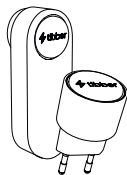


User manual

Tibber Pulse IR & Bridge



Let's get started:

1. Make sure you have everything at the ready

You'll need your Wi-Fi® password and most likely a 4-digit pin code to unlock your meter's data port. You can request this code from your meter operator.

2. Get Tibber

Search for Tibber on the Apple App Store / Google Play Store or scan the QR code to download the app. Then you can create a free Tibber account!



3. Pair me with the app

Go to Power-ups in the app and add "Tibber Pulse IR".

1. Intended use

This product is intended to be used to get consumption data from your electricity meter, and transfer it to the Tibber app. The product is intended for domestic use and should not be used for other purposes.

1.1 Retaining instructions

Read and understand this manual and its safety instructions before using the product. Failure to do so can result in severe injury or death. Follow all the instructions to avoid fire, explosions, electric shocks or other hazards that may damage property. The product shall only be used by persons who have fully read and understand this user manual's content.

Ensure that every user of the product has read these instructions prior to use and follows them. Keep all safety information and instructions for future reference and pass them on to subsequent product users. The manufacturer is not liable for cases of material damage or personal injury caused by incorrect handling or non-compliance with the safety instructions. In such cases, the warranty will be voided.

1.2 Obtaining documentation and information

Get the latest version of the manual in multiple languages at: https://pulse.tibber.com/pulse_ir_bridge_manual
Comments on the document can be submitted to our support team in the Tibber app or sent via email to hello@tibber.com

Your comments are much appreciated!

2. Description of the product

2.1 Technical details

The Pulse IR & Bridge is designed to get consumption data from energy meters using optical signaling and transfer this data via radio communication between Pulse IR and Pulse Bridge. Pulse Bridge sends data to our servers using Wi-Fi®. The product is meant to be connected to the Tibber app (available on Google Play and Apple App Store). There is an API available for advanced users at <https://developer.tibber.com/>

2.2 Product compliance

Hereby, Tibber AS declares that the radio equipment "Pulse IR & Bridge" complies with the Radio Equipment Directive (2014/53/EU). The complete version of the EU declaration of conformity is available at the following internet addresses: https://pulse.tibber.com/pulse_ir_conformity and https://pulse.tibber.com/bridge_conformity

2.3 Technical data

Parameter	Unit	
Device name	Pulse IR	Pulse Bridge
Model	TFD01	TJH01
Technical life span	>5 years	
Power usage	Expected consumption 1500 mAh/year*	0,5 W during pairing 0,2 W during normal operation
Frequency band	863 - 870 MHz	863 - 870 MHz 2400 - 2483,5 MHz
Maximum power transmitted	20 dBm for both frequency bands	
Weight	100 g (including batteries)	40 g
Dimensions(d+h+w)	100 × 36 × 29 mm	42 × 42 × 70 mm
Supported protocols	IEC62056-21, SML, Logarex, Imps	
Ingress protection (IP)	IP40	
Operational temperature range	-20 °C to 50 °C	
Input voltage (nominal)	3 V DC	230 VAC - 50 Hz
Input voltage range	-	90 - 254 VAC
Battery type(s)	2 x 1,5 V (AA) Li-FeS2 or Alkaline**	-
Directives	2014/53/EU	
Standards	EN 62368-1:2014 EN 301 489-01 V2.2.3 EN 301 489-03 V2.1.1 EN 301 489-17 V3.2.4 EN 300 220-2 V3.2.1	EN 62368-1:2014 EN 301 489-01 V2.2.3 EN 301 489-03 V2.1.1 EN 301 489-17 V 3.2.4 EN 300 220-2 V3.2.1 EN 300 328 V2.2.2
Approvals		

2.4 What's in the box



3. Installation and setup

Follow the instructions on the first page of this manual. You will be guided through the setup process in the Tibber app on how to attach ▢ Pulse Bridge to mains electricity and connect it to the internet, pair it with ▢ Pulse IR and how to attach ▢ Pulse IR to your energy meter.

4. Troubleshooting

4.1 Explanation of common LED signals during normal operation

Signal	Meaning
▢ Pulse IR	
Continuous light	Ready to pair with Pulse Bridge
2 successive blinks every second	Scanning for meter
Short blinks***	Normal operation
▢ Pulse Bridge	
Red, then white	Device is booting up
Green	Device is ready to pair
Green breathing	A phone is connected to Pulse Bridge
Yellow blinking	Firmware update. Do not disconnect!
Blue	Pulse Bridge is connected to the Tibber server. Bridge is in normal operation

4.2 Problem-solving using LED light during error states

Signal	Problem and solution
▢ Pulse IR	
3 successive blinks every 10 seconds	No communication with Pulse Bridge. Try reducing the distance between the devices. If this does not work, restart both devices. If the problem persists, try resetting Pulse IR by following the procedure described under "4.3 Resetting the devices".
4 successive blinks every 10 seconds	No data from meter. Try adjusting the placement of the reading head over the optical port. If the problem persists, try resetting the device by following the procedure described under "4.3 Resetting the devices".
No lights	Replace battery.
▢ Pulse Bridge	
Red - purple blinking	Connection to Wi-Fi® network failed. It is possible that the Wi-Fi® signal is not strong enough. Try to improve the signal by moving Pulse Bridge closer to your internet router. If your Wi-Fi® settings have been changed recently, try resetting the device by following the procedure described under "4.3 Resetting the devices".
Red - yellow blinking	Pulse Bridge connected to Wi-Fi®, but not able to reach the Tibber server. Try to restart the device or your internet router. If the problem persists, reset the device by following the procedure described under "4.3 Resetting the devices".

4.3 Resetting the devices

To pair ▢ Pulse Bridge to your Wi-Fi® network again, unplug the device from your socket and plug it in again 2 times. After the first time you plug it back in, the LED will light up red, then white then yellow. Once you've plugged it in for the second time, the LED will light up red, then white, then green and is ready for pairing with ▢ Pulse IR.

To factory reset ▢ Pulse Bridge, unplug the device from your socket and plug it back in 5 times. The first time you plug it back in, the LED will light up red, then white, then yellow. After this, the LED will light up red, then white, then green every time you plug it back in. Let ▢ Pulse Bridge sit in the socket for five seconds between removals. Once you've plugged the ▢ Pulse Bridge in for the fifth time, the LED will light up red, then white, then purple and will factory reset and reboot. Once the device has a green light, it is ready for pairing with the app.

To reset the ▢ Pulse IR, pull one battery out and reattach it 5 times. For each insertion, wait until you see a white light, then remove the battery again. After the fifth insertion, the LED will light up and stay white, and you are ready to pair the device again.

If you have trouble pairing the device or are experiencing issues with the product even after following the steps above, please see our troubleshooting guide at https://pulse.tibber.com/pulse_ir_bridge_troubleshoot. If you still have problems, reach out to our support channels through the app or via email to hello@tibber.com

4.4 Maintenance

The product should be handled with care and maintained properly in order to last. Please clean the parts with a dry tissue only and don't use any dissolvents.

* Expected battery life using Li-FeS2 batteries is 2 years. Energy consumption depends on the meter type and data update frequency.

** Alkaline batteries will give a significant reduction in battery life.

*** LED is blinking when data is sent from the Pulse IR to the Tibber server. Blink frequency depends on the data update interval.

5. Safety instructions

This is an electrical device and should be kept out of reach for children and persons with limited perception.

⚠ WARNING When accessing the fuse or meter cabinet, make sure you first inspect the meter and its surroundings to ensure there are no hazards in the form of loose cables, exposed copper or other objects that shall cause an electrical shock. If you encounter any of these threats, abort our product's installation immediately and contact an electrician. Before use, inspect the device for any physical damage. If there is any physical damage to the device, stop the installation process immediately and contact support.

⚠ CAUTION Avoid placing the device in a very hot or humid environment. Failure to do so can reduce the lifetime of the device. Do not place the device outside in rain or snow. The device is NOT waterproof. Using the device outside of the specified temperature range (-20°C to 50°C) may cause it to malfunction. If the device is opened (except from the battery lid on ▢ Pulse IR), it will be damaged. If it is dropped, it will be damaged. Any other type of shock can also damage it. Store the device in a dry environment.

6. Disposal

6.1 Disposal of electronic components

This symbol on the product, the accessories or packaging indicates that this device may not be treated as unsorted municipal waste and should be collected separately! If you live within the EU or another European country that operates separate collection systems for electrical waste and electronic equipment, ensure the device's appropriate disposal at a collection recycling location. By disposing of the device properly, you help avoid possible environmental and public health hazards that shall otherwise be caused by improper treatment of waste equipment. The recycling of materials contributes to the conservation of natural resources.

6.2 Disposal of packaging waste

The packaging is made of environmentally friendly materials, which may be disposed of at your local recycling facilities. By properly disposing of the packaging and packaging waste, you help avoid possible environmental and public health hazards.

