

# Horticulture Drainage Sensor

This kit measures drain water volume and includes holders for Aranet EC & pH probes, making it ideal for monitoring water volume and quality in horticulture setups. This device, belonging to the PRO sensor series, includes Aranet Sub-GHz ISM band radio which wirelessly transmits sensor measurements to the Aranet PRO base station.



## Product numbers

Product number	Radio band	To be used in
TDSPHP07	EU868	European Union
TDSPHPU7	US920	United States of America, Canada, South America, Australia, New Zealand
TDSPHPU7	AS923	BRN, KHM, HKG, IDN, LAO, TWN, THA, VNM, MYS, SGP
Not available	JP923	Japan
Not available	KR923	South Korea

- This product is a kit consisting of several separate devices. It combines Aranet devices with carefully selected solutions from other companies to provide a single, unified solution. Please consult the *Kit contains* table for a detailed list of included devices.

## Kit contains

Product number	Manufacturer	Product name	Amount
TDSPIK*2.010	Aranet	Drainage Sensor	1
—	Ageon	Sensors drainage box	1

- Aranet product number designations include the symbol “\*” to signify multiple product numbers, which, depending on the region of use, have either 0, U or J in place of the asterisk. Refer to the relevant product datasheets for more information.

## Specifications of kit components

### General

Ingress protection rating	IP67	
Operating temperature range	-40–60 °C	-40–140 °F
Product dimensions	290×200×150 mm	11.4×7.9×5.9 in
Weight	1.6 kg	3.5 lbs
Enclosure material	Nylon PA12	
Buffer container volume	1 l	33.8 oz
Packaging includes	AA alkaline battery, string for transmitter, inlet filter, drain tube	

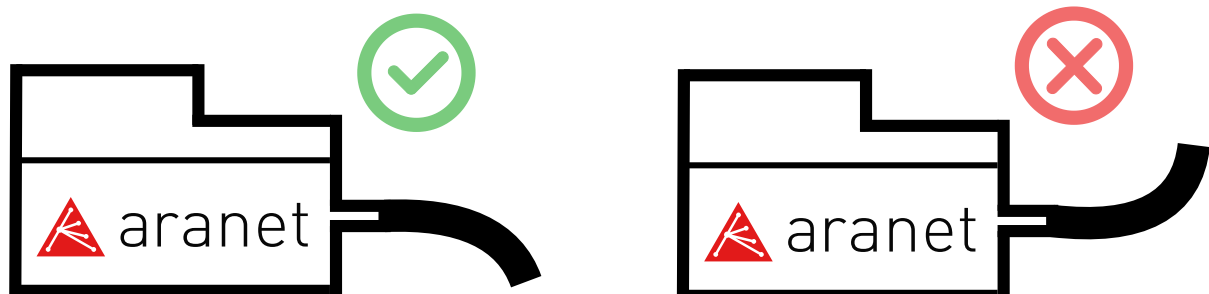
### Drainage sensor

Max Flow	3.6 l/h	0.95 gal/h
Resolution	5 ml	0.17 oz
Accuracy	±5 %	
Transmitter cable length	1 m	3.3 ft
Transmitter power supply	1 pc AA battery	

- The drainage sensor measures water volume using a self-emptying tipping bucket with a 5 ml (0.17 oz) capacity.
- For detailed specifications of drainage sensor and transmitter parameters, please use the product code listed in the *Kit contains* table to locate the corresponding product data sheets.

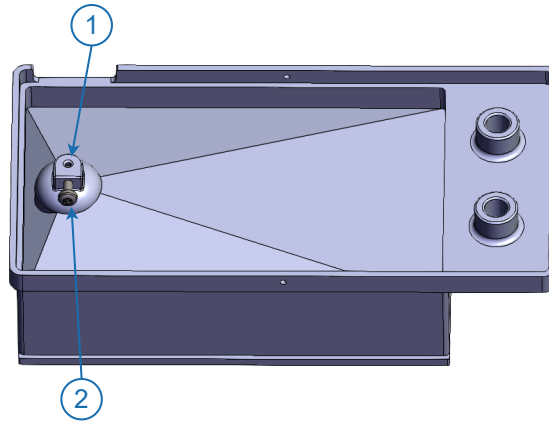
## Installing and using the Horticulture Drainage Sensor

- **Installing the Horticulture Drainage Sensor.** Place the drainage sensor box under the gutter to collect drain water. While one slab can be used, sampling from two slabs is recommended for a more representative greenhouse measurement. Ensure the drain pipe has a constant downward slope and the box itself is mounted perfectly level without tilt or slope. Before use, remove the elastic band that secures the tipping bucket spoon during transport.



- **Pairing Aranet sensors.** Pair the Aranet Drainage sensor with the base station as outlined in the respective Aranet sensor data sheets.
- **Adjusting the flow control.** Flow speed to the drainage sensor is adjusted via screw (2) on the interior side of the box cover. For high-flow applications, do not open the screw (2) more than 1/4 of the hole (1). For low-flow applications,

the screw (2) can be opened beyond 1/4 of the hole (1) to enable faster measurement readings. By default the screw (1) is opened 1/4 of the dripping hole (1). Adjust the screw (2) opening as needed, ensuring that the flow does not exceed 3.6 l/h (1.19 gallon/h) to maintain measurements within the  $\pm 5\%$  error range. The box contains a buffer container that collects water if the incoming flow is too fast to be processed by the drainage volume sensor.



- **Defining drainage sensor units.** The drainage sensor measures drain water volume using a pulse counter. Each time the self-emptying tipping bucket fills and empties, it registers one pulse. After pairing the sensor, navigate to *Sensors* menu in the Aranet base station web interface, locate the corresponding sensor, assign it a name, and enable the *Conversion* option. Set the dimension to *Volume*, select the preferred volume units, and define the volume per pulse as 5 ml, 0.005 l, or 0.0013 gal depending on the selected units.

## Compliance information

**CE** Conformité Européenne

**FC** Federal Communications Commission (USA)

**IC** Innovation, Science and Economic Development Canada