

PicoDot – EnOcean® Proximity switch



Short description

The PicoDot is a wireless, flexible and mobile proximity switch, that enables contactless control (switching and dimming) of lighting, switchable plug sockets and relays and much more.

The clever mobile wireless switch optically detects motion via infrared and communicates over the EnOcean® wireless standard with other EnOcean® compatible products which can be easily and quickly taught in and integrated into gateways, even in KNX, DALI and other building systems.



Description

- **Plug-n-Play** – fast, wire free installation, connected in seconds
- **Contactless switching** – Hands-Free, hygienic...
- **Extremely low energy consumption** – environmentally friendly, maintenance free
- **Extraneous light independent, robust, mobile, compatible** – broad application field

Through a simple “wave “ or „approach” of the hand inside an area of around 5cm distance, the PicoDot can control all possible EnOcean® compatible actuators and their connected devices and consumers.

Connect the EnOcean® products within seconds with each other and place the clever and mobile wireless switches anywhere you like. Now for example, you can control your standard lamps with an EnOcean® compatible switchable plug socket from anywhere inside the wireless range of around 30meters, turning them on and off and dim them remotely.

There are countless actuators in a variety of forms (e.g. wall enclosure mounting) that can be connected and “waved”. A few examples, and information to the integration possibilities of the PicoDot in alternative “non-EnOcean®” systems can be found in the sub-menu “Compatibility”.

Energy saving

The PicoDot was especially developed to have an extremely low energy consumption. The calculated life expectancy of the battery with a normal switching cycle of a typical light switch is approximately 70 years. That batteries today have approximately a 20-25 years physical life expectancy, means that the PicoDot will provide a maintenance free service for this duration.

A battery life expectancy to switching cycles comparison table can be found under the sub-menu “Technical Data “.

Extraneous light independence

The PicoDot that recognises a “wave” or “approach” of the hand, can also be operated in full sunlight, because the clever technology can regulate light up to 150,000Lux, which equates to 1.5 times direct sunlight.

Self-calibrating

The optical system is self-calibrating. Once the PicoDot is positioned, surrounding stationary objects will be automatically calibrated out inside 10 seconds, the PicoDot can then be used as normal. Dust and other infrared light invisible “layers” are also calibrated out.

WEEE-Nr.: DE48986370

Application

Areas of application

The PicoDot can be utilized in many application areas. Currently the PicoDot is being implemented in the following areas, amongst others:

- Private houses & apartments
- Care Homes
- Old peoples homes
- Office buildings
- Hotels
- Kitchens & Restaurants
- Areas with high hygiene standards
- Buildings under conservation protection

Areas of applications

The mains adaptor is intended for indoor use only. However, according to the operation instructions, you can use it anywhere where you want to upgrade a mains socket to a multifunctional switch socket. Information on consumer loads can be found in the “Technical Data” sub-menu, amongst other things.

The combination of the PicoDot with the mains adaptor is already used in various installations as:

- Light switch
- Mains shut off switch
- Presence detector
- ...

The PicoDot together with the mains adaptor and other products from the PicoControls family are particularly suitable for retrofits, renovations and in listed buildings.

Compatibility

EnOcean®-Aktoren

Below is a list of examples of EnOcean® actuators that can be used with the PicoDot to switch different consumers and devices.

A list of all EnOcean® actuators that we have tested, including instructions for setting the function modes for learning the PicoDot, can be found at picosens.de/EnOcean.

Manufacturer	Article	Description	Type
Eltako	FSB61NP-230 V	Control for roller shutters, internal and external blinds	Flush wall
Eltako	FSR61/8-24 V UC	Impulse, relay switch (potential free)	Flush wall
Eltako	FSR61-230 V	Impulse, relay switch (potential free)	Flush wall
Eltako	FSR61NP-230 V	Impulse, relay switch	Flush wall
Eltako	FUA12-230 V	Universal wireless actuator	DIN Rail
Eltako	FUD61NPN-230 V	Universal dimmer switch	Flush wall
Flextron	300816-230 V	Multi receiver, 1 channel	Flush wall
Jäger Direkt	563.010	1 channel bridge for lighting control	Switch
Peha	D 451 FU-EBI O.T.	1 channel receiver	Flush wall
Peha	D 4511 FU-EBIM ST	Mains socket adaptor	Mains Socket
Thermokon	STC-DO Blind 230 V	Receiver for shutters and blinds	Flush wall
Thermokon	STC-DO Light 230 V	2 channel receiver	Flush wall
Trio2sys	10020068	1 channel receiver 16A	DIN Rail
Trio2sys	10020069	1 channel receiver 10A	Din Rail
Trio2sys	10020071	2 channel receiver 5A	Din Rail
Trio2sys	10020092	Receiver with remote control and timer	Din Rail

Integration into existing systems

The PicoDot can also be integrated into existing building control systems via so-called gateways.

There are various gateways that translate EnOcean® communication into home automation systems such as KNX, DALI, ... or other common bus systems such as USB. For the home automation area, EnOcean® over WLAN gateways are also interesting.

Technical Data

Reaction distance:	50 mm (Reference hand)
Detection area:	See graphic below
Detection feedback:	Optical feedback via blinking green LEDs
Measurement principle:	Infrared impulse reflection
	Wave length: 850 nm, Impulse cycles: 10 x per second
Extraneous light immunity*:	Up to 150.000 Lux (= 1.5 times sunlight)
	*Full function even in direct sunlight
Wireless communication:	EnOcean® Equipment Profile (EEP: F6-01-01)
Wireless frequency:	868,3 MHz
Wireless range:	Up to 30 m (dependent on local environment condition)
Max. Output power:	3 dBm
Power supply:	3V button cell battery (Type: CR2032)
Power consumption:	320 nA (in standby modus)
Battery life expectancy*:	100 switching cycles/day = 30 years
	1000 switching cycles/day = 10 years
	2000 switching cycles/day = 5 years
	*We recommend quality batteries from well-known manufacturers
Temperature range:	- 20 °C to + 85 °C
Protection class:	IP64
Dimensions:	50 mm x 18 mm (Ø x H)
Weight:	35 g (incl. battery)

Detection range

