

ZigBee® Green Power Generic Switch Pushbutton Module PTM 216Z

PTM 216Z enables the realization of energy harvesting wireless switches communicating using the Generic Switch model of the ZigBee Green Power standard.

PTM 216Z is mechanically compatible with the established PTM 21x form factor which allows quick integration into a wide range of designs.

Key applications are wall-mounted or portable switches either with up to two rockers or up to four push buttons.

PTM 216Z contains an electro-dynamic energy transducer actuated by a bow which can be pushed from outside the module on the left or right by an appropriate pushbutton or switch rocker.

When the energy bow is pushed down or released, electrical energy is created and a set ZigBee Green Power frames is transmitted.

These frames transmit the operating status of all four contact nipples at the moment when the energy bow was pushed down or released.



PTM 216Z pushbutton transmitter modules are self-powered (no batteries) and fully maintenance-free. They can therefore be used in all environments including locations that are difficult to reach or within hermetically sealed housings.

PTM 216Z radio telegrams are protected with AES-128 (CBC) security based on a device-unique private key.

PTM 216Z product revision DB adds support for NFC configuration of device parameters.

TYPE
PTM 216Z

ORDERING CODE
S3271-A216

Features overview

Antenna	Integrated PCB antenna
Radio Standard	2.4 GHz Zigbee Green Power / IEEE 802.15.4
Radio Channel	IEEE 802.15.4 Channels 11 ... 26
Radio Channel Selection	User-selectable (Commissioning)
Radio Transmission Power (typ)	+4 dBm
Device Identification	Individual 32-bit Device ID (factory programmed)
Security	AES128 (CBC) authentication with Sequence Counter
Transmission Range	typ. 175 m outdoor line of sight / 20 m indoor
Power Supply	Integrated Kinetic Energy Harvester
Energy Bow Travel / Force	1.8 mm / typ. 10 N (at room temperature)
Button Inputs	Up to four buttons or two rockers
Number of operations at 25°C	typ. 100.000 (tested according to EN 60669 / VDE 0632)
Module Dimensions	40.0 x 40.0 x 11.2 mm
Operating Temperature	-25°C ... 65°C
Radio Certifications	RED (Europe)