Energy Harvesting Bluetooth® Low Energy Switch Module



The ZF switch 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 kinetic energy by mechanical actuation of the rocker on the module into a voltage pulse by means of induction. This voltage pulse is enough to reliably transmit telegrams via Bluetooth® Low Energy protocol. The switch contains four contact points for up to six different functions (two rockers) e.g. for On/Off and alternatively, dimming.

Switch module – Features

- Flexibility in application design and easy to install no cables necessary
- Batteryfree = Maintenance-free
- Long lifetime (100,000 switching cycles at room temperature)
- Suitable for a wide range of 55 x 55 / 45 x 45 design parts
- Compatible to Bluetooth® mesh systems (e.g. Silvair)







Technical data

Series	Bluetooth® Low Energy Switch Module
Dimensions	40 x 40 x 11.2 mm
Frequency band	2.4 GHz
RF distance	Up to 10m in buildings
RF protocol	Bluetooth [®] Low Energy Advertising
Power supply	Energy harvesting (Generator designed for 1 million switching cycles)
Actuation force	Typ. 11N
Device identification	Factory preset individual 48 Bit Bluetooth® MAC address
Data packages	Typ. 10 telegrams per push and release
RF channels	BLE Advertising channels 37, 38, 39
Security	Factory preset individual AES128 - key
Configuration	QR-Code (camera-based commissioning), optional NFC
Compatibility	Silvair Wireless Lighting Ecosystem (Bluetooth Mesh)
Operating temperature	-20°C up to +65°C
Radio Certifications	Europe (RED), USA (FCC), Japan (ARIB)

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