = Water detected, detection cable fault, or low battery

## LED Indicators and Buzzer

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### Powered by External Power Supply (5-30 V DC)

- **OK:** Solid **green**
- **Alarm:** Flashing **red** - 2 flashes, with two audible beeps (if the beeper is enabled)
- **Sensing cable disconnected:** Flashing **red** - 3 flashes, with two audible beeps (if the beeper is enabled)



### Powered by Batteries (2× AA)

- **OK:** Flashing **green**, one flash every 30 minutes
  - Intensive Alarm = ON - Flashing **green** continuously
  - Power Saving Mode = ON - No LED indication in the OK state
- **Alarm:** Flashing **red** - 2 flashes, with two audible beeps (if the beeper is enabled)
- **Sensing cable disconnected:** Flashing **red** - 3 flashes, with two audible beeps (if the beeper is enabled)
- **Low Battery:** Flashing **red** - 1 flash, with one audible beep (if the beeper is enabled)



### ⚠ Notes:

- With batteries installed, the device remains active. To deactivate the device, please remove the batteries.
- After power-up, the LEDs flash at shorter intervals. Standard intervals are applied 30 minutes after power-up.
- If both power sources are connected, the behaviour of the external power supply mode applies..

## **Installation and Setup**

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### **DIP Switch Configuration**

Before applying power, set the DIP switches according to the required configuration.

### **Power Supply Connection**

The device can be powered in one of the following ways:

- by inserting batteries (2× AA), or
- by connecting an external power supply (5-30 V DC).

### **Connecting the Sensing Cables**

Connect the sensing cable to the WLD Zone 1 connector.

If you want to use two independent WLD zones:

- Connect an additional sensing cable to WLD Zone 2
- Set DIP switch 2 = ON

### **Alarm Relay Connection (Optional)**

- The relay output indicates an alarm in any WLD zone.
- NO (Normally Open) relay contact.
- When powered by batteries, a low-battery alarm is indicated by an audible signal and the relay switches to the closed (1) state, the same as when water is detected.
- Galvanically isolated, suitable for connection to any dry contact (DI) input.

### **Operation Check**

After powering on the device, verify proper operation using the LED indicators:

- Solid green LED indicates normal operation when powered by an external power supply.
- Flashing green LED indicates normal operation when powered by batteries.

## WLD Sensing Cables

The WLD-ECHO device can detect water leakage only when a sensing cable is connected.

The WLD sensing cable is an integral part of the Water Leak Detection system from HW group. It ensures easy installation and long-term reliability. Conductive liquids are detected along the entire WLD sensing cable length; even a few drops trigger an alarm.

The WLD sensing cable from HW group is a unique solution featuring:

- No bending limit
- No gripping limit
- No twisting limit
- No reuse limit



No bend limit



No grip limit



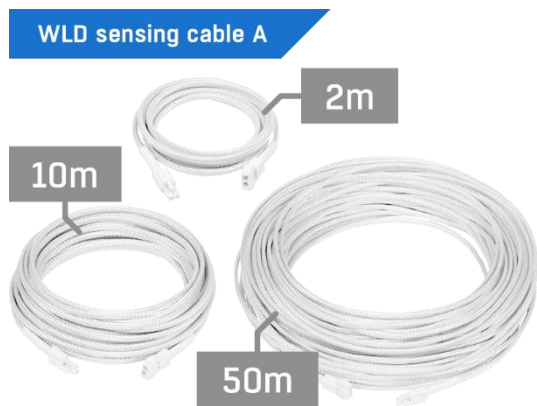
No twist limit



No reuse limit

Technical parameters	Type A	Type B
<b>Sensing cable diameter (Ø)</b>	6 mm	3.2 mm
<b>Cable material</b>	Polyester, multi-filament	Nylon fibre
<b>Sensing cable length options</b>	2 m / 10 m / 50 m custom lengths available	2 m / 5 m / 10 m / 50 m / custom lengths available
<b>Water Leak Detection</b>	Along the entire length of the sensing cable	
<b>WLD Zone max length</b>	<b>185 m</b> (including extension cable)	
<b>Connector</b>	2-pin locking connector	
<b>Detection medium</b>	Water	
<b>Reaction time</b>	0.5 – 5 seconds	
<b>Leak location detection</b>	No (Zone-based detection)	
<b>Operating environment</b>	-10 °C to 60 °C	
<b>Cable to connect to device (terminator included)</b>	WLD Connecting cable AB_2m	
<b>Extension cable (non-sensing)</b>	WLD Extension cable AB_5m	

## Available WLD Sensing Cable Variants



### WLD-Sensing Cable A

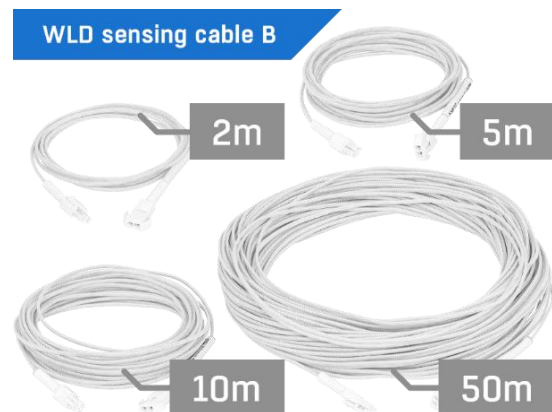
Cable lengths: 2 m, 10 m, and 50 m  
Sensing cable diameter: **Ø 6 mm**



### WLD-Connecting cable AB 2m

Connection cable with a green terminal block and terminator for the WLD sensing cable. Used to connect the sensing cable to the WLD device.

Cable length: 2 m



### WLD-Sensing Cable B

Cable lengths: 2 m, 5 m, 10 m, 50 m  
Sensing cable diameter: **Ø 3.2 mm**



### WLD-Extension cable AB 5m

Non-sensing extension cable for the WLD sensing cable. Provides a cost-effective way to extend the length of the WLD monitoring zone.

Cable length: 5 m

### ⚠ Note:

The WLD Connection Cable and the Extension Cable do not detect water.

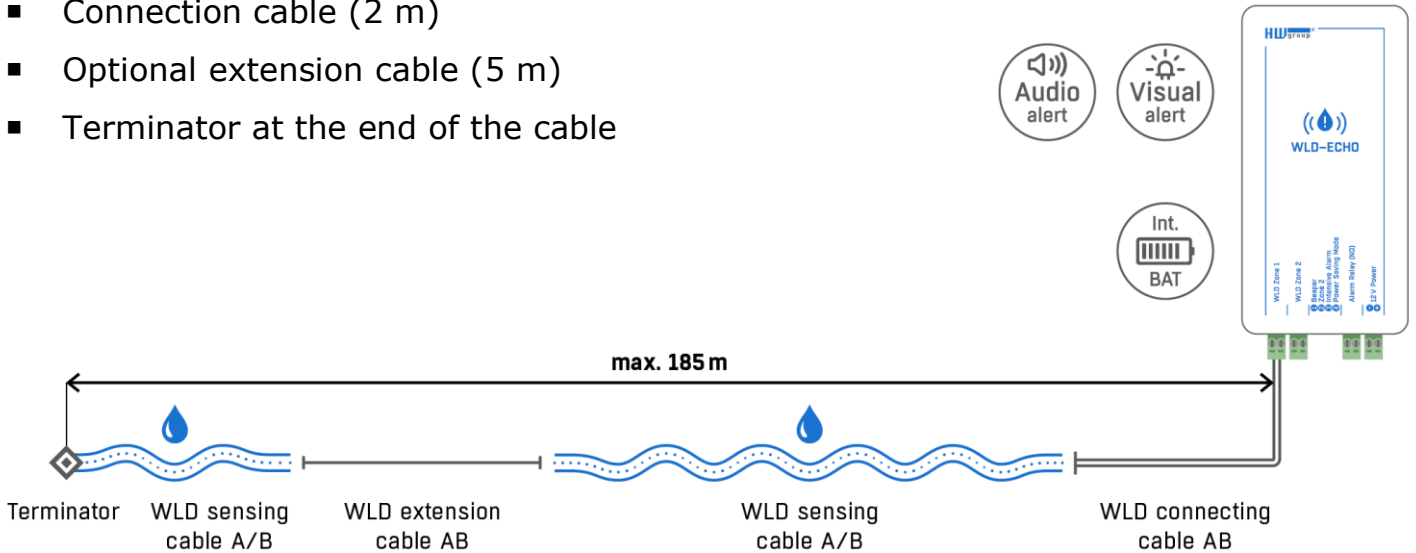
# WLD Zones: What They Are and How to Use Them

Water leak detection with the WLD-ECHO depends on the connected external water sensing cable (Type A or B). Use only compatible sensing cables from HW group.

## What Is a Zone?

A zone is an independently monitored area composed of:

- WLD sensing cable (available in lengths of 2 m, 5 m, 10 m, or 50 m)
- Connection cable (2 m)
- Optional extension cable (5 m)
- Terminator at the end of the cable



All cables are interconnected, starting with the connection cable, and are connected to a single input of the WLD-ECHO device via the green terminal block.

Each zone operates as an independent monitored area. WLD-ECHO can support two zones, allowing separate areas of a facility to be monitored independently and simultaneously.

## Creating and Extending Zones

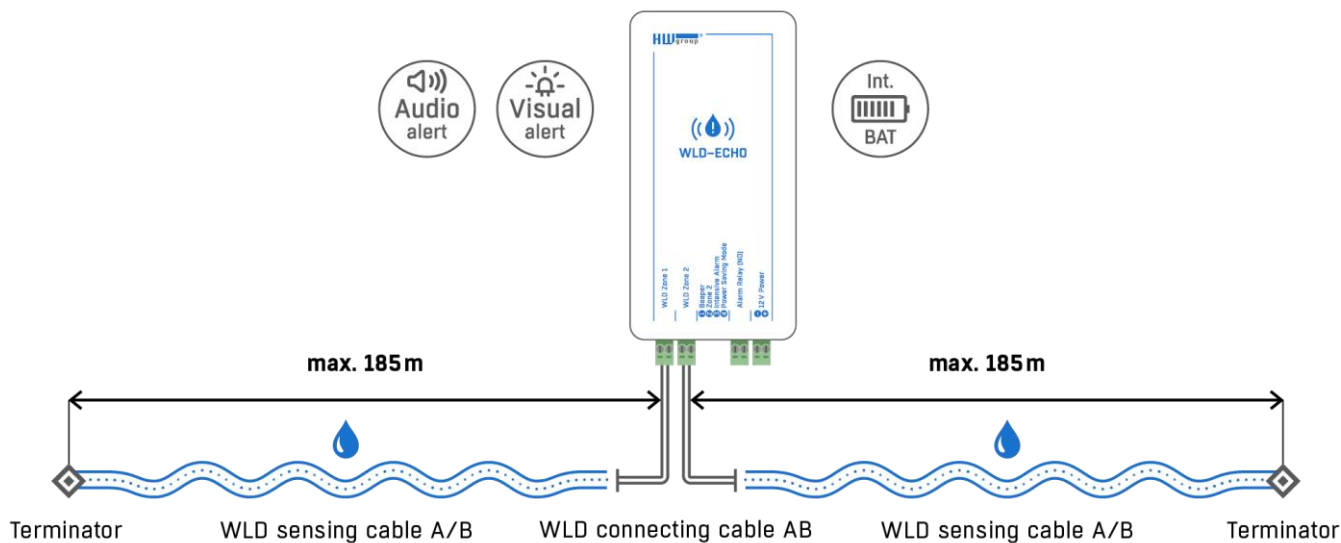
Detection and extension cables can be combined to create custom zones and optimize the total installation length. Each WLD sensing zone can be extended up to 185 meters.

## Several Water Sensing Segments in One Zone

A cost-effective solution for monitoring long distances. Water detection cables are installed only in areas where leaks are likely to occur, while non-sensing extension cable is used to bridge dry areas and extend the total zone length as required.

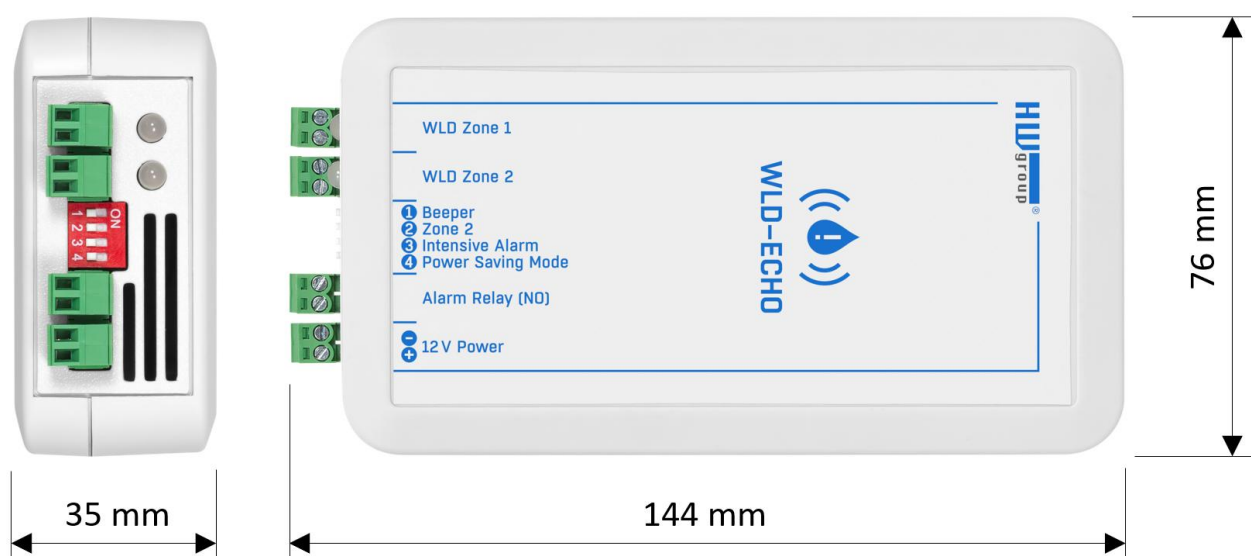
## Several WLD Zones for Independent Alerts

WLD-ECHO supports two independent WLD zones connected to the green terminal block inputs. Multiple zones allow larger or segmented protected areas to be monitored independently.



## WLD-ECHO Technical Parameters

WLD-ECHO	
<b>Number of WLD zones:</b>	2 zones, max. 185 m per zone
<b>Sensing cable length:</b>	Max. 185 m (one zone – including connecting and extension cable)
<b>Status indication:</b>	2× LED; internal beeper
<b>Alarm relay output:</b>	1× NO relay (25 V / 0.5 A)
<b>Power supply:</b>	2× AA batteries or 5–30 V DC (12 V DC nominal), typ. 20 mA
<b>Operating temperature:</b>	-10 °C to 60 °C
<b>Storage temperature:</b>	-30 °C to 60 °C
<b>Ingress protection:</b>	IP40 (indoor application)
<b>Dimensions:</b>	76 x 35 x 144 mm (W x H x D)
<b>Weight:</b>	150 g (without batteries)



## WLD Accessories

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### WLD-Cover Strip B-30 5m

Self-adhesive grey strip (**30 mm**) for protection of WLD sensing cable **Type B** on floors, stairs, and similar surfaces.



### WLD-Cover Strip A-35 5m

Self-adhesive grey strip (**35 mm**) for protection of WLD sensing cable **Type A** on floors, stairs, and similar surfaces.



### WLD-Poro Tape 5m

White perforated single-sided adhesive tape for mounting the WLD sensing cable on floors or walls.

## WLD-ECHO Set

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**WLD-ECHO (plain unit)**



**WLD-Sensing cable B 2m**



**WLD-Connecting cable AB 2m**

Connection cable with terminator for WLD sensing cable.



**12V Wall plug adapter 2 pin INT**

International power adaptor 12 V DC with a 2-pin terminal block.



**2x AA batteries (primary cells)**



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