

Pushbutton Transmitter Module

PTM 210 / PTM 210U

PTM 210J / PTM 215

The radio transmitter module from EnOcean enables the implementation of wireless remote controls without batteries. Power is provided by a built-in electro-dynamic power generator.

Key applications are wall-mounted flat rocker switches with 1 or 2 rockers (with medial position), as well as handheld remote controls with up to 4 single pushbuttons

Functional Principle

A common electro-dynamic energy transducer is 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, electrical energy is created and a RF telegram is transmitted including a 32-bit module ID. Releasing the energy bow generates different telegram data, so every PTM telegram contains the information that the bow was pressed or released. In addition, the radio telegram transmits the operating status of 4 contact nipples when activating the bow. This enables the identification of up to 2 appropriate switch rockers or up to 4 single pushbuttons.



„Long“ or „Short“ pushbutton operation (the time between pushing and releasing the push button) can be easily detected by the receiver. By doing that, applications such as dimming control or jalousie control including slat action are simple to implement.

PTM 215 contains additional encryption mode. Telegrams are encrypted via a combination of rolling code and AES128 algorithm.

Type

PTM 210
PTM 210U
PTM 210J
PTM 215

Ordering Code

S3001-A210 (868 MHz)
S3051-A210 (902 MHz)
S3061-A210 (928 MHz)
S3001-A215 (868 MHz)

Features overview

Power supply	power generation by rocker operating Electro-dynamic Power Generator
Antenna	integrated PCB antenna
Frequency	868.300 MHz / 902.875 MHz / 928.35 MHz
Data rate	125 kbps
Channels	2 with 4 action states each (upper/lower pushbutton is pressed/released)
EnOcean Equipment Profile supported	EEP F6-02-xx, F6-04-xx (PTM 210/215 normal mode) rolling code with AES128 (PTM 215 secure mode)
Transmission range	300 m free field (PTM 210J):
Energy bow travel/Operating force	1.8 mm / typ. 8 N (at room temperature)
Number of operations at 25°C	typ. 100.000 actuations tested according to EN 60669 / VDE 0632
Module dimensions (inclusive rotation axis and energy bow)	40.0 x 40.0 x 11.2 mm
Operating temperature	- 25 up to + 65 °C

Radio signals are event controlled (pushbutton is pressed / is released) with button code and unique module identification (fix 32 bit ID).