

emoswitch-BT

Bluetooth® Footswitch

Product data sheet
Instructions



1 FEATURES AND BENEFITS

- Connection via Bluetooth®
- IP67
- IEC 60601-1- compliant
- UL Recognized Component
- RoHS- compliant
- 100% testing - every emoswitch is tested before shipping
- Housing made of natural anodized aluminum, pedals made of steel
- Made in Germany

2 GENERAL DESCRIPTION

EMO Systems GmbH stands for innovative foot switch solutions of the highest quality. With the **emoswitch**, we offer both proven standard versions and customized, customer-specific variants. The **emoswitch-BT** is available with two pedals and connects via Bluetooth®.

Designed for professional use, all **emoswitch** foot switches meet the highest standards of safety, ergonomics, and design. Their robust, waterproof, and exceptionally flat construction ensures maximum ease of use and a long service life – even under demanding conditions. The materials used are resistant to common disinfectants and cleaning agents, making them ideal for everyday medical use.

In combination with medical devices, the **emoswitch** ensures reliable operation in the patient environment. Each **emoswitch** meets the design requirements of the IEC 60601-1 standard.

In addition, the UL certification underlines its international usability: The **emoswitch** is therefore also approved for the Canadian and US markets.

3 APPLICATIONS

The **emoswitch-BT** uses a Bluetooth® HID connection and is recognized by the end device as a keyboard input device.

4 VARIANT OVERVIEW

The **emoswitch-double-BT** is available from stock.

The **emoswitch-double-BT Guarded**, **emoswitch-single-BT**, and **emoswitch-single-BT Guarded** variants are available upon request.

There are several options available to customize the base model to your needs.

The housing is milled from high-quality aluminum. The standard finish is natural anodized. Color anodizing is also available as an option.

The base and pedals are made of stainless steel and can also be finished with various surface treatments.

The switching functions can be identified by laser markings, stickers, or engravings on the housing and pedals, or by a color code.

5 DRAWINGS

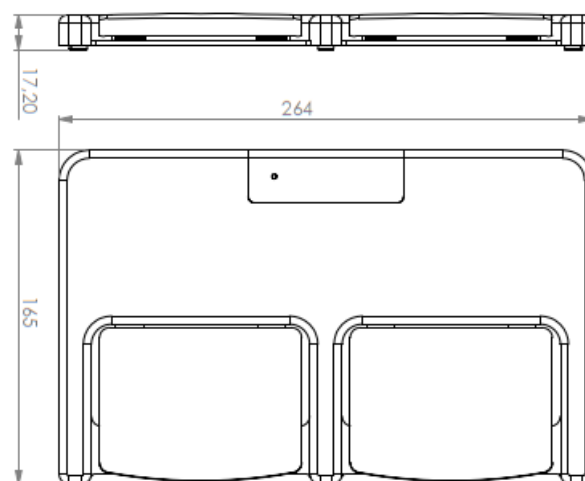


Fig. 1 Dimensional drawing of emoswitch-BT. All dimensions in millimeters.

6 COMMISSIONING

To use the **emoswitch-BT**, a Bluetooth® Low Energy-enabled computer is required.

Once paired, it can be used immediately. Place the foot switch within a 10-meter radius of the receiver at the desired location.

6.1 INITIAL COUPLING

Preparation

- Open the Bluetooth® settings on your computer
- Make sure Bluetooth® is enabled

Enable pairing mode

- Turn on the emoswitch-BT by pressing any pedal
- The LED will blink slowly

Select device

- The emoswitch-BT will appear as “EMO BLE FS” in the Bluetooth® settings and will be visible for approximately 30 seconds
- Select “EMO BLE FS” to establish the connection

Note: If the connection is not established immediately, select “EMO BLE FS” again.

6.2 RECOUPLING

Preparation

- Open the Bluetooth® settings on your computer
- Make sure Bluetooth® is enabled

Activate pairing mode

- Press and hold the left pedal for approximately 20 seconds
- The LED will start flashing faster
- Within 30 seconds, briefly press the left pedal twice
- The LED will now flash more slowly; pairing mode has been successfully activated

Select device

- The emoswitch-BT will appear as “EMO BLE FS” in the Bluetooth® settings and will be visible for approximately 30 seconds
- Select “EMO BLE FS” to establish the connection

Note: If the connection is not established immediately, select “EMO BLE FS” again.

7 SAFETY INSTRUCTIONS

- The emoswitch-BT is not suitable for triggering safety-relevant control commands (e.g., for winches, laser systems, etc.).
- Improper battery replacement can cause an explosion.

8 HOW IT WORKS

Communication with the receiver is encrypted according to the BLE HID standard, ensuring the highest connection quality.

The key combination triggered by the **emoswitch-BT** can be changed if needed. A free tool is available in the [download area of our website](#)*.

Power is supplied by two 3 V lithium batteries. The **emoswitch-BT** sends a short signal to the receiver only when a pedal is pressed. Therefore, depending on the application, a battery life of typically five years can be expected.

Should a battery replacement become necessary, this will be carried out by EMO Systems GmbH or one of its authorized partners.

* Link to manual entry: <https://emosystems.de/en/downloads/>

9 SPECIFICATIONS

Technical data:

Standard communication protocol	Bluetooth® Low Energy 5.1
Frequency band	2,402 - 2,480 GHz
FCC ID	R7T1101102
IC ID	5136A-1101102
International approvals	Radio Regulation Certification for United States (FCC), Canada (IC) and Europe (ETSI)
Reach	approx. 10 m*
Power supply	Two internal 3 V Lithium batteries
Type	CR2450, 620 mAh
Life	Typically, 5 years per use case
RX-sensitivity e.r.p.	-90 dBm
TX-performance	4 dBm
Protection class	IP67
Weight	1475 g

*The range of the radio link can vary greatly depending on environmental conditions. Other radio transmissions can interfere with and disrupt the transmission. Obstacles such as metallic objects can attenuate or deflect the signals.

Classification:

Manufacturer	EMO Systems GmbH
Company headquarters	Berlin, Germany
Product name	emoswitch-BT
Item number	A10120
Operating conditions	
Temperature	-20°C to 60°C (typical 25°C)
Humidity	5% to 90% (non-condensing)
Air pressure	700 hPa to 1013 hPa
Storage and transportation	
Temperature	-20°C to 60°C (typical 25°C)
Humidity	5% to 75% (non-condensing)
Air pressure	700 hPa to 1013 hPa

10 SIGNIFICANCE OF THE LED

Behavior of the LED	Length of time	Meaning
Flashes 3 times slowly After pedal pressure	6 seconds	The foot switch is paired but cannot establish a connection to its pairing device and subsequently enters deep sleep mode.
Slow blinking	Longer than 6 seconds	If the foot switch is already paired and cannot establish a connection to its pairing device. This behavior can occur, for example, when the pedal is intentionally pressed to activate pairing mode.
Slow blinking	30 seconds	The foot switch is in pairing mode.
Fast blinking	30 seconds	The left pedal was pressed for 20 seconds, and the foot switch can be put into search mode by double-clicking.
Permanent glow	3 seconds	The foot switch was successfully connected.

Notes:

- When the **emoswitch-BT** is connected, the pedal will not flash when pressed.
- To test if the battery has sufficient charge, hold the left pedal down for 20 seconds. If the pedal does not flash after 20 seconds, the battery is empty.

11 MAINTENANCE

The **emoswitch-BT** is maintenance-free when used as intended.

12 PRODUCT IDENTIFICATIONS

	This mark confirms the product's conformity with all applicable EU directives.
	The UKCA mark is a conformity mark that indicates compliance with the applicable requirements for products sold in Great Britain.
	Identifies the product as UL „Recognized Component“; File No. E362969.
	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. Changes or modifications not expressly approved by the entity responsible for compliance could void the user's authority to operate this device.
	Read the operating instructions and this data sheet before commissioning.
	This product must not be disposed of with household waste.
	This product contains no lead-based substances and was manufactured with lead-free solder.
	This product complies with the requirements of the current EU directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

13 ACCESSORIES

There are currently no accessories available for the **emoswitch** footswitches.

14 QUALITY

EMO Systems GmbH maintains a certified quality management system for development and manufacturing according to ISO 9001 and ISO 13485. Every **emoswitch** undergoes a comprehensive quality check before delivery.

15 PACKAGING

Package contents:

- 1 **emoswitch-double-BT** foot switch or another variant as per order.

16 ENVIRONMENTAL PROTECTION NOTICE

This device contains electronic components.

- It must be returned to the manufacturer for disposal after use.
- It must not be disposed of with household waste.

17 CONTACT AND SUPPORT

You can find the current contact details on our website.: <https://emosystems.de/en/downloads/>

Or you can reach us by email at the following address: support@emosystems.de

18 LEGAL NOTICES

The information on this data sheet has been compiled to the best of our knowledge and with the utmost care. Nevertheless, we cannot guarantee that it is completely error-free.

The user is responsible and liable for the proper use of this product; we assume no liability. We reserve the right to make changes to this data sheet without prior notice.