

ASIM by Xtralis Tri-Tech Detectors

Triple Technology Combination Detectors

Model TT 292

Non-Intrusive Combination Detector for Lane Selective Traffic Data

ASIM Tri-Tech detectors use a combination of doppler radar, ultrasound and passive infrared in a single unit. Data like individual vehicle speed, class, time gap, occupancy time and length are communicated via RS 485 for every vehicle – in all traffic situations and weather conditions, day and night.

How do ASIM Tri-Tech Detectors Work?

ASIM combination detectors measure the speed of each vehicle by means of the Doppler shift of the reflected microwave frequency. The ultrasonic part scans the vehicle's height profile as it passes under the detector. The PIR channels provide lane selective information and trigger the ultrasonic measurement.

In power save mode, the PIR activates the radar too.

The ASIM combination detector Model TT 292 is easily mounted on gantries or other overhead structures above the lane to be observed, or alternatively on a pole on the side of the lane. Superior performance and reliability are standard thanks to:

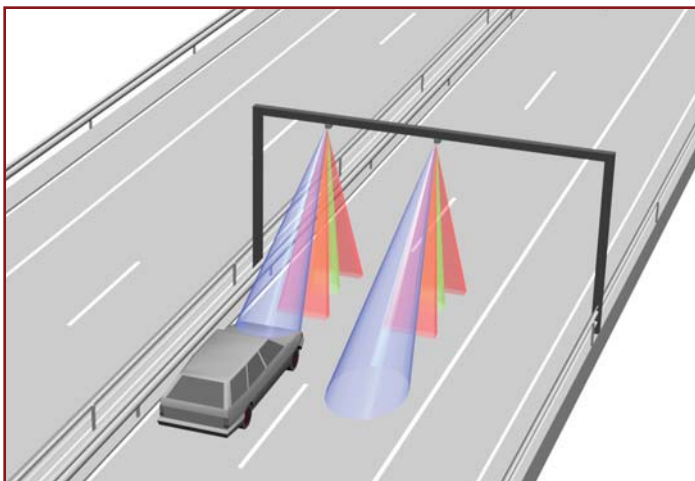
- Three independent detection technologies in a single unit
- Redundant digital signal processing (DSP) with adaptive parameters
- Full temperature compensation

Applications

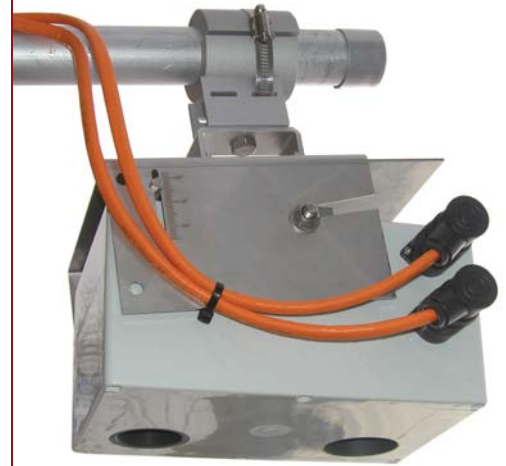
ASIM combination detectors are ideal for a variety of traffic data acquisition and traffic control applications where inductive loops have been used in the past:

- Vehicle classification
- Counting of all kinds of vehicles
- Individual vehicle speed
- True presence and queue detection
- Occupancy and headway / time gap measurement

Field of View



Picture shows a typical two lane installation (2 detectors)



Product Highlights

- Low Power Consumption
100 mA or less at 12 V DC in continuous operation, less in power save mode
- Detection of Standing Vehicles
- Detection of Wrong-Way Drivers
- Suitable for Alternating Traffic
Remote switching of measuring direction for use in situations with alternating traffic
- Triple Technology Detection
Three independent physical detection principles in a single unit
- Low Cost per Monitored Lane
Cutting edge Swiss manufacturing and precision engineering result in a highly reliable, cost effective product
- -40 to +70°C (-40 to +158°F) Operating Temperature
Optimal performance in all weather conditions
- Remote Configuration and Setup
Dedicated Windows installation program
- Mounting Height Adjustment
Self calibration within the recommended height above the lane
- Standardised Vehicle Classification
2 classes according German TLS

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by **xtralis**[®]

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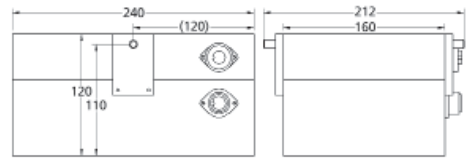
Model TT 292

Technical Specifications

Mechanical	
Dimensions	See drawing
Case Material	Polycarbonate, light grey
Mounting Points	M8, stainless steel V4A
Weight	App. 1'800 g (3.95 lbs)
Microwave	
Doppler Radar	K-Band 24.05 ... 24.25 GHz
Ultrasound	
Frequency	50 kHz
Pulse Frequency	10 ... 30 Hz
Infrared	
Sensors	Dual channel dynamic
Spectral Response	8 ... 14 µm
Electrical	
Supply Voltage	10.5 ... 30 V DC
Power Consumption	Max. 110 mA @ 12 V DC Typ. 25 mA in standby
Output (Data Transfer)	RS 485 Bus. 9600, 8, e, 1
Turn-on Time	Typ. 20 s from power on
Accuracy	
Counting	Typ. ± 3%
Speed	Typ. ± 3% (> 100 km/h) Typ. ± 3 km/h (≤ 100 km/h)
Classification	Vehicle types according TLS The specifications refer to free traffic flow, detector operated in Frontfire mode
Environmental	
Operating Temperature	-40°C to +70°C (-40 to +158°F)
Humidity	95 % RH max.
Sealing	IP 64 splash proof

Mechanical Dimensions

L & R Versions



Accessories

IF 485B & Software

Interface module including ASIM-T installation software required for commissioning of the detectors with a PC.



Mounting Accessories

Mounting hardware and cable connectors are **not** part of the delivery. Information regarding the available accessories depending on the mounting and operation mode according to the separate list.

Standard Model

TT 292 MW, US & PIR (2 Classes)

Ordering Information

	TT 292 - XX3 - YY
Detector Type	2 Classes 2
Supply Voltage	10.5 ... 30 V DC 3
Outputs	RS 485 Bus 5
Colour	Grey 3
Mounting	Longitudinal standard L Longitudinal reverse R
Protocol	Standard 0

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