

# TWM-1887

## TLPWAN Wireless I/O Module Installation & User Manual



Release Date: 15/09/2021  
Rev:01

### Critical Warnings

#### General

- ✓ Read this manual with care before operating the device and keep it for further reference.
- ✓ Comply with all warnings and measures provided in the manual. Follow all respective operation and usage instructions.
- ✓ Keep the devices away from water and humidity.

#### Ambient Conditions

Do not operate the device under extreme temperature conditions that fall outside the following values.  
Temperature: Between -10°C and +55°C  
Relative Humidity: Max. 95% RH

#### Service

Do not attempt to repair the device on your own, you may be exposed to electric shock in case you open the device housing.  
Contact your dealer or authorized service in case of a failure. Technical interventions to the device must be carried out by qualified personnel of authorized service.

**Warning:** Do not attempt to take the card out of its plastic protection. It is sealed solely for your safety. Users must avoid intervention.

#### Failures That Require Service Intervention

Contact your authorized service or dealer in case of a failure or in following cases.

- ✓ If the power line or plug is damaged,
- ✓ If any liquid has leaked or a substance has fallen into the device,
- ✓ If the device is exposed to water or rain,
- ✓ If the device is dropped or the housing is damaged,
- ✓ If there is significant performance change in the device,
- ✓ If the device is not operating normally according to the operating instructions in the user manual

Call the service since erroneous operations may cause further failures.

#### What You Can Do On Your Own

Do not attempt to repair the device on your own since you may be exposed to electric shock in case you open the device housing. Contact your dealer or authorized service in case of a failure. Technical interventions to the device must be carried out by qualified personnel of authorized service. The device must be cleaned with a dry cloth. No chemical substances must be used for cleaning purposes.

#### Handling and Transportation

The device must be handled with care in manner that it does not get exposed to impacts and liquid influx. The damages that may occur during improper handling are out of guarantee.

#### Human and Environment Health

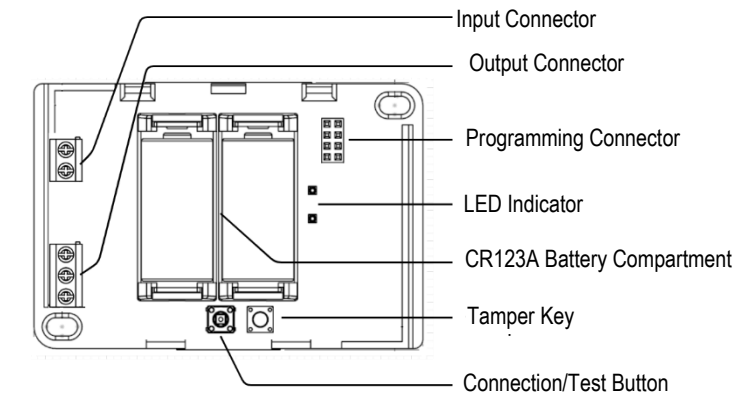
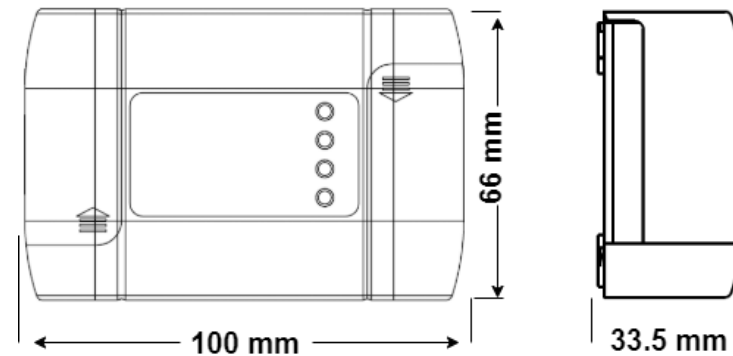
This device does not contain any chemical or biological substance that may harm human health.

### General Features

- ✓ TLPWAN low power consumption, two-way safe and stable wireless communication protocol
- ✓ Standard, low cost lithium battery
- ✓ 10 years battery life thanks to advanced communication protocol
- ✓ Support with one dry contact output that can be programmed from the panel
- ✓ Support with one dry contact input
- ✓ EN54-18, EN54-25

### Technical Specifications

Communication Distance (via Coordinator or Router)	500 m (open area)
Operating Frequency	868 MHz
Operating Frequency Channels	10
Output Power	14 dBm (25 mW)
Average (Quiescent) Current Consumption	15uA (@3V)
Battery	2xCR123A (3 Vdc)
Battery Life	5 years (20s Ping Time) 10 years (120s Ping Time)
Input Line End Resistance	33K
Input Alarm Resistance	10K
Operating Temperature Range	-10°C ~ 55°C (14°F ~ 131°F)
Humidity	95% RH (max.)
Size (mm)	100x66x33.5
Housing Material	White Color, ABS Plastic
Weight	??????



## Indicator LEDs

Led Signal Meaning	LED Signal Pattern
Any error situation (Open Circuit, Tamper etc.)	Green LED blinks once in every 10 seconds
Device in normal operation mode	Green LED blinks once in every 20 seconds
Alarm mode	Red LED blinks once in every 2 seconds
Low battery warning	Orange LED blinks once in every 20 seconds
Network connection-disconnection operation	Green LED blinks twice in every 2 seconds Positive, green LED lights for 3 seconds Negative, red LED lights for 3 seconds
Result of operation	Negative, red LED lights for 3 seconds
Connection quality	Good connection; Green LED blinks 3 times Moderate connection; Green LED blinks 2 times Poor connection; Green LED blinks once No connection; Red LED blinks once

## Network Connection Procedure

For a device to connect a network, such device must not be connected to any network. The connection status of a device can be found out by means of the link test. Follow the steps below for connecting the device to a network.

1. The connection permission on the coordinator or on the router must be on before the device is connected to a network. Turn on the connection permission on the coordinator or on the router.
2. Press long (for 5 seconds) on the "Connection/Link" button under the device.
3. The device will start the connection procedure automatically. This procedure takes a about 20 to 60 seconds. The green LED will blink twice every 2 seconds during the procedure.
4. At the end of the procedure, the green LED will light for 3 seconds if the connection procedure is successful, and the red LED will light for 3 seconds if the connection procedure is not successful.

**Warning:** Once the device is connected to the network, carry out the link test from the point where the device will operate. The system will not operate properly if there is no connection at the link test. Change the device's location in such case.

## Disconnection procedure

Disconnection of the device from the network can be done both on the coordinator and on the device. Follow the steps below for disconnecting the device from a network.

1. Press long (for 5 seconds) on the "Connection/Link" button under the device.
2. The device will start the disconnection procedure automatically. The green LED will light for 3 seconds at the end of the procedure.

## Link Test

It is possible to measure the link quality between the device and the connected coordinator or router. For this, press shortly on the button under the device. If the device is connected to a network, the LEDs will light as noted below at the end of the procedure:

Link Kalitesi (RSSI)	LED Signal Pattern
RSSI > -60 dBm	Good connection; Green LED blinks 3 times
-60 dBm > RSSI > -75 dBm	Moderate connection; Green LED blinks 2 times
-75 dBm > RSSI > -90 dBm	Poor connection; Green LED blinks once
-90 dBm > RSSI	No connection; Red LED blinks once

**Warning:** If no LED lights at the end of the Link Test, this means the device is not connected to any coordinator or router.

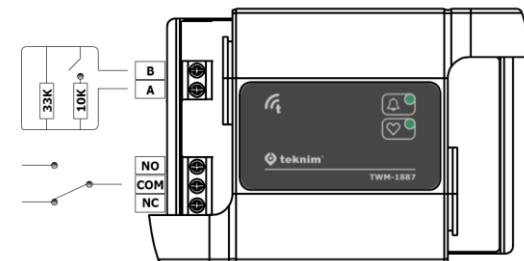
## Input Output Connections

Both dry contact can perform monitoring and dry contact can provide output for the external alarm devices to operate.

( $R_s$ ) 33K is being used for line end resistance and ( $R_{alarm}$ ) 10K is being used for alarm resistance.

Relay contacts are 30Vdc 2A Form C.

Terminal	Description
NO	Normally open contact
NC	Normally closed contact
COM	Common contact
A	Input
B	Input



1922

### Bilgi Elektronik San. ve Tic. A.Ş.

Dudullu OSB 1. Cad. İsmet Tarman İş Merkezi  
No:1 Kat:2 No:32 Ümraniye / İstanbul

**21**  
**1922-CPR-1598**

EN 54-18:2005, EN 54-18:2005/AC:2007

Fire Detection And Fire Alarm Systems (Input/Output Devices)  
EN 54-25:2008, EN 54-25:2008/AC:2010, EN 54-25:2008/AC:2012  
Components Using Radio Links

**TWM-1887**

Technical data: See BİLGİ-TEC-170908 kept by the manufacturer.

## Manufacturer Company and Main Service

### Bilgi Elektronik San. ve Tic. A.Ş.

Dudullu Organize Sanayi Bölgesi 1. Cadde İsmet Tarman İş Merkezi  
No:1 Kat:2 No:32 Ümraniye / İstanbul / Turkey

**Phone:** +90 216 455 88 46 **Facsimile:** +90 216 455 99 06

[www.bilgielektronik.com.tr](http://www.bilgielektronik.com.tr)

[satis@bilgielektronik.com.tr](mailto:satis@bilgielektronik.com.tr)

[destek@bilgielektronik.com.tr](mailto:destek@bilgielektronik.com.tr)



\*In compliance with AEEE regulations. This product is manufactured from recyclable and reusable high quality parts and materials. Therefore, do not dispose of the product together with domestic or other wastes at the end of its service lifetime. Take it to a drop-off point for the recycling of electrical and electronic devices.

\* Lifetime of this product specified and announced in the list attached to the After Sales Services Regulations published in the Official Gazette No 29029 dated 13/6/2014 is 5 years.

\*The consumer may apply to the Consumer Arbitration Board or Consumer Court of the place of residence or of the consumer transactions in case of disputes arising from exercising the rights granted by the guarantee.