

Energy Harvesting Bluetooth® Low Energy Pushbutton Module



Intelligent lighting systems are key drivers for the rapidly growing global smart home sector. These not only have to be energy-efficient, sustainable, and inexpensive, but also connected for an increased flexibility. ZF supports the transformation in the smart home sector with its first wireless and battery-free demo version of BLE5.0 light switch module.

The technological principle:

The ZF pushbutton module is a self-powered, wireless and battery-free pushbutton module for building automation (e.g. for controlling lights or blinds). The ZF radio switch converts the kinematic energy by mechanical actuation of one of the two rockers into a voltage pulse by means of induction. This voltage pulse is enough to reliably transmit RF commands via BLE5.0 protocol. The switch contains four contact points for up to six different functions which can be programmed individually e.g. for On/Off but also dimming.

Pushbutton module - Features

- Flexibility in application design and easy to install – no cables necessary
- Long lifetime (100,000 switching cycles) and no batteries – no maintenance necessary
- Suitable for all Energy Harvesting switch series
- Can be used in Bluetooth mesh networks



Technical Data

Series	Pushbutton module
Dimensions	40 x 40 x 11.2 mm
Frequency band	2.4 GHz
RF distance	up to 10 m (in buildings at 0dBm)
RF protocol	Bluetooth Low Energy 5.0
Power Supply	Self-powered
Pairing	NFC on request
Device Identification	Individual 48 bit MAC address
Data packages	ca. 10 telegrams per push and release
RF channels	<i>BLE Kanäle 37, 38, 39, BLE Mesh on request</i>
Security	<i>AES128</i>