



# Tempus Air BW

## Base Station WiFi

WiFi-LoRa™ Gateway



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USER'S GUIDE

## INTRODUCTION

Tempus Air BW is a WiFi-LoRa™ gateway that allows data transmission between the MyToroTempus application or platform and Tempus Air modules (CT, MS, PS, MV).

Tempus Air BW connects to the MyToroTempus, application or web platform, via Internet WiFi.

Tempus Air BW can communicate via LoRa™ (long range radio connection) with up to 30 modules among Tempus Air CT / MV / MS / PS.

## RECOMMENDATION

Tempus Air product installation requires a pre-audit phase in order to check the connection of the products in their intended locations.

To optimize the connection between the Tempus Air BW and the Tempus Air modules, it is strongly recommended :

1. Position the Tempus Air BW or its remote antenna as high as possible, with a clear environment.
2. Test the LoRa™ connection between Tempus Air BW and the modules using the test tool present in the MyToroTempus App.

LoRa™ connection frequency between Tempus Air BW and his modules is 3 minutes.

Remotely, each modification of program or manual control will be effective after 3 minutes.

On the Tempus Air MS module :

- Recording of the count, every 15 minutes.
- Feedback, every 3 minutes.

**Read the following safety instructions carefully before installing or using the Tempus Air BW.**

**Be sure to strictly respect precautions of use.**

Tempus Air BW must be installed indoors or under cover.

Install your product so that the socket outlet is near the equipment.

The socket is a disconnecting device, in case of problem, it must be easily accessible at all times. Make sure the outlet on which your power transformer is plugged has overcurrent protection and circuit breaker type short circuit protection 16A.

Use only the power supply unit provided with the product (model MU06-T120050-C5),

INPUT : 100-240V ~ 0.2A Max 50/60Hz OUTPUT : 12V - 0.5A.

## SPECIFICATION

### DIMENSIONS

Width: 8 cm

Height: 8,2 cm

Depth: 1,3 cm

### INSTALLATION

Permissible humidity: 90% (relative humidity)

Ambient temperature of product use: 0°C to 50°C

Warranty: 2 years

### POWER SUPPLY

Power supply unit: INPUT : 100-240V ~ 0.2A Max 50/60Hz

OUTPUT: 12V 0.5A

### FEATURES

Frequency band used and power emitted max :

Bluetooth®: [2400-2483.5]Mhz, 1mW

WiFi: 2.4Ghz , 25mW

LoRa™: [868-868.6]Mhz, 25mW

## Step 1

### APP DOWNLOAD

1. On your smartphone or tablet, go to the «App Store» or to the «Play Store».



2. Search for «The Toro Company» in the search bar.

**Developer**

*The Toro Company*



3. Once found, download the MyToroTempus App




4. Once installed, activate the Bluetooth® of your smartphone or tablet.

### CREATE AN ACCOUNT

To use Tempus Air BW you need to create your MyToroTempus account.

1. Launch MyToroTempus app from your smartphone and/or tablet.

2. Go to «My account» by typing on icon. 

3. Follow the steps described on the app.

**Note:** if you already have an account on the MyToroTempus.com platform, you must use the same credentials

## Step 2

### INSTALLATION AND ASSOCIATION

1. Make sure the place where you want to install the Tempus Air BW is covered by the Wi-Fi connection of your internet box.

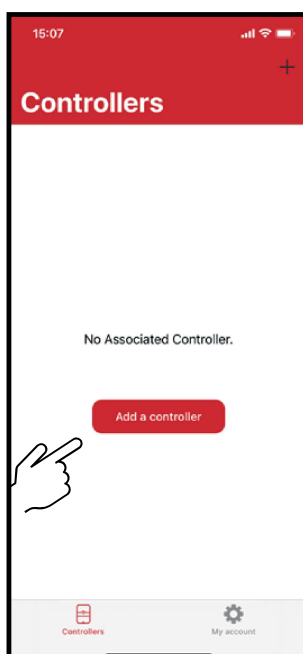
2. Screw on the antenna, and connect the 230VAC power supply provided with the Tempus Air BW

3. Verify that the Bluetooth® is activated on the settings of your smartphone.

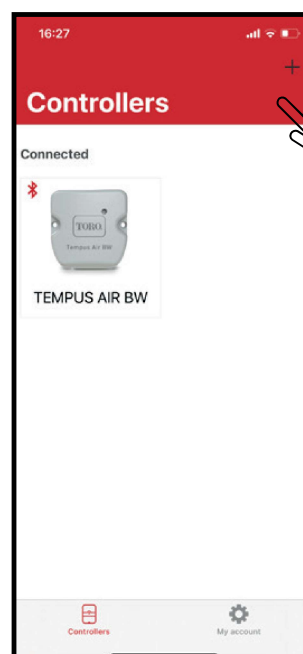
4. Launch MyToroTempus app from your smartphone or tablet.

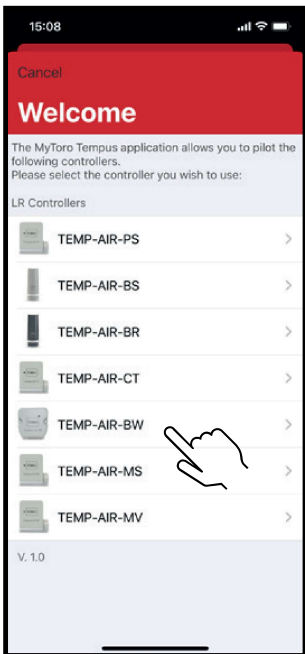
5. Click on the «Add a module» button or on the «+» button

No module already installed



Modules are already installed





Select the Tempus Air BW icon from the modules list



Select the required Tempus Air BW to be installed from the list of the available modules

**Note:** To identify your Tempus Air BW among the nearby BW gateways, please refer to the «Default name» present on its product label."



Select the WiFi network access to which you want to connect your Tempus Air BW by clicking on the corresponding line or «Ignore» if your Tempus Air BW has already been assigned to a WiFi network.

Enter the password for the WiFi network access point, then confirm.

To check that your Tempus Air BW is correctly connected to the WiFi network, check that the LED on the front panel is solid green.

### Step 3

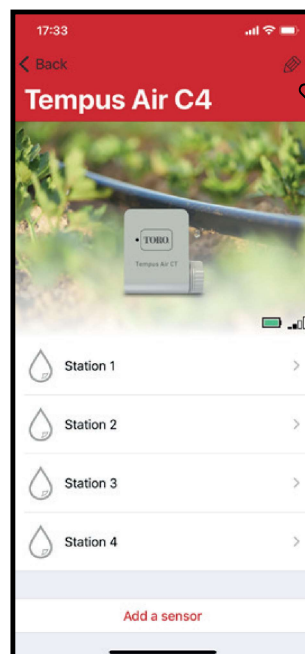
## PAIRING


### Association between a Tempus Air module (CT/MS/PV/MV) and the Tempus Air BW:

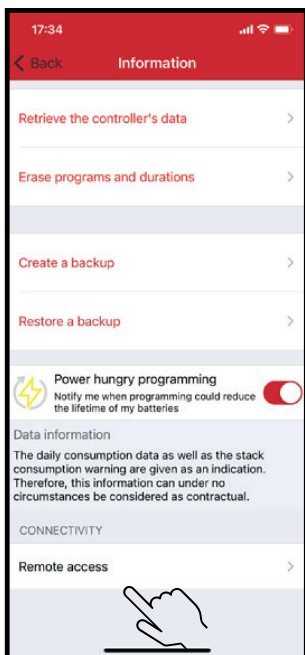
You must first have associated your Tempus Air module with your account in MyToroTempus application before proceeding with the association of the module on your Tempus Air BW gateway. Refer to the module user manual to associate it and then perform the following steps.



1. Select the product in the list of modules. (Remember that you must be connected to your module via Bluetooth®).



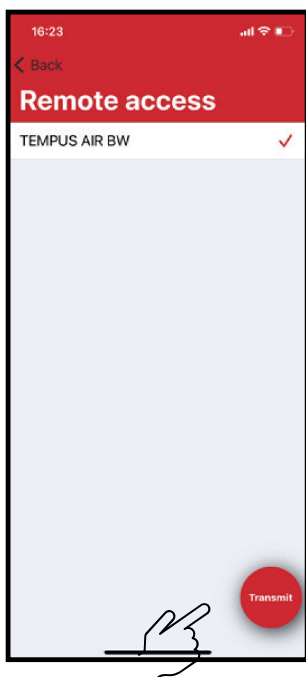
Push on  on the top right of the screen to access to information of the products. (Example refers to Tempus Air CT)



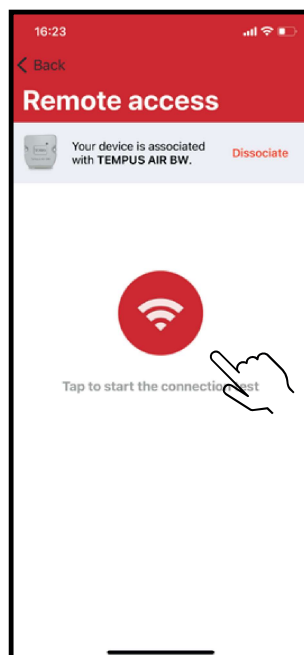
2. Push on « Remote access »



3. Select your Tempus Air BW (Refer to the «Default name» present on its product label)




4. Push on Transmit to validate the operation.



5. Your Tempus Air BW is now associated. (Push red button to test it)

### Security key

The security key allows to protect your gateway. You can define it by clicking on the icon  at the top right of your screen (you must be connected via Bluetooth).

# Step 4

## LoRa™ TEST CONNECTION

If the association of the modules is carried out before the final installation of the Tempus Air BW, this connection test can be used to validate the positioning of the latter by going to temporarily install the Tempus Air BW in its intended location then by going to position a module in each of the valve boxes to verify good communication with the Tempus Air BW. The connection test can also allow you to verify at any time the correct operation of the LoRa™ radio between your module and the Tempus Air BW.

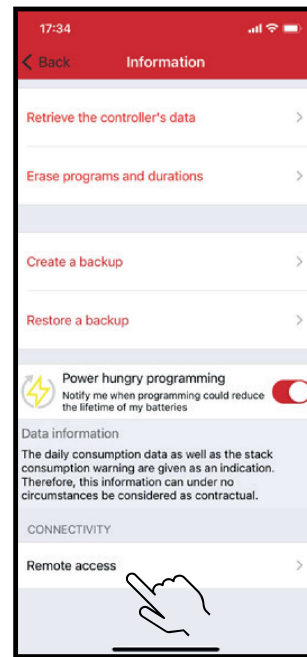
(Example: the product fell into the upside-down valve box and no longer communicates with the Tempus Air BW). To test the LoRa™ connection, do the following:



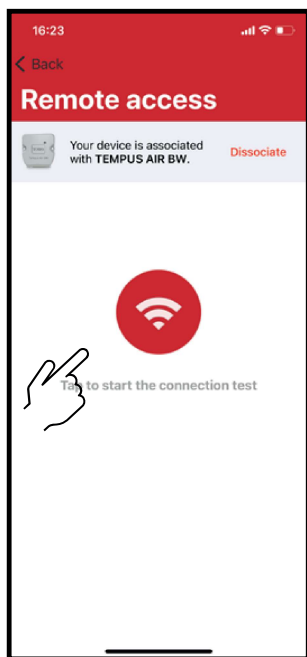
1. Enter the Tempus Air module in Bluetooth®



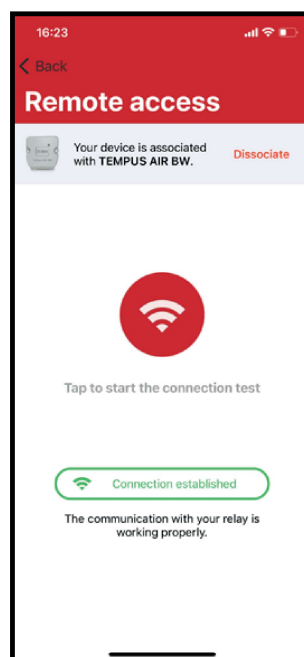
Then in the parameters (small pencil at the top right)



2. Push on « Remote access »



3. Push the red button to test the connection LoRa™



4. The message indicate that the LoRa™ connection between the Tempus Air BW and the module is reliable.

If the connection is not established, a "No connection established" message appears. Repeat this test several times to confirm that the connection cannot be made. In this case, the distance between the Tempus Air BW and the Tempus Air module will need to be reduced.

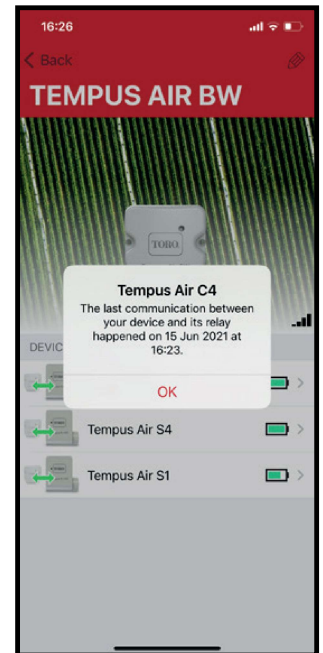
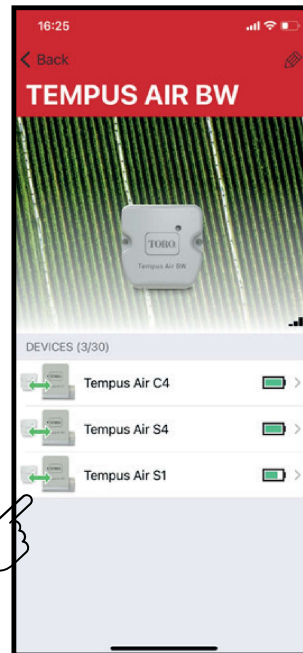
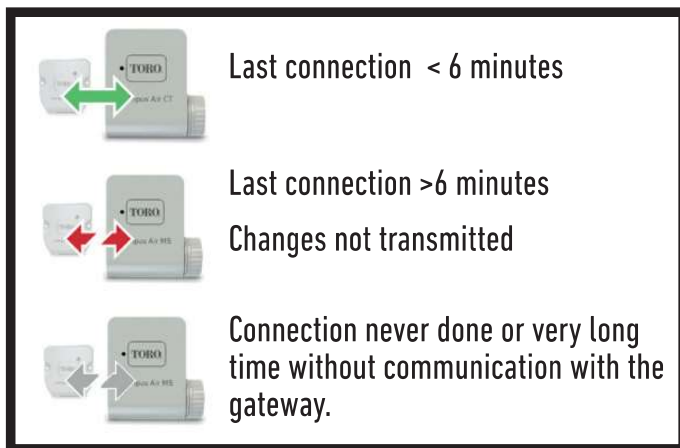
## Step 5

### LoRa™ STATUS CONNECTION

#### The communication periodicity in LoRa™ mode :

The communication interval of the LoRa™ radio between the Tempus Air modules and Tempus Air BW is approximately 3 minutes.

**Status of LoRa™ radio communication between the modules and the Tempus Air BW.** The icons indicate when Tempus Air BW was last connected to the module via LoRa™. If you press the icon a message will inform you of the last connection."



## LED STATUS

### INFORMATIONS ON THE STATUS OF THE TEMPUS AIR BW LED

- **Green LED:** normal running
- **Green LED flashing :** Firmware update in progress
- **Red LED flashing 3 times :**  
Possible causes :
  1. Loss of Wi-Fi access point (router) or connection not established.  
Restart your router and the product.
  2. During initialization, the password entered is not correct.  
Trick : Enter the password of the your router in a « Notes » application on your mobile. Copy the password with a long press and paste it into the corresponding field. Repeat the initialization procedure.
  3. During initialization, the product may be too far from the box : bring the product closer.
- **Red LED flashing 2 times :** alarm time : the Tempus Air BW is no longer on time. If your product is connected to the MyToroTempus platform, the time setting will be automatic. Otherwise, connect to the Tempus Air BW from the application and check that the message « Synchronization OK » is displayed.
- **LED off :** the product is not powered.

## MOUNTING (Outdoor Antenna)

In the case of mounting the antenna outdoors with the optional extension of 10 meters, we recommend protecting the antenna with a plastic tube with an internal diameter of 15mm minimum. This tube will be clogged on his upper part to protect the antenna from the rain. The cord will have to be protected by a sheath.

## GENERAL INFORMATION



This symbol indicates that the product uses a LoRa™ technology radio.



The symbol «CE» indicates that this device complies with the European standards on safety, health, environment and user protection. Devices with the symbol «CE» are intended for sale in Europe.



This symbol indicates that these types of electrical and electronic equipment must be disposed of separately in European countries. Do not dispose of this device with your household waste. Please use the collection and recycling points available in your Country when you no longer need this device.

## DECLARATION OF CONFORMITY

The Toro Company declares that TEMPUS AIR BW conforms to the following directives and standards:

### **Directive 2014/53/UE (RED)**

Following standards:

BLE/WiFi standard : ETSI EN 300 328 v2.2.2

RADIO standard : ETSI EN 300 220-2 v3.1.1 & ETSI EN 300 220-1 v3.1.1

EMF standard : EN 62311 (2008) and the recommendation 1999/519/CE

EMC standard : EN 301 489-1 v.1.9.2 et EN 301 489-17 2.2.1

Safety standard : EN 62368-1:2014

### **RoHS Directive 2011/65/EU & Directive amendment (EU)2015/863**

This declaration has been issued under the sole responsibility of the manufacturer.

The object of the declaration is in conformity with relevant Union harmonization legislation.

### **The Toro Company**

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**Tempus Air BW**

*WiFi-LoRa™ Gateway*

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