

PTM 535BZ

Transmitter module for BLE and Zigbee

PTM 535BZ enables in conjunction with the EnOcean ECO 200 harvester the realization of energy harvesting wireless switches communicating based on the BLE or the Zigbee Green Power standard.

Key applications are button switches and position contacts for Bluetooth or Zigbee systems powered by kinetic energy.

PTM 535BZ is a fully self-contained transmitter integrating a Bluetooth and Zigbee radio together with an on-board antenna and all power management functionality required for self-supplied operation in conjunction with the ECO 200 harvester.

PTM 535BZ integrates an NFC configuration interface (including NFC antenna) used to control which allows selecting between Zigbee and Bluetooth radio protocol defining all operation parameters. The NFC interface also enables quick commissioning using the NFC functionality of smartphones or dedicated NFC readers.



PTM 535BZ provides direct mechanical connection to the ECO 200 harvester by means of 2 contact pads on the PCB. Additionally, PTM 535BZ provides a 5-pin solderable interface for the connection of the ECO 200 harvester together with 2 additional input signals.

PTM 535BZ contains an LRN button that can be used for simple commissioning tasks.

Order Information

Type	Frequency	Order Code
PTM 535BZ	2.4 GHz BLE and Zigbee	S3231-A535

Features overview

Radio Standards	Default: 2.4 GHz Bluetooth Low Energy (Advertising Mode) Selectable via NFC: 2.4 GHz Zigbee Green Power (Generic Switch)
BLE Radio Channels	Default: BLE Channel 37, 38 and 39 (Advertising Channels) Selectable via NFC: BLE Channel 1 ... 79 (selectable via NFC)
Zigbee Radio Channels	Default: Zigbee Channel 11 Selectable via LRN button: Zigbee Channel 11, 15, 20 and 25 Selectable via NFC: Zigbee Channel 11 ... 26
Data Encoding	BLE: EnOcean BLE Sensor Protocol (same as PTM 215B) Zigbee: Green Power Generic Switch Model (same as PTM 216Z)
Security	AES128 (CBC) authentication with sequence counter
Transmission Power	+4 dBm
Transmission Range (typ.)	30 m line of sight / 10 m indoor environment
Antenna	Integrated antenna
Power Supply	Kinetic harvester (ECO 200)
Configuration Interface	NFC (integrated antenna)
User Interface	Learn button
Operating Conditions	-25°C ... +65°C / 0 ... 90 % r.h. Indoor use in dry rooms only
Dimensions	26.2 mm x 21.15 mm (same as PTM 535)