TORO

TEMPUS-AG-WF
Base Station WiFi
WiFi-LoRa™ Gateway

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WiFi-LoRa™ Gateway

LoRa™

USER'S GUIDE

INTRODUCTION

TEMPUS-AG-WF is a WiFi-LoRa™ gateway that allows data transmission between the MyToroTempus application or platform and TEMPUS-AG devices (CT, MS, PR, MV).
TEMPUS-AG-WF connects to the MyToroTempus, application or web platform, via Internet WiFi.
TEMPUS-AG-WF can communicate via LoRa™ (long range radio connection) with up to 30 devices among TEMPUS-AG-CT/MV/MS/PR.

RECOMMENDATION

TEMPUS-AG 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-AG-WF and the TEMPUS-AG devices, it is strongly recommended :
1. Position the TEMPUS-AG-WF or its remote antenna as high as possible, with a clear environment.
2. Test the LoRa™ connection between TEMPUS-AG-WF and the devices using the test tool present in the MyToroTempus App.
LoRa™ connection frequency between TEMPUS-AG-WF and his devices is 3 minutes.
Remotely, each modification of program or manual control will be effective after 3 minutes.
On the TEMPUS-AG-MS device :
- Recording of the count, every 15 minutes.
- Feedback, every 3 minutes.

Read the following safety instructions carefully before installing or using the TEMPUS-AG-WF.
Be sure to striclty respect precautions of use.
TEMPUS-AG-WF 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 16mA.
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 40°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-AG-WF you need to create your MyToroTempus account.

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

2. Select the "Registration" button.

3. Follow the step described on the app.

Note: if you already have an account on the MyToroTempusAG.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-AG-WF is covered by the Wi-Fi connection of your internet box.

2. Screw on the antenna, and connect the 120VAC power supply provided with the TEMPUS-AG-WF

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 controller» button or on the «+» button
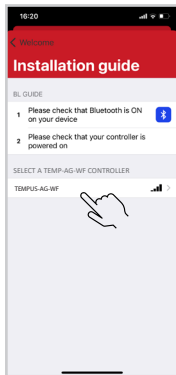
No device already installed
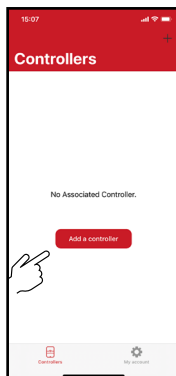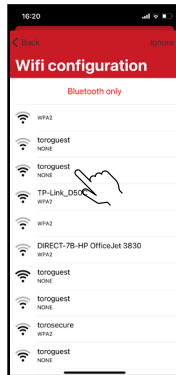

Devices are already installed

3
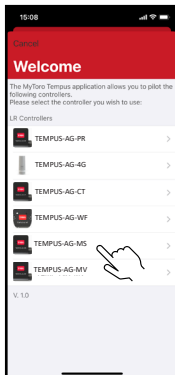
Select the TEMPUS-AG-WF icon from the devices list

Select the required TEMPUS-AG-WF to be installed from the list of the available devices

Note: To identify your TEMPUS-AG-WF among the nearby WF 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-AG-WF by clicking on the corresponding line or «Ignore» if your TEMPUS-AG-WF has already been assigned to a WiFi network.

Enter the password for the WiFi network access point, then confirm.
To check that your TEMPUS-AG-WF 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-AG device (CT/MS/PR/MV) and the TEMPUS-AG-WF:

You must first have associated your TEMPUS-AG device with your account in MyToroTempus application before proceeding with the association of the device on your TEMPUS-AG-WF gateway. Refer to the device user manual to associate it and then perform the following step.
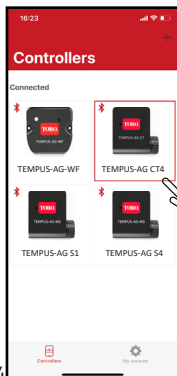
1. Select the product in the list of devices.
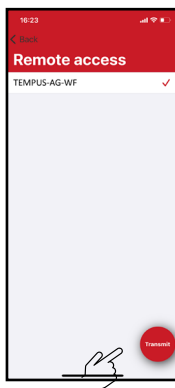(Remember that you must be connected to your device via Bluetooth®).
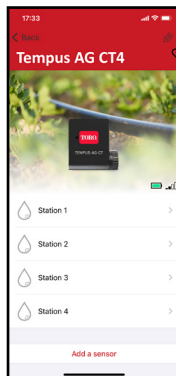
Push on ✎ on the top right of the screen to access to information of the products.
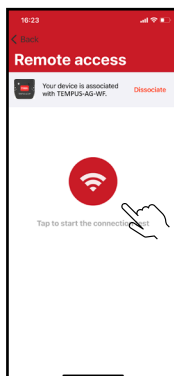(Example refers to TEMPUS-AG-CT)
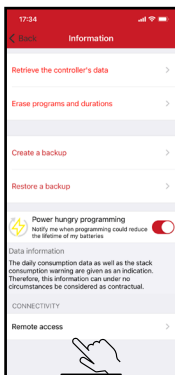
2. Push on
« Remote access »

3. Select your
TEMPUS-AG-WF
(Refer to the «Default
name» present on its
product label)

4. Push on
Transmit to
validate the
operation.

5. Your TEMPUS-AG-WF
is now associated.
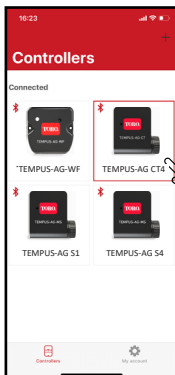(Push red button to
test it)

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 devices is carried out before the final installation of the TEMPUS-AG-WF, this connection test can be used to validate the positioning of the latter by going to temporarily install the TEMPUS-AG-WF in its intended location then by going to position a device in each of the valve boxes to verify good communication with the TEMPUS-AG-WF. The connection test can also allow you to verify at any time the correct operation of the LoRa™ radio between your device and the TEMPUS-AG-WF.
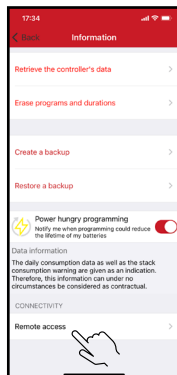
(Example: the product fell into the upside-down valve box and no longer communicates with the TEMPUS-AG-WF). To test the LoRa™ connection, do the following:

1. Enter the TEMPUS-AG device in Bluetooth®
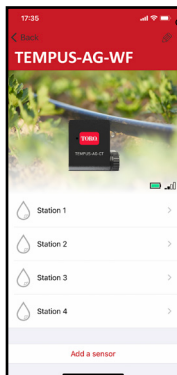
Then in the parameters (small pencil at the top right)

2. Push on « Remote access »
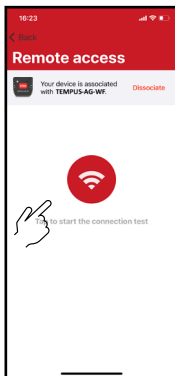
3. Push the red button to test the connection LoRa™
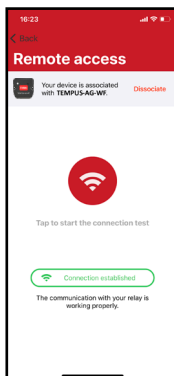
4. The message indicate that the LoRa™ connection between the TEMPUS-AG-WF and the device is reliable.

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-AG-WF and the TEMPUS-AG device 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-AG devices and TEMPUS-AG-WF is approximately 3 minutes.
Status of LoRa™ radio communication between the devices and the TEMPUS-AG-WF. The icons indicate when TEMPUS-AG-WF was last connected to the device via LoRa™. If you press the icon a message will inform you of the last connection."

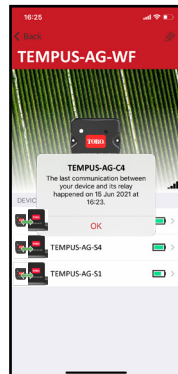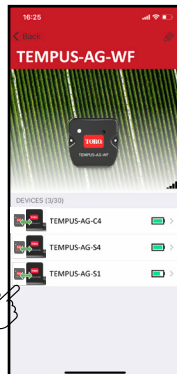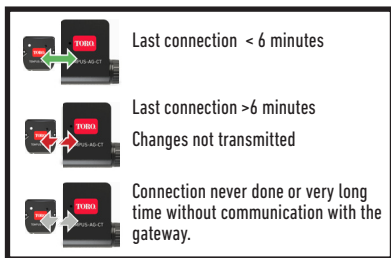Last connection < 6 minutes

Last connection >6 minutes
Changes not transmitted

Connection never done or very long time without communication with the gateway.

LED STATUS

INFORMATIONS ON THE STATUS OF THE TEMPUS-AG-WF 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 etablished.
  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-AG-WF is no longer on time. If your product is connected to the MyToroTempusAG platform, the time setting will be automatic. Otherwise, connect to the TEMPUS-AG-WF 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

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

 C E 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.

In case of contrary use to the indications given in this user manual, the device protection may be compromised.

This symbol indicates that the supply voltage is a direct voltage.

This symbol indicates that the supply voltage is an alternating voltage.

This symbol indicates the polarity of the DC supply voltage.

This symbol indicates that the power supply unit is intended for indoor use only.

This symbol indicates that the power supply unit is a double insulation class 2 type.

VI This symbol indicates that the efficiency of the external power supply is level 6.

DECLARATION OF CONFORMITY

The Toro Company (Toro AG), 1588 N. Marshall Avenue, El Cajon, CA, 92020-1523, USA declare that TEMPUS-AG-4G conform(s) to the following directives, standards and/or other normative documents:

CAN ICES-003B NMB-003B FCC Part 15B

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.

TEMPUS-AG-WF
WiFi-LoRa™ Gateway

For Technical Assistance:
service.wb.emea@toro.com

FCC/IC STATEMENT TEMPUS-AG-WF

This product contain a modular approval with FCC ID : YWW-BLEMOD, T9JRN2903, 2AC7Z-ESPWROOM02 and IC : 9319A-BLEMOD, 6514A-RN2903, 21098-ESPWROOM02.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution : the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note : this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occurin a particular installationi. If this equipment does cause harmful inteference to radio or television reception which can be determined by tunning the equipment off and on ,the user is encouraged to try to correct interference by one or more of the following measures :

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with innovation, science and Economic development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions : (1) this device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/recepteur exempt de license contenu dans le présent appareil est conforme aux CNR d'innovation, Science et Dévellopement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux condtions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est suceptible d'en compromettre le fonctionnement.

This device complies with FCC and ISED RF radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Le present appareil est conforme aux niveaux limites d'exigences d'exposition RF aux personnes définies par ISDE. L'appareil doit être installé afin d'offrir une distance de séparation d'au moins 20cm avec les personnes et ne doit pas être installé à proximité ou être utilisé en conjonction avec une autre antenne ou un autre émetteur.

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For Technical Assistance:
service.wb.emea@toro.com

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