

Application Study – AGD 318 Traffic Control Radar Enhanced detection realises junction efficiencies

Requirement

As highways authorities seek to prolong the life of their biggest asset, roads, the ability to realise efficiencies in traffic detection at junctions becomes ever more appealing.

Traditional loop and magnetometer-based control brings many problems. From the necessary traffic management required to close each junction, through the crews needed to dig trenches, lay cables and cut intrusive loops in the road, to the time engineers spend literally ‘on the road’ - with all the attendant health and safety risks – because many schemes are difficult to set up. Sadly, some of these systems are less than reliable and many require frequent maintenance and battery changes.

Then there’s the fact that the road surface is compromised by intrusive technologies because they create weak points easily damaged by weather and traffic.

Unsurprisingly, the idea of replacing loops and magnetometers with radar-based detection systems is extremely compelling.

MOVA

For traffic control at isolated junctions and small networks, MOVA has provided a highly effective strategy for nearly 30 years. However, MOVA is reliant on its analysis of traffic demands on approach to a junction – at which point it optimises signal timings in order to minimise delay. Therefore, ensuring ‘In’ and ‘X’ detectors are working optimally is essential to MOVA’s effectiveness.

AGD’s 318 Traffic Control Radar can be used with its 350 Traffic Control Radar in MOVA solutions, to enable multiple-lane coverage and speed detection. By using AGD technology, installers can address the problems of expensive ducting activity away from the stop line to the ‘In’ and ‘X’ detection points – a consideration that has traditionally prevented some sites benefiting from MOVA.

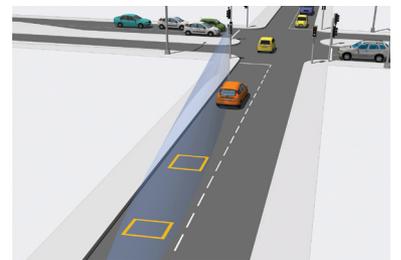
Solution

AGD’s 318 Traffic Control Radar addresses these problems, bringing all the benefits of enforcement-grade technology to a flexible, cost-effective solution that’s easy to setup, deploy and maintain.

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- Traffic Control Optimised Radar
- Approach & Recede Detection
- MOVA Compatible In & X
- Non-intrusive Loop Replacement
- Low Install & Maintain Costs
- Simple & Flexible AGD Livewire-setup
- Accurate Virtual-loop Technology
- Enforcement Pedigree
- Controller Interface



safer, greener, more efficient

The 318 can emulate up to two inductive loops to a range of 150 metres. It also allows lane-specific detection up to 40m, with a beam angle of 7°. The 318 can make loops ‘smart’, too, so detection zones can look for specific targets in terms of speed, size and direction of travel. This allows it to distinguish between buses, bikes and cars.

In a traffic control application, the radar tracks up to 12 targets within its 150m coverage, but only ‘reports’ when user-defined virtual loops are triggered. This capability is particularly effective at bus gates to give buses junction priority.

One of the standout benefits of the 318 is its Livewire Bluetooth setup capability. Engineers can mount the unit and then set it up from ground level or the comfort and safety of their vehicle. This means all the units on a junction can be set up together – a great saving in time and exposure to traffic risk.

AGD’s focus is on making potentially complex installations simple. The 318 Traffic Control Radar is a perfect example – its unique drag and drop Livewire setup allows you to create and place loops with a touch screen. Real-time feedback allows you to ‘see’ what the radar ‘sees’ while you are setting it up, helping you get it right first time. Another 318 feature is that junction configurations can be saved and either pre-loaded onto a replacement unit, should that ever be necessary, or onto multiple units – to save deployment time. Physical installation is easy too: the 318 can be mounted on existing infrastructure poles and the detection points set from ground level.

Outcome

Developed from enforcement-grade technology, the 318 Traffic Control Radar is proven, more accurate and more flexible than other solutions, providing an intelligent alternative to loop and magnetometer detection. It also takes a fraction of the deployment time experienced with traditional solutions. There’s no costly, intrusive roadwork, no cabling, and installer risk is reduced because engineers configuring 318s do not have to work from height. And because 318s are robust and require almost no maintenance, they can deliver significantly reduced whole-life cost, much more effective traffic management and optimal efficiency of MOVA installations.

Stephen Nyasha Parirenyatwa, Transportation Engineer at Atkins Global, has recently designed several MOVA schemes using AGD’s 318, and confirmed: “In using radar detection with MOVA I believe we will be able to eliminate the cost and time constraints imposed by embedded loops, while providing highly accurate, critical event data that will aid improved traffic flow and efficiency through the MOVA algorithm.”

The AGD 318 Traffic Control Radar can be deployed on its own or with other AGD radars to cover entire approaches or specific areas within them. Looking ahead, AGD aspires to completely replace expensive intrusive devices with a suite of flexible, high-reliability, lower TCO, proven radar technology that will inform the smart cities of tomorrow.

You can see the future of traffic detection now. The AGD 318 Traffic Control Radar will be demonstrated at Traffex 2017.

AGD, product solutions for Intelligent Traffic Systems

Traffic & Pedestrian Control



Highways



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