

Flexibility, Low Cost and Energy Efficiency for the Smart Building –



The ZF Energy Harvesting Pushbutton Makes it Happen

Intelligent lighting systems are key drivers for the rapidly growing global smart building sector. These not only have to be energy-efficient, sustainable, and inexpensive, but also connected for an increased flexibility. The ZF wireless and battery-free Pushbutton makes significant progress to fulfill these objectives.

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 kinetic 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 commercially available radio protocols such as KNX, EnOcean3.0 or BLE5.0. The switch contains four contact points for up to six different functions which can be programmed individually e.g. for On/Off, or dimming.

The advantages:

- Flexibility in application design – no cables necessary
- Long lifetime (100,000 switching cycles) and no batteries – no maintenance necessary
- Suitable for all Energy Harvesting switch series
- Compatible with commercially available standard protocols (EnOcean3.0, BLE5.0, ZigBee)

Application example: KNX Lighting Control at Beijing Airport

The wireless and battery-free light switch module from ZF is uniquely available for the KNX-RF wireless standard without an additional gateway. The reasons for using these innovative ZF light switch modules are varied, but simple. Based on RF and completely free of batteries and cables, the modules can be integrated into a KNX network. After short training, lights can be controlled via the ZF light switch in the same way as traditionally wired light switches. KNX-RF commands transmitted by the switches can be easily transformed into KNX-TP by means of a media coupler. As a wireless solution, however, the ZF light switch offers great flexibility and the option of redesigning the room division in the airport according to individual requirements. This avoids not only maintenance work in the future but also time-consuming measures for battery replacement and disposal.

ZF Wireless Pushbutton Module



ZF Forum - using ZF wireless pushbutton module with EnOcean protocol



Beijing Airport - using ZF wireless pushbutton module with KNX protocol

