Water Sensor 7 Pro user guide (ZWA019/ZWA044)

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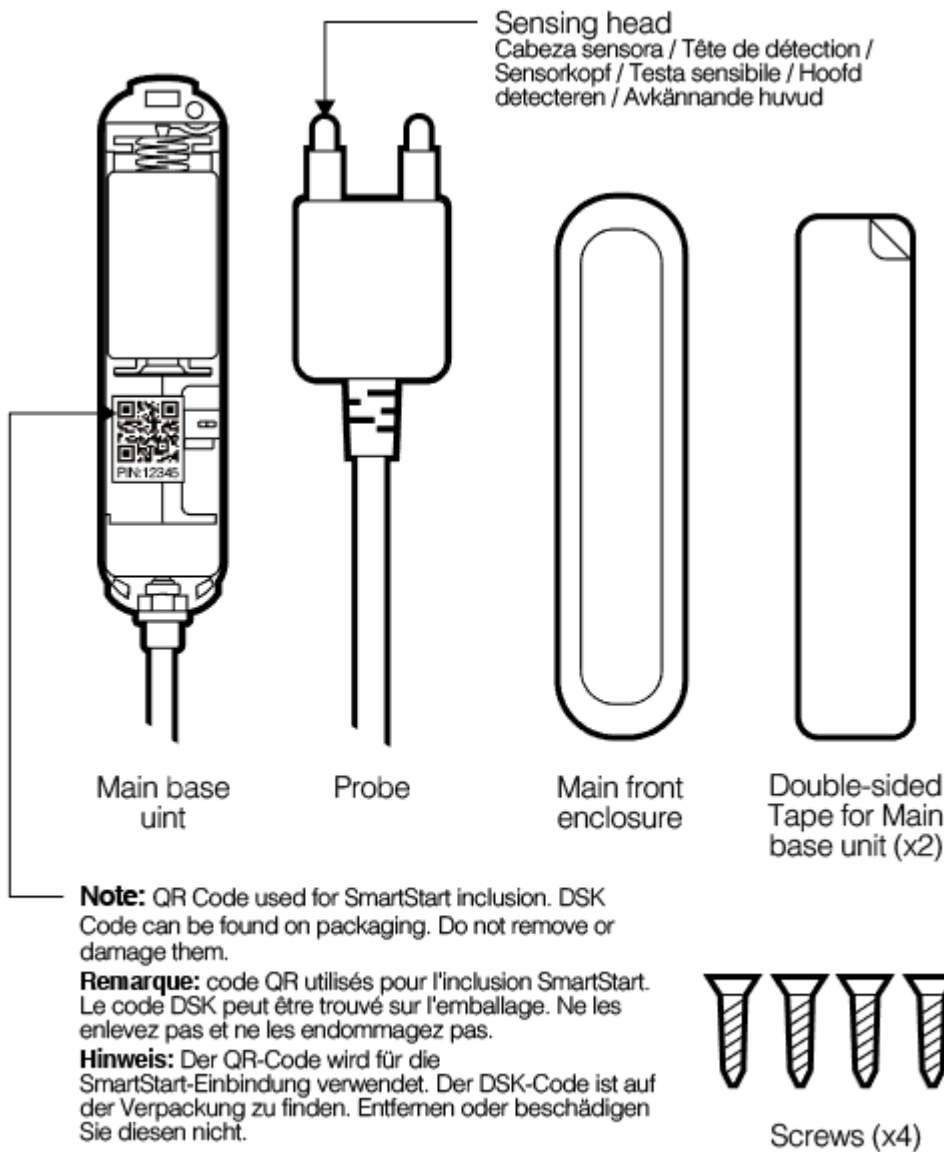# Aeotec Water Sensor 7 Pro.

Aeotec Water Sensor 7 has been crafted as a safety sensor to help detect and prevent floods and water leaks using Z-Wave Plus. It is powered by Aeotec's **Gen7 (https://aeotec.com/z-wave-home-automation/z-wave-gen7.html)** technology and S2 framework. You can find out more about **Water Sensor 7 (https://aeotec.com/z-wave-door-window-sensor)** by following that link.

To see whether Water Sensor 7 is known to be compatible with your Z-Wave system or not, please reference our **Z-Wave gateway comparison (http://aeotec.com/z-wave-gateways)** listing. The **technical specifications of Water Sensor 7 (https://aeotec.freshdesk.com/a/solutions/articles/6000218908-door-window-sensor-7-technical-specifications-)** can be viewed at that link.

Familiarize yourself with your Water Sensor 7.

Package contents:

1. Sensor Unit.
2. Cover.
3. Double-Sided Tape large (×2).
4. Screws (×4).
5. Dowels(x4).

Sensing head
Cabeza sensora / Tête de détection /
Sensorkopf / Testa sensibile / Hoofd
detecteren / Avkännande huvud

Main base
uint

Probe

Main front
enclosure

Double-sided
Tape for Main
base unit (x2)

Note: QR Code used for SmartStart inclusion. DSK
Code can be found on packaging. Do not remove or
damage them.
Remarque: code QR utilisés pour l'inclusion SmartStart.
Le code DSK peut être trouvé sur l'emballage. Ne les
enlevez pas et ne les endommagez pas.
Hinweis: Der QR-Code wird für die
SmartStart-Einbindung verwendet. Der DSK-Code ist auf
der Verpackung zu finden. Entfernen oder beschädigen
Sie diesen nicht.

Screws (x4)

Important safety information.

Please read this and other device guides carefully. Failure to follow the recommendations set forth by Aeotec Limited
may be dangerous or cause a violation of the law. The manufacturer, importer, distributor, and/or reseller will not be held
responsible for any loss or damage resulting from not following any instructions in this guide or in other materials.

Keep product and batteries away from open flames and extreme heat. Avoid direct sunlight or heat exposure. Always
remove all batteries from products that are being stored and not used. Batteries may damage the appliance if they leak.
Do not use rechargeable batteries. Ensure correct polarity when inserting the batteries. Improper battery use may
damage the product.

Water Sensor 7 is intended for indoor use in dry locations only. Do not use in damp, moist, and/or wet locations.
It contains small parts; keep away from children.

Quick Start

Installation of Water Sensor 7 Pro.

- Open the cover by pressing the clip on the side and pulling the cover upwards.
- Insert a fresh **1 * 1/2 AA** battery, but pay attention to the polarity
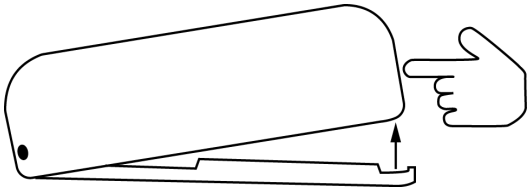
Install your Water Sensor 7 Pro.

The Water Sensor 7 should be placed wherever you want to monitor for possible flooding or leaks. When placing the Water Sensor 7, consider the direction in which a flood or leak may flow and where it may occur. The contacts of the Water Sensor 7 probe will detect the liquid, so the probe must be placed so that any flood or leak will come into contact with it. When the probe contacts come into contact with a liquid, the Water Sensor 7 sends a leak warning to your Z-Wave Gateway. Make sure that both contacts are capable of detecting leaks or flooding.

Adding your Water Sensor 7 to Z-Wave network.

SmartStart Inclusion.

You can use this method of inclusion only if your Z-Wave gateway/controller/hub supports SmartStart.

1. Open up your Z-Wave gateway/controller/app.
2. Select SmartStart inclusion.
3. Scan the QR code located on the Water Sensor 7.
4. Within 10 minutes after powering your Water Sensor 7, it will automatically get included in your Z-Wave gateway/controller/hub.

Classic Inclusion

1. Set your Z-Wave controller into pairing mode.
2. Triple-click the tamper switch on Water Sensor 7 - this begins to blink five times
3. After completion of the inclusion, the LED will illuminate green for 3 seconds.
4. If you pairing with S2 encryption/security, enter the first 5 digits of the DSK into your controller/gateway/hub interface when requested.
5. Close the cover
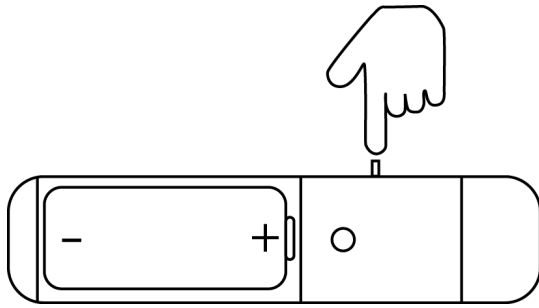
Functions of Water Sensor 7 Pro.

Water leak

Once installed, this sensor will report wet or dry via Notification Command Class when this device is wet or removed from water.

- Notification Report
- Type: Unknown (0x05)
- Value: Wet (0x02) or Dry (0x00)

Tamper

Tamper alarm will be sent if the cover is removed.

- Notification Report
- Type: Tamper Removed (0x07)
- Value: 0x03

Temperature

This sensor will report occasionally on its own as an unsolicited Multilevel Sensor Report either by a timed interval (Parameter 18) or by the change in value (Parameter 16).

     Multilevel Sensor Report

Humidity

This sensor will report occasionally on its own as an unsolicited Multilevel Sensor Report either by a timed interval (Parameter 18) or by the change in value (Parameter 17).

     Multilevel Sensor Report

LED indicator.

Function Description	LED Indicator
Device Not in Network	Blinks red for 5 seconds (1 sec duty cycle) when battery is inserted and sensor is not in network
Include/Exclude/Learn Mode	Illuminate green for 3 seconds when Inclusion / Exclusion / Configuration is successful. Illuminate red for 3 seconds when Inclusion / Exclusion / Configuration is unsuccessful (upon a timeout of 30 seconds).
Local Reset	When device is locally reset to Factory Default LED blinks red (1 second duty cycle) for 5 seconds.
LowBatt	When operation button is Short Pressed the LED blinks red three time (1 sec duty cycle)

Tampering	If either Tamper Switch 1 or 2 is activated the device blinks red one time with ½ second duty cycle if within range of Controller. The device blinks red three times with ½ second duty cycle if out of range of Controller
Water protection	When operation button is Short Pressed the LED illuminates red three seconds in case of Water Leakage detected and Green if no Leakage detected.

Button Function.

Push Type	Function	Description
Long Press 5s	Pending reset	LEDs start indication Waiting for Reset.
Long Press 10s	Reset	Initiates Device Reset Locally.
Short Press	Tamper	Sends Wake Up notification.
3 Times Short Press	Sequence	See Learn Mode.

Advanced Functions.

Communication test.

This utilizes the Power Level command class to determine the health between the Water Sensor 7 and your Z-Wave gateway. This will tell you if the Water Sensor 7 has a healthy connection to your system and is a great method of debugging connectivity issues.

1. Set Parameter #4 to value #1
2. Double click the Tamper Switch.
3. Result:
   - **Green LED blinks once -** success
   - **Red LED blinks 3x times -** failure

Firmware-Update over the Air.

This device is capable of receiving a new firmware 'over the air'. The update function needs to be supported by the central controller. Once the controller starts the update process, perform the following action to confirm the firmware update:

1. Wake Up the device by removing the cover.
2. Hit the tamper switch once.

Send a wake-up notification.

In order to send your sensors new configuration commands from your Z-Wave controller or gateway, it will need to be woken up.

1. Wake Up the device by removing the cover.
2. Hit the tamper switch once.

Note: Water Sensor 7 remains awake until the housing is closed again.

Remove your Water Sensor 7 from Z-Wave network.

Your sensor can be removed from your Z-Wave network at any time. You'll need to use your Z-Wave network's main controller/gateway. To do this, please refer to the part of your gateways respective manual that tells you how to remove devices from your network.

1. Set your Z-Wave controller into unpair mode.
2. Triple-click the tamper switch on Water Sensor 7 within 1.5 seconds - this will cause the LED to blink five times.
3. After a successful exclusion, it will light up its LED for 2 seconds then deactivate.

Reset your Water Sensor 7.

This device also allows being reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

To manually factory reset:

1. Remove the cover of Water Sensor 7
2. Press and hold tamper switch for 5 seconds until the red LED blinks.
3. Release the tamper switch
4. Immediately press and hold the tamper switch for 5 seconds until the red LED blinks.

Association Groups

Group Association allows Water Sensor to directly communicate with other Z-Wave devices directly without the need for the Z-Wave Controller to act as an in-between controller. This using this function will help with communication efficiency and limit the amount of time it takes to control a device.

Group Number	Maximum Nodes	Description
1	5	Lifeline
2	5	Control devices when water leakage is detected
3	5	Sends out alarm message when water leakage is detected
4	5	Sends alarm messages when tamper is tripped

Parameter setting.

3. Visual LED indications

Parameter: 3

Size: 1 Byte

Default Value: 7

Description:

This parameter defines when the red LED will indicate events. Disabling all indications may extend battery life.

(values 1 + 2 + 4 summarized)

0 - No indications

1 - Water Leakage Status Change

2 - Wake Up (1 x click)

4 - Device tampering

4. Range test after double click

Parameter: 4

Size: 1 Byte

Default Value: 0

Description:

Allows enabling the activation of a Z-Wave range test with double-clicking the tamper switch.

0 - disabled

1 - enabled

5. 2nd Association Group Trigger

Parameter: 5

Size: 1 Byte

Default Value: 0

Description:

This parameter defines the status of the water leakage that causes sending a BASIC command to all devices of Association Group 2.

0 - Switch after Water Leakage Start and Stop

1 - Switch after Water Leakage Start

2 - Switch after Water Leakage Stop

6. Command Sent to Devices of Association Group 2

Parameter: 6

Size: 1 Byte

Default Value: 255

Description:

This parameter defines which commands are sent to 2nd Association Group

0 - On

1 - Off

2 - On and Off

7. BASIC command value sent to 2nd Association Group on On event

Parameter: 7

Size: 1 Byte

Default Value: 255

Description:

This is the BASIC command value sent in case of On even

0 - 99 - Value

255 - On

8. BASIC command value sent to 2nd Association Group on Off event

Parameter: 8

Size: 1 Byte

Default Value: 0

Description:

This is the BASIC command value sent in case of Off event.

0 - 99 - Value

255 - On

9. Time Delay of On command frame

Parameter: 9

Size: 2 Byte

Default Value: 0

Description:

On command is sent after a delay defined in this parameter.

0 - 32400 - Seconds

10. Time delay of Off command frame

Parameter: 10

Size: 2 Byte

Default Value: 0

Description:

Off command is sent after a delay defined in this parameter.

0 - 32400 - Seconds

11. Delay of tamper alarm cancellation.

Parameter: 11

Size: 2 Byte

Default Value: 0

Description:

Time a tamper alarm is delayed.

0 - 32400 - Seconds

12. Reporting tamper alarm cancellation

Parameter: 12

Size: 1 Byte

Default Value: 1

Description:

This parameter defines if the alarm cancellation event is reported.

0 - do not send report

1 - send report

16. Minimum temperature change to report.

Parameter: 16

Size: 1 Byte

Default Value: 20

Description:

This value defines the minimum change of temperature to cause an unsolicited report of temperature to the central controller using Lifeline. If the value is set to 0, there will be no reports sent to the controller, when the temperature changes. However, periodic reports, managed by configuration parameter 18, may still be active.

0 - disabled

1-100 - 0,1 degree step

17. Minimum humidity change to report.

Parameter: 17

Size: 1 Byte

Default Value: 5

Description:

This value defines the minimum change of humidity to cause an unsolicited report of humidity to the central controller using Lifeline. If the value is set to 0, there will be no reports sent to the controller, when the humidity changes. However, periodic

reports, managed by configuration parameter 18, may still be active.

0 - disabled

1-20 - value in %

18. Periodic Reports.

Parameter: 18

Size: 2 Byte

Default Value: 43200

Description:

This parameter defines the time interval to send an unsolicited report. If the value is set to 0, there will be no periodic reports sent to the controller. However, reports on temperature/humidity changes, managed by configuration parameters 16 and 17, may still be active.

0 - disabled

900-65535 - value in seconds

64. Temperature Scale

Parameter: 64

Size: 1 Byte

Default Value: 1

Description:

This parameter sets the temperature scale.

1 - Celsius

2 - Fahrenheit

255. Reset Parameter
Parameter: 255

Size: 4 Byte

Default Value: 0

Description:

This parameter helps reset configuration parameters and the device to factory defaults

1- Reset all Parameter settings to their default settings.

1431655765 - (0x55555555) Completely factory reset sensor and send device reset locally notification