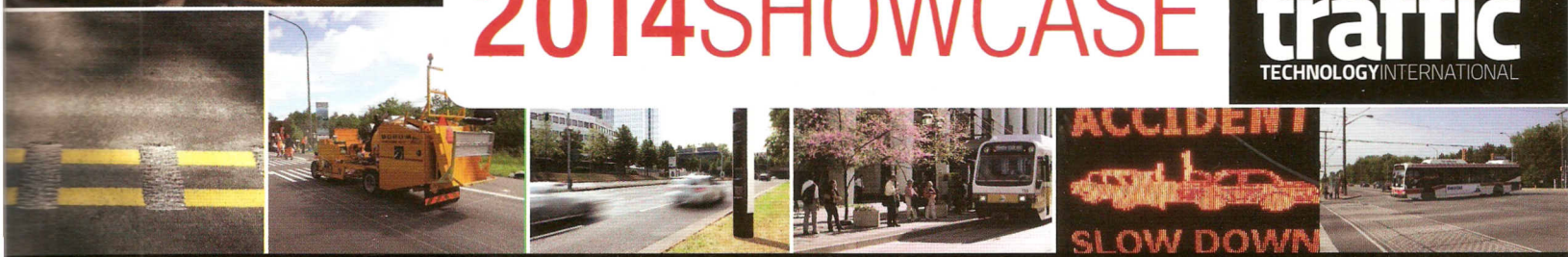


# intertraffic world



## 2014 SHOWCASE

From the publisher of  
**traffic**  
TECHNOLOGY INTERNATIONAL



INFRASTRUCTURE • TRAFFIC MANAGEMENT • SAFETY • PARKING

# A bright idea

Traffic accidents are often caused by drivers receiving a lack of key information in time. Modern signalling technology can greatly increase traffic safety at critical points within the road infrastructure

Words | **Jaroslav Látal, PDSystems, Czech Republic**

It is not only the electronic safety assistance systems installed in vehicles (mostly for an extra charge) that can improve road safety – traffic infrastructure itself can also help to ensure the active safety of its users. Active safety systems can also be implemented in traffic infrastructure.

Such systems make use of the light-giving abilities of the PDS-400 ground warning LED signals and sophisticated detection equipment that monitors the current situation at the place of installation. When installed, the equipment is designed to present its light signals right in the field-of-vision of a road user, in particular the driver of a moving vehicle.

## Communicate directly from the carriageway

There are a lot of advertising hoardings around traffic signage today and it is very easy for drivers to miss vertical traffic signs. The consequences can be tragic. However, traffic signs aside, it is a well-known fact that all road users pay the greatest attention to the road in front of them. So if we want to influence the behaviour of, in particular, vehicle drivers, it is necessary to communicate key information to them directly from the carriageway. The PDS-400 ground warning LED signals can be used to inform drivers of changes in traffic conditions.

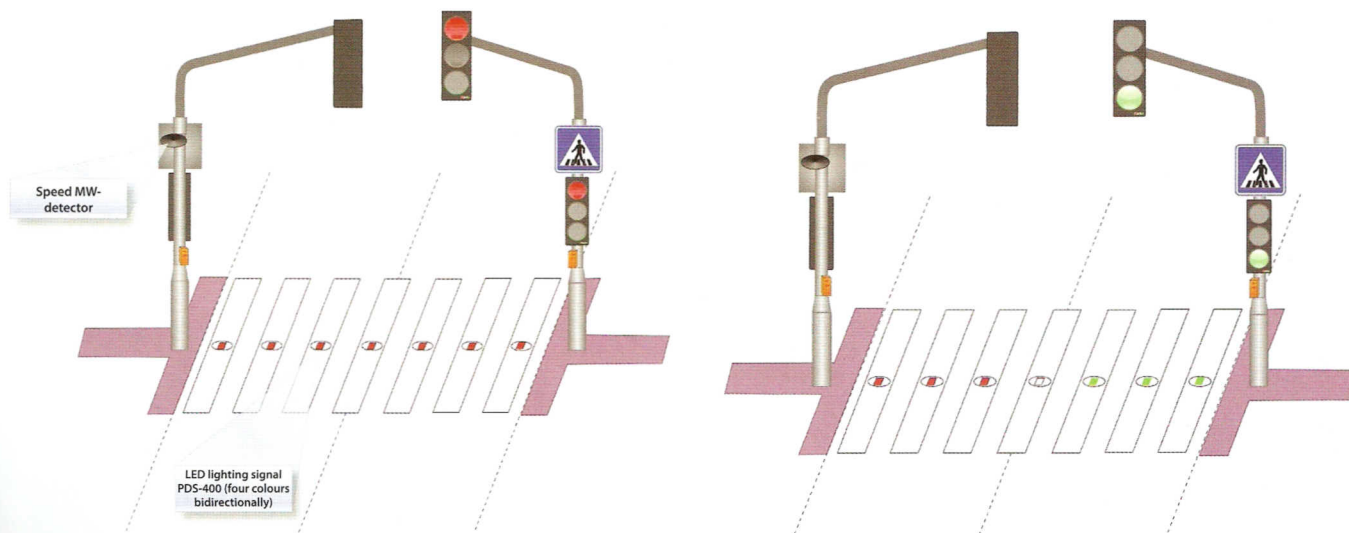
The PDS-400 signal is the basic building block of active safety systems implemented in traffic infrastructure. It is designed to meet the demanding needs of its application on roads. It has excellent visibility, even in harsh sunlight, but cannot dazzle a driver in reduced visibility or at night. This state is ensured by the dynamic brightness regulation functionality in accordance with surrounding illumination.

Another important property is high mechanical durability, which is necessary for problem-free operation over 5 to 10 years on dense traffic routes where there is a high share of lorry traffic. The units are self-cleaning and maintenance-free by design and can be driven over by snow ploughs in winter with no adverse effects. Also necessary is the ability to switch colours in one LED signal depending on the application and its regime. Because it is a basic part of a warning safety system, it is also necessary for the LED signals and control units to contain remote control and monitoring functions so that road operators can ensure they are functioning correctly.

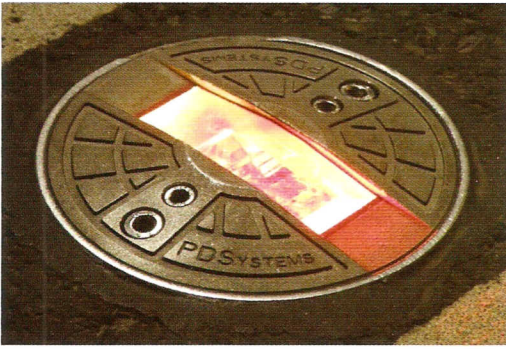
## Application of active safety systems

PDSystems has observed a rising number of applications for its in-road active safety systems. Locations where systems have been deployed include tunnels, crossroads, roundabouts, pedestrian crossings and level crossings.

The systems are used for a wide variety of applications. These range from the management of traffic at locations where



For traffic light applications, the LED signals can be switched from red (as shown on the left) to green (as shown on the right)



profile (for instance, garages, underground car parks and underpasses).

The company behind the product, PDSsystems, also believes there are further applications for its technology that have not even been thought of yet!

(Left) **Close-up of a PDS-400 unit**  
(Below) **A railway crossing equipped with the signals**

**A look ahead**

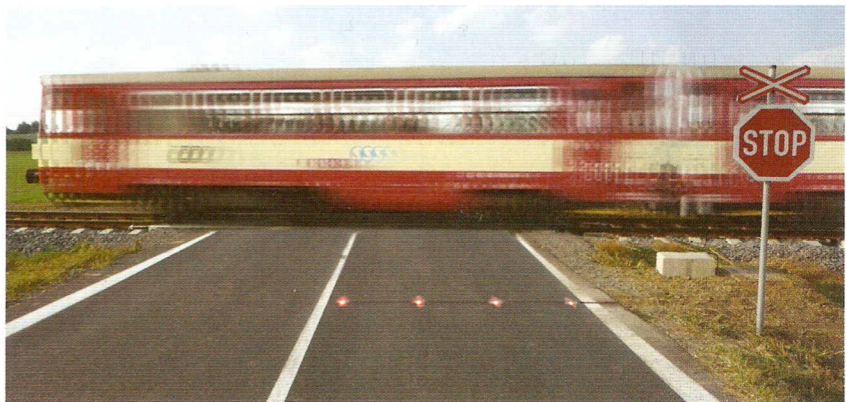
PDSsystems currently operates across the whole of the Czech Republic. It has more than 70 applications in place. In 2012, in partnership with a public research institute, the company installed a system of so-called 'safe crossings', which is now in the testing phase. In 2013, PDSsystems expanded its market reach and entered the worldwide market. Further successes on the international front are anticipated throughout 2014. ■

vehicles with right of way turn in, to warning drivers of a traffic jam ahead. Bridge operators are also embracing the technology as a means to deliver warnings – about ice on a bridge, for instance.

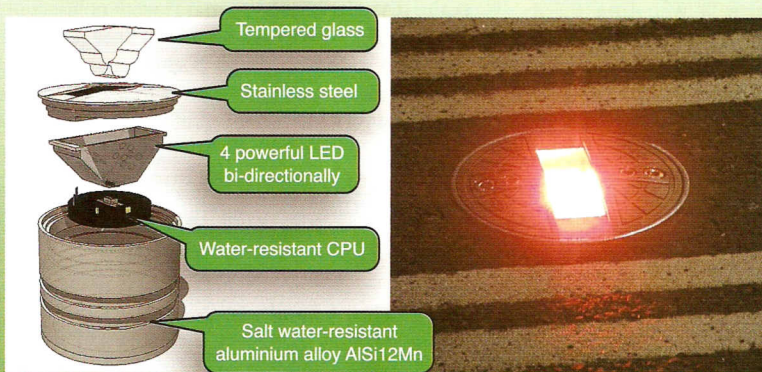
It is not only drivers who benefit from these solutions. For instance, cyclists can be better protected in two ways: first, by using the signals to warn cyclists of dangers at crossings, and second, by using the technology to protect cyclists by illuminating their dedicated cycle lanes.

As well as the more obvious applications for a signal-based solution – such as traffic lane management – the technology can also be used to warn drivers when they are exceeding the speed limit and to illuminate exits from gateways and garages.

PDS-400 signals can also be used for the management of traffic in spaces with a reduced



**LED Lighting Signal PDS-400**



- + Quality Czech made product
- + High resistance up to 96 tonnes
- + More than 100m water column
- + Low profile < 5mm
- + Up to four colors bi-directionally
- + Independent control of each power LED
- + Monitoring of functionality
- + High reliability and efficiency
- + Self-cleaning constructions
- + Easy to install and to service

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operates in different industrial sectors. It was the first European company to successfully build and test (in June 2004) a wood and steel H2-class bridge safety barrier. Nowadays, Margaritelli – with its Esterni Eterni division – is the leading company for high-quality wood safety barrier production.

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**Nedap (page 215)**

Nedap produces vehicle identification systems for the ultimate in fast and secure long-range identification in order to monitor and control vehicle- and driver-related activities. The ability to integrate various RFID technologies offers a high level of flexibility and user convenience. Nedap's systems are widely deployed around the world.

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**Neural Labs (page 105)**

Neural Labs offers precise, hardware-independent and easy to integrate ANPR engines in addition to all the advice and consultancy needed to succeed in building an ANPR system. The company's products are available for Windows and Linux and in different versions for stop-and-go or free-flow traffic scenarios.

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**Park Assist (page 201)**

Park Assist develops infrastructure technology with a focus on parking and transport. The company launched two products in 2010 that it considers to be the next generation of smart transport systems: on-street wireless sensors and a camera network for indoor car parks that can identify the exact location of any car in real-time.

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**PDS Systems (page 141)**

PDS Systems specialises in traffic safety solutions. The company's goal is to produce and deploy systems for traffic smoothing and increasing safety in a way that provides drivers and other participants in the road traffic sector key information in time. The company has been successfully operating across the whole of the Czech Republic for many years.

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**Pexco (page 7)**

Based in Atlanta, Georgia, USA – and with seven plants in the USA and Mexico – Pexco is a leader in the design and fabrication of extruded plastic products. Parent company Davidson Traffic Control has long been recognised as a leading manufacturer of high-quality traffic and highway safety products, which include the FG 300 high-impact resistant delineator posts, temporary pavement markers for chip seals and two versatile curb systems. Davidson also manufactures Types I & II, ADA-compliant barricades, guardrail delineators, barrier markers, snow poles, pedestrian safety signs and more.

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**Q-Free (page 3)**

Q-Free is the leading global supplier of products and solutions within ITS (Intelligent Transport Systems) for road user charging and advanced transportation management. Q-Free offers a complete range of products, solutions and professional services based on the most advanced and cost effective technologies.

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**Quercus Technologies (page 150)**

Quercus Technologies manufactures leading-edge and reliable detection systems for traffic and parking. Quercus has built on its lengthy experience in artificial vision to create a range of smart detection devices that include: all-in-one numberplate recognition units and digital video recording systems, non-intrusive vehicle presence detection and data collection sensors, and non-intrusive, all-in-one red light enforcement cameras.

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**Redflex (page 146)**

Redflex Traffic Systems is an experienced provider of photo enforcement equipment and services, with installations and operations throughout the world. Whether it's fixed or mobile technologies – or a large or small enterprise back office – Redflex has the products and expertise to offer a tailored solution that caters to your specific enforcement needs.

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# SAFEROAD®

**SafeRoad (page 63)**

SafeRoad works for a safe and improved infrastructure where safety, functionality, durability and design are of vital importance. Vision Zero is the Group's mission – zero killed and zero seriously injured in traffic. SafeRoad Group is a complete supplier of road safety and infrastructure solutions. The group has subsidiaries in 21 countries, with a total of 2,300 employees.

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# Schick electronic<sub>sa</sub>

**Schick Electronic (page 208)**

With more than 40 years' experience, Schick Electronic develops and manufactures traffic and parking electronics products and software. To ensure it offers only the most advanced technology, the company mainly works on its own products. It has marketing, development, manufacture, sale, installation and maintenance departments. Based in Switzerland, Schick is represented or directly involved in the traffic sector all over the world, and has equipped 300,000 spaces worldwide over the past decade.

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**Schneider Electric (page 5)**

Schneider Electric offers SmartMobility solutions for safe, efficient and sustainable transportation. With more than 40 years' worldwide experience, the company deploys the most innovative solutions and comprehensive services available.

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**Sensys Traffic (page 153)**

SENSYS Traffic develops, markets and delivers products for traffic safety and traffic informatics. The products are primarily used for speed and red-light enforcement.

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**Sernis (page 161)**

The Sernis i-Stud Evolution is the new generation of solar studs with the most advanced technology in the market. Special features include a 'wake up' function, automatic brightness control, definition of the working period and flash/always on programmable function after installation.

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