

## 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

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