

1 - OptoBTE_x 2 interface



Implicitly read the user manual, which contain all necessary information about appliance, including safety information.

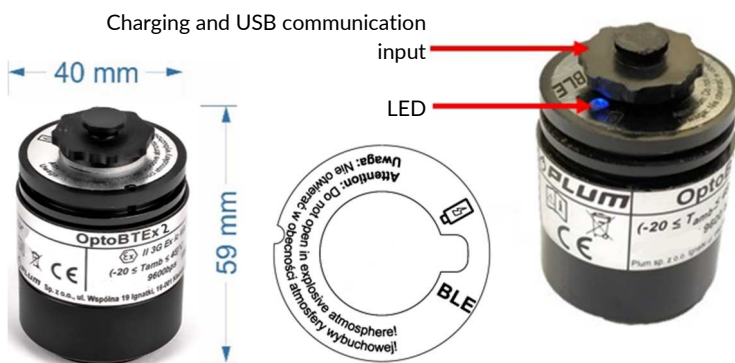
User manual along with information regarding safety and a template of EU conformity declaration is available on website <https://gas.plummac.com/en/> after logging into your Client Panel (link in QR code) under OptoBTE_x 2 section.



OptoBTE_x 2 interface enables wireless data read (with no influence to its content) from the devices with optical link in compliance with IEC 62056-21 (optical, physical layer), using wireless transmission Bluetooth BLE 5.2 (Bluetooth Low Energy).



Due to radio waves transmission do not use close to human body, keep minimum distance of 20cm.



- **ON** – device is automatically turned on by external application during BLE communication
- **OFF** – device is automatically turned of by external application after the end of BLE communication
- **CHARGING AND USB COMMUNICATION INPUT** – input behind the cover, to connect USB-C cable in order to charge the device or connect to the PC

2 - Technical data



IP54 protection level of the head housing is required to maintain explosion-proof properties.



Mechanical durability of the housing lowered to 4 J according to PN-EN 60079-0:2013. It must be considered during usage.



The housing is not resistant against UV radiation - do not expose the device to direct and long-term effect of UV radiation, e.g. sunlight or incoming from artificial light sources. It must be considered during usage.



Battery of device must be charged outside of potentially explosive atmosphere only.

Battery	Li-Po 3,7V/150mAh battery; constant operation <16h in 25°C, stand by mode up to 21 days
Charging	Through USB-C socket via standard mobile devices charger or via USB port in PC, cable length: up to 1,8 m. Voltage/charging current: 4,5÷5,5 V/100 mA, charging time: 2÷3h, charge only at temp. 0÷45°C.



To maintain explosion-proof characteristics of the device, for charging use the devices complying with technical requirements provided above, so that the charging process did not damage the device.



For longer lasting, battery charging is recommended every fortnight when idle. The battery has overdischarge and overcharge protection.

Bluetooth transmission	Type: BLE 5.2, Transmission baud rate via optical channel: 9600 b/s or 19200 b/s, 8N1, operation range up to 10 m.
USB transmission	USB-C socket under protection plug. Transmission baud rate via optical channel: 9600 or 19200 b/s, 8N1, cable length: up to 1,8 m. During using the USB connection charging functionality is active.
Optical transmission	IEC 62056-21, Transmission baud rate 9600 b/s or 19200 b/s, 8N1
Ex mark	II 3G Ex ic IIA T4 Gc The device can operate in explosion hazard zone 2
Housing protection level	IP54
Operation conditions	Mobile device. Open conditions excluding direct exposure to atmospheric precipitation and sunlight (under the roofing). It can operate under water vapor condensation conditions. Operation temp.: - 20°C ≤ Ta ≤ 45°C

3 - Operation

- **BLUETOOTH TRANSMISSION IDENTIFICATION**
(information is on device name plate):
BLE Device ID: OPTOBTEX2_XXXXXX
(where XXXXXX – last part of MAC address of BLE module)

- **ANDROID APPLICATION:**
 - Confit! converters
 - Confit! data loggers
 - Confit! SMART



<https://play.google.com/>, Plum APK

- **WINDOWS APPLICATION:**
 - Confit! (only USB connection supported)
<https://gas.plummac.com/en/products/confit/>

- Remove the plastic cover of optical communication channel by pulling on the line
- Place OptoBTE_x 2 head on device's optical interface, so that the LED diode was on the right side



- **Wireless BLE transmission**
 - Start mobile application and search device. Application automatically switch on the interface (blue LED start blinking). Bluetooth pairing of interface is not required.
 - Application on the smartphone will connect and read out the device automatically.

i If application is not able to turn on interface and find device, enable "Show Bluetooth devices scanner" in application settings, then during communication, choose your OptoBTE_x 2 interface by MAC address of BLE module.

i In wireless BLE connection mode it is possible to communicate with the target device via optical channel at baud rate of 9600 or 19200 b/s. Baud rate can be chosen in settings of mobile application.

- **USB PC transmission**
 - Unscrew the cover of USB-C port in OptoBTE_x
 - Connect proper cable to USB-C port in interface and to a free USB port in PC.
 - The interface should be recognized as *USB Serial Port* without installation of additional drivers.

USB Serial Port (COM3)

- Using dedicated software, connect to a target device, select proper COM port assigned in Windows.

i USB connection baud rate via optical channel is 9600 or 19200 b/s.

LED	Red	Orange	Blue
 Continuous light	 Battery charge	---	---
 Blinking	 Malfunction	 Low battery level	 Waiting for BLE connection
 Fast blinking	---	---	 Bluetooth transmission pending
 Light off	 No charge / Charging completed	 Optimum charge	 Interface off / USB connected

! The interface is an explosion-proof device and can be used in explosion hazard zone 2. Dummy plug along with gasket of charging input (provided with the device) must be tightly tightened ensuring IP54 protection level. It is unacceptable to use the device with damaged gasket or plugs other than provided by manufacturer. It is required to check the device before using in the zone.