

REVOLUTION IN CROSSWALK SECURITY

CROSSWALK INTERACTIVE SIGNALING

GUARANTEE OF AN ACCIDENT-FREE CROSSWALK

Patent pending No. PV 2014-943 and certified for roads.



EQUIPMENT FEATURES AND BENEFITS

Elimination of pedestrian accidents at a crosswalk

By following the instructions on the control panel collisions of pedestrians with a vehicle are avoided. A pedestrian must, according to the instructions, press and hold the button providing the information for vehicles that he intends to use the crosswalk and hold the button until the vehicle stops; consequently, he releases the button and crosses the road, while the information device through its uninterrupted lighting advises of a pedestrian at the crosswalk. If the pedestrian follows this rule an accident is avoided, because he only enters the road after vehicles have stopped. Until the vehicle stops the pedestrian holds down the button and thus cannot enter the roadway.

Participation of pedestrian while signalling

The information device encourages pedestrians to participate in signalling, thereby preventing thoughtless rushing into the road in front of moving vehicles, which is the cause of a large percentage of accidents. Additionally, instructions at the button on using the information device gives clear instructions not to enter into the road before vehicles have stopped, thereby alerting the pedestrian that his priority is not absolute.

Price affordability

Significantly lower purchase price compared with classic pedestrian lights.

Funding

Possibility of a grace period until obtaining a grant. In case of interest we can arrange long-term financing without any prepayment until after the project approval process the grant application is resolved. The municipality is thus able to make the crosswalk safe without having to expend funds immediately.

Flow of traffic

The vehicle stops or slows down only briefly to give way to the pedestrian and continues driving once the pedestrian moves out of the traffic lane in which the vehicle is travelling. In the case of traffic light use the vehicle must wait for the green light, regardless of the fact that the pedestrian has already left the traffic lane. This considerably slows down the operation and leads to an undesirable strings of cars, which among other things, also excessively pollutes the air.

Speed of installation,

No excavation works or cabling (counter-devices communicate wirelessly), no building permit is required.

Independence from external power supply

Possibility of solar power supply and charging.

OVERVIEW OF SIGNALLING PANELS



PANEL WITH SIGN

Execution of signalling panel with **PEDESTRIANS** warning sign that lights up when signalling and starts to blink when crossing the road



PANEL WITH SYMBOLS

The execution of the signalling panel that statically displays selected symbols, e.g. **Pedestrians**, which lights up when signalling and begins to move when crossing the road.



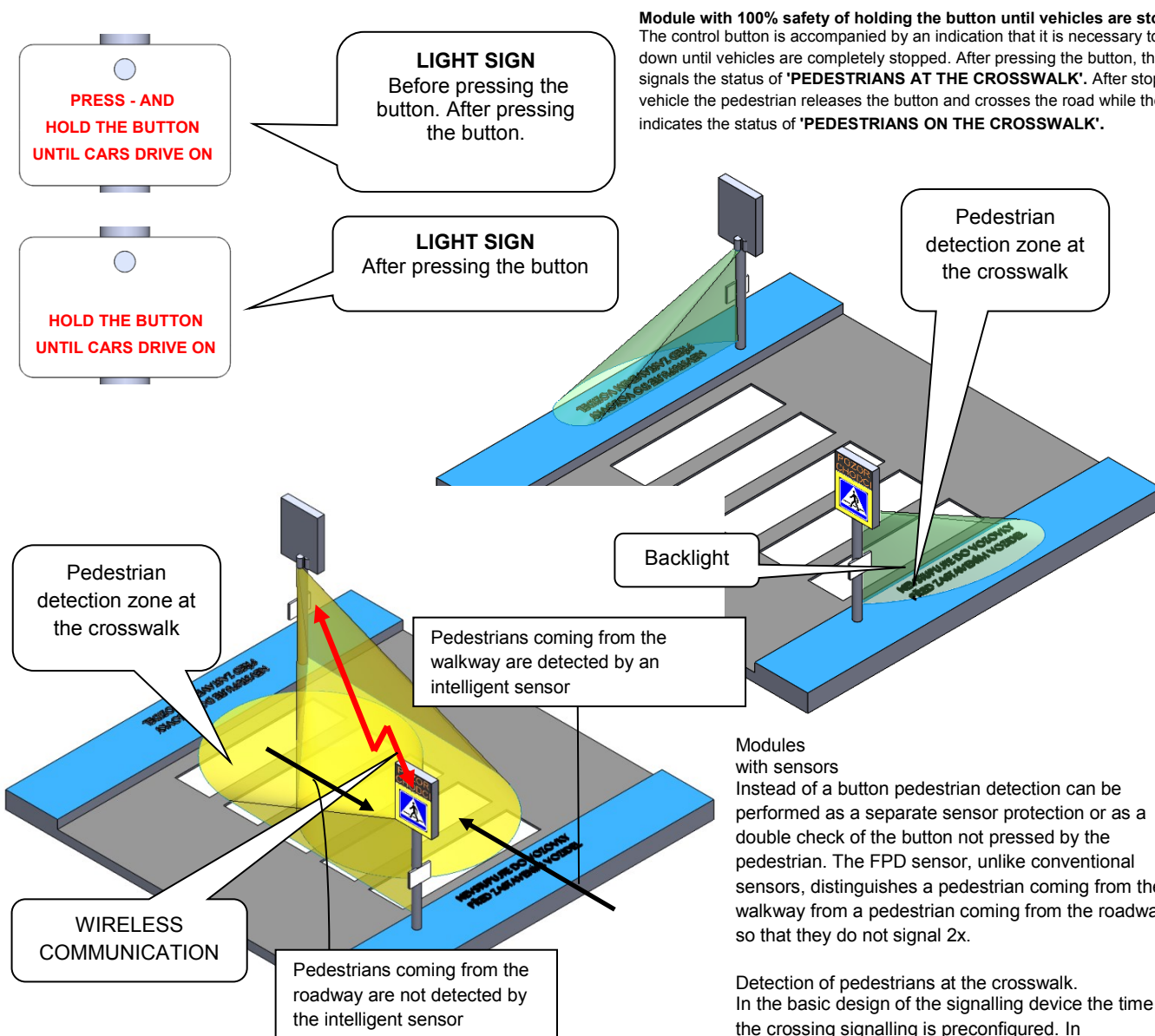
PANEL WITH LIGHTS

A simple version of the signalling panel with **warning lights**, which light up when the alarm starts blinking when crossing the

OVERVIEW OF ACTIVATION MODULE EXECUTION

Interactive modules with 100% guarantee of accident-free traffic (the pedestrian is involved in the process of road crossing). It is suitable for high traffic crosswalks where accident-free traffic is especially important such as at schools, offices, institutions, hospitals, busy crossings and so on.

All versions of signalling panels can be freely combined with individual activating modules according to specific requirements. Všechny verze signalizačních panelů lze libovolně kombinovat s jednotlivými aktivačními moduly, dle konkrétních požadavků.



Module with 100% safety of holding the button until vehicles are stopped

The control button is accompanied by an indication that it is necessary to hold it down until vehicles are completely stopped. After pressing the button, the device signals the status of '**PEDESTRIANS AT THE CROSSWALK**'. After stopping the vehicle the pedestrian releases the button and crosses the road while the device indicates the status of '**PEDESTRIANS ON THE CROSSWALK**'.

Modules with sensors

Instead of a button pedestrian detection can be performed as a separate sensor protection or as a double check of the button not pressed by the pedestrian. The FPD sensor, unlike conventional sensors, distinguishes a pedestrian coming from the walkway from a pedestrian coming from the roadway, so that they do not signal 2x.

Detection of pedestrians at the crosswalk.

In the basic design of the signalling device the time for the crossing signalling is preconfigured. In an alternative execution, the pedestrian is detected by the sensor after entering the crosswalk. The advantage is that the signalling is performed only while he is on the crosswalk and that a slow pedestrian has enough time for safe crossing.

Three-state signalling

Modules with button are equipped with three-state signalling.

First display status - no pedestrian activated by the button or by his presence (with device without button) the signalling equipment

Signalling panels do not signal

Second status – The pedestrian holds the button or the sensor detects pedestrians at the crosswalk

Signalling panels indicate a pedestrian at the crosswalk

Third status – The pedestrian releases the button or leaves the detection zone at the crosswalk and during a set time or throughout detecting by sensors on the crosswalk

signalling panels indicate a pedestrian at the crosswalk

Wireless communication

Both pairs of units at a given crosswalk can communicate wirelessly

Signalling device with radar

Radar increases crosswalk safety by informing the driver by a red light and flashing when he exceeds the prescribed speed limit in town, usually 50 km/h. At the same time when exceeding the speed limit the SLOWLY sign is displayed. When the signalling device is activated the PEDESTRIANS sign is optionally displayed. The radar can be placed before the crosswalk, thanks to which vehicles have a longer distance to slow down..

Recommendations for proper crossing:

- Attention – the pedestrian has no absolute priority and before entering the crosswalk must signal his intention to vehicles and wait for them to stop
- The device only signals throughout the period of the pressed button and warns the driver of the pedestrian's intention to cross the street whereas the traffic at the crosswalk is governed by the law of the road
- Where there is no signalling device signal with the hand until vehicles stop before entering the road!
- Upon crossing we also have to watch the other traffic lane, as the first vehicle gives way to us but the driver in the next lane may not notice the pedestrian. Therefore, it is necessary once again to indicate (preferably with the hand) one's intention to complete the crossing and wait until the other vehicle stops.

During signalling device activation the sign "PEDESTRIANS" is displayed

When exceeding the preset speed the sign SLOWLY is displayed

Instruction board

It is possible to place a sign on the signalling device warning that pedestrians do not have absolute priority at the the crosswalk, which is something many pedestrians do not realize or do not know, causing a substantial percentage of accidents at crosswalks. There is also a correct method of crossing there. This is used



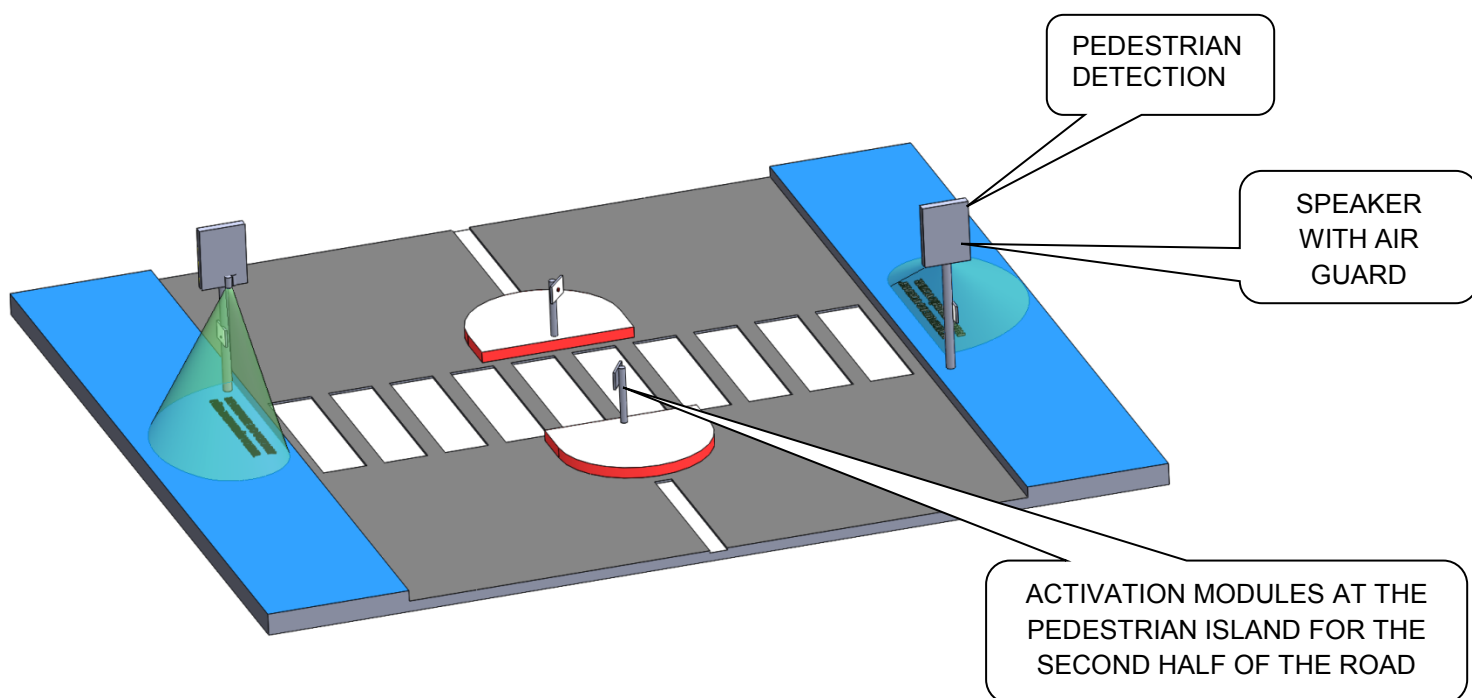
to train pedestrians for crossings that are not equipped with signalling devices. Additionally, on the sign there is a QR code to download to your mobile with a detailed description of preventing frequent causes of accidents, and listing the text of the law on crosswalks. Furthermore, there is a link to the FPD website with detailed instructions for crossing.

Pedestrian islands

Especially with four or more-lane roads the use of a pedestrian island significantly increases the safety of the crosswalk. FPD offers a range of affordable prefabricated, sets of islands that are installed instantly without excavation or construction works. You can choose a suitable signalling device to some of above types

Pedestrian detection in a space at the crosswalk with a sound guard or information board backlighting

During pedestrian detection it is possible to activate an alert tone or sound guard at the crossroads inviting pedestrians to the use of the signalling device just before entering the roadway, which reduces the amount of unexpected rushing into the roadway, and thus accidents. After activation the signalling sound guard guides the pedestrian through the safe use of the crosswalk, particularly drawing attention to waiting for vehicles stopping before entering the roadway. At the same time individual phases of safe crossing are backlit on the informational board.



How to educate pedestrians so that they do not suddenly enter the roadway?

1. Holding the button

During interactive signalling the driver presses and holds the push button till vehicles stop, i.e. he cannot rush into the road abruptly.

2. Lighting of a waiting pedestrian

SPOTLIGHT FLOODLIGHTING THE PEDESTRIAN WITH AN INTENSE CONE OF LIGHT alerting the driver of the presence of a pedestrian at the crosswalk. It is only activated along with the signal light in the opposite direction when the button is pressed. This motivates pedestrians to hold the button pressed until vehicles stop, thus preventing accidents.

3. Information for pedestrians that the signalling is activated

By placing the flashlight also in the opposite direction a pedestrian sees that the signalling is activated, which motivates them to use it.

4. The crosswalk lighting when activating a signalling device by a push button increases the intensity, encouraging pedestrians to use it.

