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Intertraffic Amsterdam
30-03-2004 → 02-04-2004
Hall 4 – Booth 437



M-GAGE™ Vehicle Detection Sensors



QS30 High-Power Sensors



A-GAGE™ MINI-ARRAY™ Measuring Light Curtains



U-GAGE™ Ultrasonic Sensors

A-GAGE, MINI-ARRAY and U-GAGE are registered trade marks of Banner Engineering Corp. with the US patent and Trade Mark Office.

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▲ Car Wash Vehicle Detection

This type of application requires sensors that correspond to the highest sealing degree possible, to avoid liquids entering the housing and affecting the electronics. Banner offers various optical, ultrasonic and magnetic vehicle detection sensors with an IP69K sealing degree. These will resist continuous exposure to liquids, even at high pressure cleaning levels.

Where forklift trucks are entering or leaving an area frequently, pull cords or transponders can be avoided by mounting multiple magnetic vehicle detection sensors below the concrete for invisible installation. These doors will only open when a forklift truck is in front of the door, and will not react to people. This avoids doors being opened by unauthorised personnel.

▼ Forklift Entry/Exit



▲ Docking Station Detection

A truck driver can be helped when backing his truck in a docking station. Ultrasonic sensors indicate the distance from the back of the truck to the docking station. Magnetic vehicle detection and optical sensors indicate that the truck is docked so that the docking door can be opened. After the truck drives away, the docking doors will be automatically closed.

Banner offers measuring light curtains for vehicle detection and measurement (e.g. detecting trucks). Overheight detector optical sensors that are suitable for outdoor mounting and direct exposure to sunlight will warn the tollbooth operator that the car or truck is too high. A magnetic vehicle detector can sense a vehicle to issue a ticket from an automatic ticket dispenser machine.

▼ Toll Booth Detection

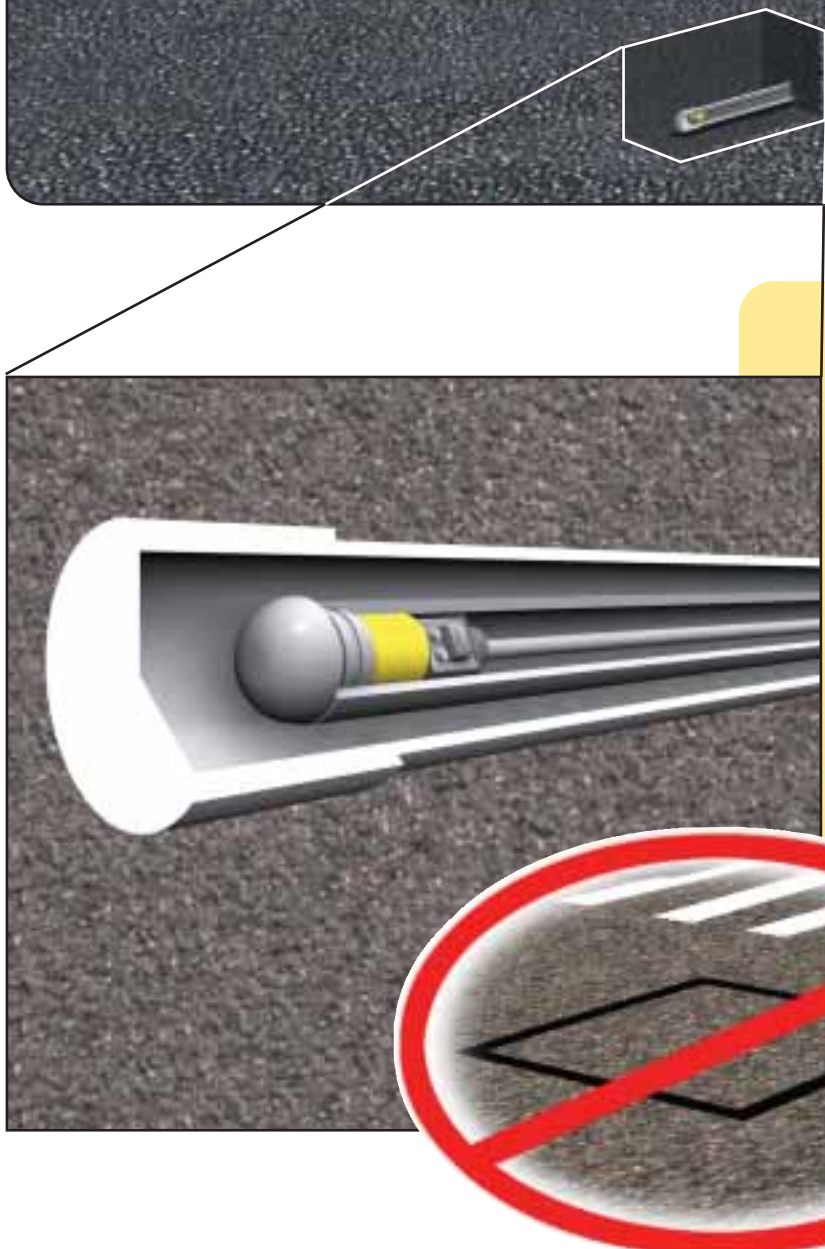
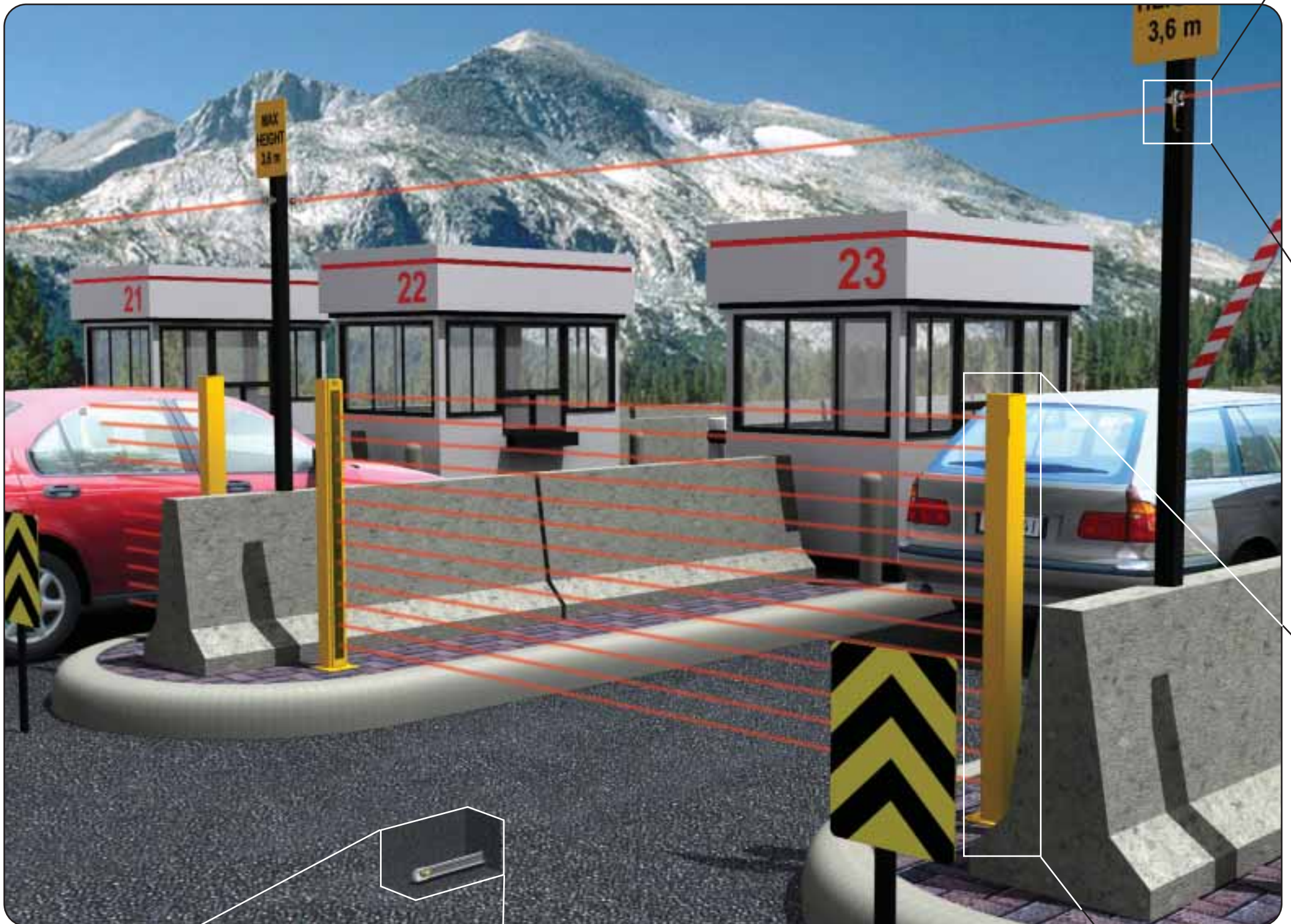


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> Tollbooth Vehicle Detection <



M-GAGE Magnetic Vehicle Sensors (patented technology)

This innovative sensor uses 3-axis magneto-resistive technology to sense large ferro-magnetic objects (such as motorcycles, cars and trucks). Its small and compact size allow easy mounting and installation, both above or below ground.

A simple "click-&-teach" routine stores the ambient background conditions into a non-volatile memory, after which the sensor will detect stationary or dynamic vehicles within its detection range. This makes the M-GAGE the ideal sensor to replace inductive loop technology at a

much lower installed cost. In addition this self contained sensor requires only power, and it has a standard PNP and NPN switching output on board.

Sensors that are mounted below ground are not required to be removed in case of rework of the road surface. A simple background re-teach is sufficient to get the sensor going again!





QS30 High Power Photoelectric sensors

Typical optical sensors used for overheight detection and warning systems need to be specially shielded from weather conditions and direct sunlight.

Banner's QS30 sensor is built for extreme temperature fluctuations and for high humidity conditions. With its IP69K sealing degree it can be submerged indefinitely, or exposed to high pressure cleaning at 120 bar. Its optical power has been specially tuned to look through mist or fog but not miss any cars or trucks blocking its beam.

The QS30 also incorporates advanced optical and digital technology. This allows the sensor to eliminate nuisance trips and lock ups that can be caused by ambient sunlight or cross talk from other optical sensors. When using multiple pairs, the sensor can be set for different frequencies to avoid any optical crosstalk.

The QS30 is truly a sensor for maintenance free and long-life reliable operation!

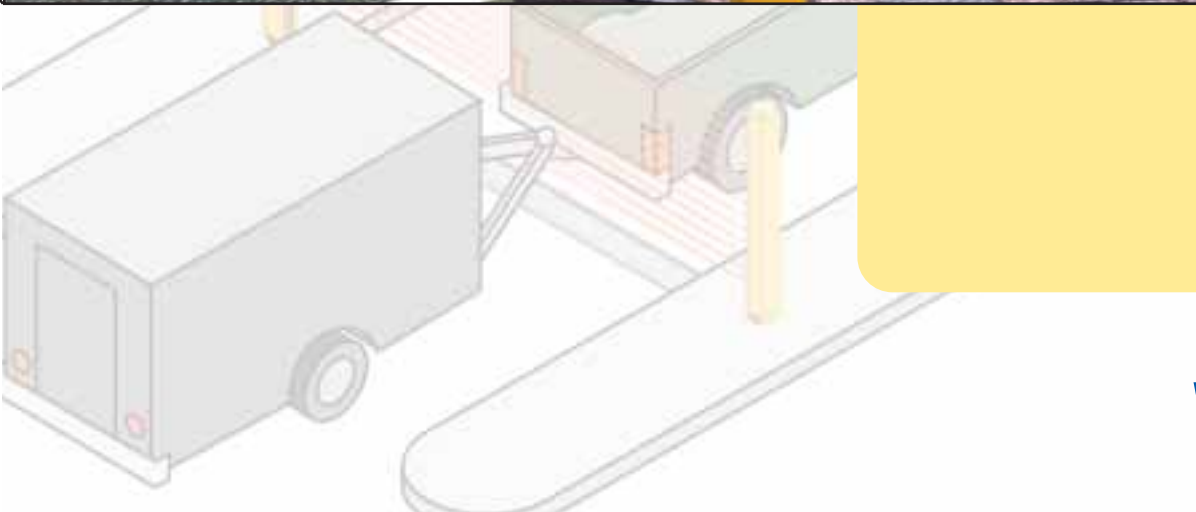


A-GAGE MINI-ARRAY Measuring Light Screen Systems

For toll booth applications, it is important to get reliable information if a car is entering the toll booth station, or if it has cleared the station. The main difficulty is that a wide variety of vehicles can come through the station: motorcycles, cars, cars with caravans, cars with trailers, light pick-ups, trucks, ... Single beam sensors are not good at distinguishing between these different types, typically they fail to see the towing hook.

The MINI-ARRAY measuring light curtains are the standard solution for these problems. Composed of an array with multiple synchronised emitter/receiver pairs, they will detect the car or truck starting with its bumper, but sense even the smallest parts like the towing hook. This ensures reliable sensing, or even processing the car/truck profile for automated fee calculation.

Special protective enclosures, with or without special heaters for the coldest conditions, are also available.



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U-GAGE Ultrasonic Sensors



Ultrasonic sensors are unaffected by rain, fog, snow, mud, extreme lighting conditions or colour of the object to be sensed. This makes these sensors an excellent choice for a wide range of applications: long range vehicle sensing (8 m), short range object sensing (2 m) liquid level

sensing for recycle water tanks, precise level sensing at short distance (0,2 m). Many of these sensors have analogue outputs (voltage or current), discrete switching outputs, or both. Some sensors even have special "pump-in/pump-out" logic so that filling applications do not require any external switching logic.

All sensors have a compact housing and are completely sealed for harsh environmental conditions. Sensors can be easily set up using a simple "click-&-teach" routine. Most ultrasonic sensors have built-in temperature compensation sensors to avoid any drift in sensing distance due to temperature differences.



Photoelectric Sensors



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Machine Safety Systems



Measurement & Inspection Sensors

→ Banner Engineering offers the industry a highly complete and integrated line of photoelectric and ultrasonic sensors, machine safety products, measurement and inspection products and vision sensors. Banner Engineering is a US based company with subsidiaries around the world for global sales and support.

→ Banner Engineering bietet ein praktisch vollständiges Sortiment an optoelektronischen und Ultraschall-Sensoren, Personenschutz-, Mess- und Prüfprodukten sowie Bildverarbeitungssensoren. Banner Engineering ist ein amerikanisches Unternehmen mit weltweiten Niederlassungen für Vertrieb und technische Unterstützung.

→ Banner Engineering propose une ligne très complète composée de détecteurs photoélectriques et à ultrasons, de produits de sécurité pour les machines, de produits de mesure et d'inspection ainsi que de détecteurs de vision. Banner Engineering est une société américaine qui a des filiales partout dans le monde pour la vente et le support technique.



Vision Sensors