

## » Bluetooth radio switches

Universal Wireless Switch Insert

**thermokon**<sup>®</sup>  
HOME OF SENSOR TECHNOLOGY

### Datasheet

Subject to technical alteration  
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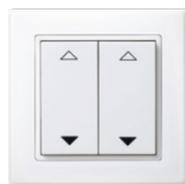
JUNG



BERKER



BUSCH-JAEGER



MERTEN



GIRA



PEHA



THERMOKON



### » APPLICATION

Battery-less Bluetooth® switch for controlling 2.4 GHz lighting systems. The devices are for switching and dimming lights and calling scenes. The wireless technology allows for flexible attachment using adhesive pads or screws to glass and plaster.

### » SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

### » NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

## » TECHNICAL DATA

Radio technology	2.4GHz / Bluetooth Low Energy
Frequency	2402..2480 MHz
Antenna	internal transmitting antennae
Radio channels	BLE channels 37, 38 und 39 (2402 MHz / 2426 MHz / 2480 MHz), Beacons
Transmission range	10 m inside buildings
Power supply	maintenance-free, electrodynamic energy generator
Ambient condition	-25..+65 °C, max. 85% rH non-condensing
Mounting	to be mounted flat onto the surface using adhesive foil (included) or screws
Notes	Configuration interface NFC Forum Type 2 Tag (ISO/IEC 14443 Part 2 and 3)

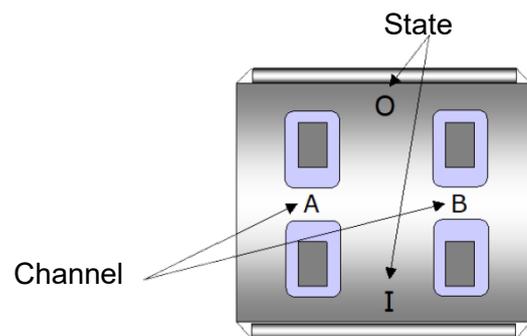
## » FUNCTION DESCRIPTION

Bluetooth® Wall switch are universal energy harvesting wireless switches for systems using the 2.4 GHz Bluetooth Low Energy (BLE) radio standard.

They are based on the maintenance free, self-powered Bluetooth pushbutton transmitter module PTM 215B. PTM 215B contains an electrodynamic energy transducer which is actuated by the rocker movement. Whenever a rocker is pushed down or released, electrical energy is created and a set of Bluetooth advertising frames is transmitted by the PTM 215B radio transmitter which identifies the rocker status (pushed or released).

The PTM 215B module has four buttons. They are grouped into two channels (channel A and channel B), each with two button contacts (state O and state I). The state of all four key contacts (pressed or not pressed) is transmitted together with the unique device identification (48-bit device ID). Press "Long" or "Short" rocker is evaluated by the receiver. This allows switching, dimming or blind control or slat adjustment. The radio telegrams are encrypted with AES-128.

The adjacent figure shows the arrangement of the four buttons.



## » COMMISSIONING

### NFC-based commissioning

The switch parameters are read by a suitable commissioning tool (e.g. NFC smartphone with suitable software) which is already part of the network into which the switch will be commissioned. The commissioning tool then communicates these parameters to the intended receiver of the switch.

### Camera-based commissioning

Each switch module contains an optically readable Data Matrix Code (DMC) which identifies its ID and its security key. This DMC can be read by a suitable commissioning tool (e.g. smartphone) which is already part of the network into which the switch will be commissioned. The commissioning tool then communicates these parameters to the intended receiver of the switch.