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Traffic Eye Universal 5

The stand-alone detection system
with a fine eye for the traffic situation

Traffic Eye Universal 5: Reliable data for innovative traffic management



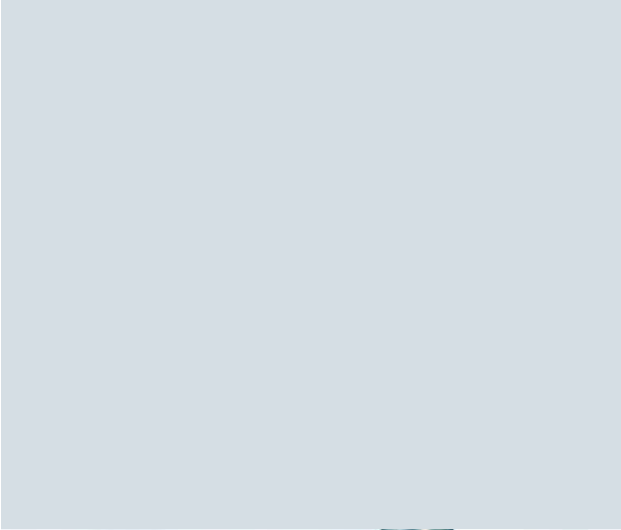
A traffic control or traffic management system can work only as efficiently and accurately as its data base allows. Traffic Eye Universal (TEU) systems from Siemens have been delivering the necessary accurate input data for many years already. As part of projects of any size, TEU systems are demonstrating their reliability day after day and at exceptionally low investment and maintenance costs – to the delight of the municipal financial managers. We are proud to present the new generation “Traffic Eye Universal 5” (TEU 5), which adds even more advantages, such as further increased detection accuracy, to the already impressive list and eases the transition to the detection technology of the future in an ideal way.

TEU 5 is a stand-alone solution, using mobile radio for data transmission and the sun as power source

TEU 5 is a stand-alone detection system that needs no cabling, neither for data exchange nor for power supply. The TEU system uses 2G/GPRS, 3G, 4G/LTE as an affordable data transmission solution and receives its power from a small solar panel respectively a back-up battery designed to bridge up to four weeks without sun. In short: TEU requires minimum installation and maintenance efforts.

TEU 5 means freedom: Location and detection functions to fit your purpose

With its low installation costs and its independence from data and power cabling, TEU provides traffic planners with a new freedom of choice: Now the installation locations can be selected based on purely traffic-related reasons, and the TEU systems can be placed wherever they serve the detection needs best. Besides, when it comes to collecting data for environment-sensitive traffic management, TEU 5 systems are useful data detectives, too, because they can provide detailed data on heavy goods vehicles traffic and classify vehicles according to 5 different types.



Traffic Eye Universal 5 provides reliable traffic data in urban and interurban settings. When suitably positioned, a single TEU 5 can monitor traffic on up to ten lanes – in both directions

With detailed information on HGV traffic, TEU 5 supports effective environment-sensitive traffic management



Existing TEU systems can be very easily upgraded to TEU 5



The graphical user interface makes TEU 5 easy to operate and allows parameterization either directly on site or remotely from the control center



Traffic Eye Universal 5: New functions, new benefits

- Enhanced data accuracy enables faster and more precise LOS calculations
- Classification of vehicles according to five vehicle types provides a more detailed data base for environment-sensitive traffic control
- Transmission of data on individual vehicles makes in-depth traffic analyses possible
- Coded data transmission enhances data security and protects against unauthorized data access within the IT network
- Improved protection against communication breakdowns ensures higher availability and minimizes service calls
- Partially automated registration of new TEU 5 in Sittraffic Concert allows simplified and fast commissioning

Traffic Eye Universal 5: User-friendly, reliable – and highly functional

Fast and cost-efficient data transmission

Using infrared overhead sensors for detection, TEU 5 systems transmit the measuring results per mobile radio to the relevant Sitraffic® Concert traffic center. For data transmission the detectors use 2G/GPRS, 3G, 4G/LTE, the required data volumes are within the limits allowed by favorably priced flat rates. Data transmission to the control center takes place cyclically at short intervals of a few minutes, which improves the quality of the traffic information derived and keeps it always up-to-date. In addition to the periodically transmitted data, TEU 5 can also send individual vehicle data to the OCM module of Sitraffic Concert as input for detailed traffic analyses.

Faster and better LOS calculations

The high accuracy of the data provided by the TEU 5 systems allows fast and reliable traffic situation calculations. Changes in the prevailing traffic conditions can be detected quickly and displayed in the system since, given the high data accuracy, only a limited number of data points are required for a reliable LOS assessment.

Detailed data on HGV traffic are the foundation for environment-sensitive traffic management

A single TEU 5 can monitor traffic on up to ten lanes in a maximum of two directions. The detectors can distinguish between passenger cars, small and large trucks so that they can provide exact data on the current volume of HGV traffic with its especially high carbon emissions. TEU 5 data allow the derivation of meaningful information, such as the current HGV traffic volumes at different points of the road network, patterns and changes during the course of the day, regular peak times, changes observed after certain traffic control measures have been taken, and many more. Such comprehensive information is an essential precondition for effective environment-sensitive traffic management.

Existing TEU systems can be easily and quickly upgraded to TEU 5

With an installed base of 3,500 systems, Traffic Eye Universal is a proven and widely used technology. We have made sure that existing systems can be upgraded with minimum effort and at low costs. Many components (such as solar panel, battery and housing) can be reused. Only the 2G/GPRS, 3G, 4G/LTE modem and the detectors proper need to be replaced.



Traffic Eye Universal: With an installed base of 3,500, TEU has proven its reliability for more than ten years



Siemens Traffic Eye Universal systems are demonstrating their benefits in a large number and variety of applications. Particularly for areas where extremely high traffic volumes need to be controlled and steered to less congestion-prone routes, traffic engineers tend to decide in favor of this detector technology. TEU stands for safe and reliable detection, high-quality traffic data, high availability and a long useful life – in short, for everything that you can hope to find in a detector system.

Berlin traffic management center: The traffic information hub for Germany's capital relies on TEU data

Berlin counts more than 300 Traffic Eye Universal systems. They provide up-to-the-minute traffic data to the Sitraffic Concert traffic management system, which uses the data to generate a traffic situation report including precise prognosis for the entire street network of the metropolis.

Ruhr area: TEU systems help integrate the traffic and transport systems in an entire region

The Ruhr area in the center of Germany is a huge conurbation of 42 cities, with 600 km of motorways, 5.5 million inhabitants, and about 6.6 million commuters per day. The transport systems for the entire region, including interurban traffic, public and private transport, have been brought under one roof with the "Ruhrpilot" project. The data that the Ruhrpilot traffic management center needs for an overview of the current traffic conditions are delivered by the more than 600 Traffic Eye Universal installed across the region.

Potsdam: Environment-sensitive management reduces particulate emissions

In Potsdam, the first environment-sensitive traffic management system can influence the environmental impact of traffic by switching dedicated gatekeeper signals so as to slow down or accelerate the different traffic flows depending on the current particulate emission levels in the inner city. The traffic data recorded by the TEU systems allow the timely initiation of suitable traffic control measures.



The Berlin traffic management center, too, relies on the valuable, accurate data provided by TEU systems



The traffic situation in the Ruhr area is monitored with the help of more than 600 detectors of the Traffic Eye Universal type



For Germany's first environment-sensitive traffic management system in Potsdam, TEU detectors provide helpful data

Technical specification – Traffic Eye Universal 5

Power supply

Supply voltage	12 V DC +20%
Serial interfaces	<ul style="list-style-type: none">•RS 232 for connection to PC•RS 485 for detectors
Max. admissible cable length for detector bus (RS 485)	30 m (no star topology; screened, twisted-pair cables)
Stand-alone operation without sunlight	About 4 weeks (depends on transmission interval)
Solar power	<ul style="list-style-type: none">•Panel: 30 W (rated value)•Battery: lead-fleece, 42 Ah
Power management	<ul style="list-style-type: none">•Temperature-controlled solution•Power-save mode on low power (without traffic data)•Total-discharge protection with power-down function

Data detection and transmission

Transmission system	2G/GPRS, 3G, 4G/LTE
Transmission interval	Periodical
Number of directions supported	2
Total number of detectors supported/lanes monitored	10
Max. number of vehicles classes	5 (classified purely acc. to length)

Mechanical data

Dimensions of solar power unit	57 × 33 × 3.5 cm
Weight of solar power unit	Ca. 5 kg incl. mounting support
Dimensions of control unit	40 × 30 × 21 cm
Weight of control unit	Ca. 21 kg incl. mounting support
Weight of individual detector	Ca. 1 kg incl. mounting support (without cantilever bracket etc.)
Mounting options for detectors	On all horizontal, vertical or sloped tubes Ø > 40 mm
Mounting options for solar power unit	On all vertical masts Ø > 100 mm
Mounting options for control unit	On all vertical masts Ø > 100 mm

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