



Ultrasonic Wi-Fi Installation Guide

Thank you for purchasing the Tekelek Ultrasonic Wi-Fi sensor which uses ultrasonic technology to measure the liquid level of your tank and then communicates this data to a remote server via Wi-Fi communication.



STEP 1: Activation

- Using a mobile device, confirm that the Wi-Fi network is available at the tank location.
- Place the sensor as close as possible to the point of installation, press and hold the button for approximately 5 seconds, until the LED turns Red.
- Using a mobile device, search for a Wi-Fi network beginning with "TEKELEK" and connect to it.
- Open a web page browser and enter 192.168.4.1 into the address bar. The Tekelek page will load.
- Choose the required Wi-Fi network (SSID) from the list or choose "manually entered" and carefully enter the Wi-Fi network name (SSID).
- Enter the Wi-Fi password and click on the "Connect to WIFI" button.



Unit Serial 0000000001

Select WiFi Network TE-MainBoardroom (secure)

Enter Network Password 1234567890

Connect to WIFI

- The LED on the sensor will turn green. Wait approximately 20 seconds and observe if the LED flashes green or red several times.
- Green** flashes indicate a successful connection to the Wi-Fi network.
- Red** flashes indicate an unsuccessful connection and the number of flashes may be counted to diagnose the problem by using the list below.

LED Patterns

- To manually test the connection after setup, hold the button until the LED turns green.
- Wait approximately 20 seconds, observe if the LED flashes green or red.
- Green** flashes indicate a successful connection to the Wi-Fi network.
- Red** flashes indicate an unsuccessful connection and the number of flashes may be counted to diagnose the problem by using the list below.

LED Error Flash Codes:

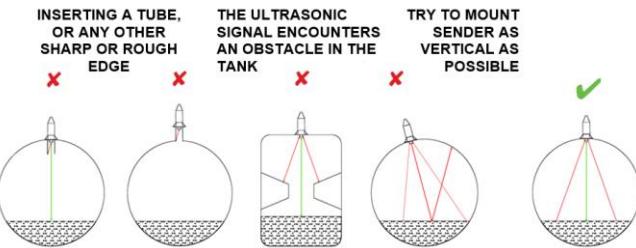
LED Pattern	Function
Red X 1 Flash	Unable to find Wi-Fi network (or Wi-Fi setup incomplete)
Red X 2 Flashes	Wi-Fi network unable to connect i.e. poor signal or MAC filtering enabled on the router
Red X 3 Flashes	Wi-Fi password incorrect
Red X 5 Flashes	Server endpoint unavailable (no web service detected)
Red X 6 Flashes	Invalid response to the server i.e. a 404 HTTP response returned
Red X 7 Flashes	Firmware download failed (timed out, not found or wrong type)
Red X 8 Flashes	Low battery (a depleted battery will eventually prevent Wi-Fi connections)
Red X 9 Flashes	No response from Wi-Fi module (critical fault)



STEP 2: Installation

The following outlines the Ultrasonic Wi-Fi sensor mounting options.

- The sensor must sit in a vertical position on top of the tank and be fitted such that the sensor has a clear path to the tank contents. Position it so that there are no internal obstructions that may interfere with the ultrasonic signal.



- Locate a suitably positioned threaded opening on the top of the tank to hold the sensor.
- Place the foam gasket over the hole followed by the mounting adaptor.
- Tighten on to tank with 2 stainless steel self-tapping, counter sunk screws, supplied. Do not over tighten!
- Screw the sensor into the adaptor. Ensure that the sensor is vertical on the tank and screwed correctly into the base and that the threads have not crossed, to give a secure seal.
- For tanks that do not contain a suitably positioned threaded opening on the top of the tank to hold the sensor, please refer to [Appendix 1](#).



Appendix 1: Drilling procedure

- For tanks that do not contain a suitably positioned threaded opening on the top of the tank to hold the sensor, a hole will need to be manually drilled into the top of the tank.
- Choose a flat spot on the top of the tank.
- Use a 45.5mm tapping drill to drill a 1 ½" BSP hole on the surface of the tank.
- Follow installation guidelines as per **STEP 2**

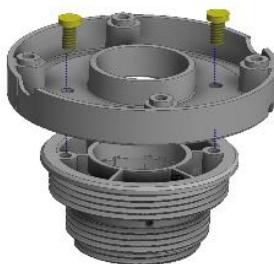
- The Multi-Thread adaptor will fit directly into threaded 1 ¼", 1 ½" or 2" BSP (British Standard Pipe) existing tank connections.
- Ensure that the rubber seal is placed, and that the sensor is screwed correctly into the tank. Do not over-tighten!



Appendix 2: Multi-Thread Adaptor

The following outlines the steps for replacing the standard 2" adaptor with a Multi-Thread adaptor.

- Remove the 2" adaptor by unscrewing the M3.5x10 Pozi screws that attach it to the base of the ultrasonic sensor.
- The Multi-Thread adaptor should be attached to a pairing adaptor using No.8x13mm Pozi screws x 2.



- The pairing adaptor should then be attached to the ultrasonic sensor base using the M3.5x10 Pozi screws x 4 that previously held the 2" adaptor in place.

*Note: The Multi-Thread adaptor can also be installed using the mounting adaptor and gasket, as per **STEP 2**.*



For more information on the Tekelek Ultrasonic Wi-Fi sensor please visit our website www.tekelek.ie where a link to our YouTube page can also be found.