ROAD TRAFFIC INFORMATION -
INTELLIGENT TRANSPORTATION SYSTEMS

QUALITY THROUGH INNOVATION AND DESIGN

March 2017

Energy, Water, Environment.
Global Sustainable Solutions.

13 Road Traffic Information – SafeRoad and DataCar Systems

ENEA Grupo® offers advanced Road Traffic Information Systems as our SafeRoad System specifically designed with the aim of improving safety and reduce congestion for ground transport. Road Traffic Information is a fundamental part of Intelligent Transportation Systems (ITS) that improve traffic flow, increase road safety, help to protect the environment and enhance public security.

The SafeRoad System incorporates diverse types of traffic detectors, for vehicle count and classification and vehicle velocity monitoring, these being of tremendous utility for the authorities and those responsible for road and motorway management and conservation.

DATACAR, as a part of the SafeRoad System or as an independent system, is a specific solution for vehicle count and classification, as well as for vehicle velocity monitoring. DATACAR consists of autonomous remote measuring stations based on the METEODATA datalogger plus a multilane vehicle detector, offering real-time data transmission to a Central Station, so allowing complete traffic information of the whole road network of a country or region, including main and secondary roads.

The SafeRoad System can integrate also road weather information as our RWIS system, in such a way to optimize the measuring networks, incorporating also pavement status conditions and environmental data as visibility, in a mixed or combined road traffic/weather information solution.

DataCar System has been designed to detect, track and classify all traffic (multi-lane traffic detector). The system implements the newest RADAR technology and it can be used for permanent or temporary installations.

DataCar System may include other sensors and detectors for complementing the traffic information such as:

- Meteorological Sensors (e.g. Wind Speed and Direction, Air Temperature and Relative Humidity, Precipitation).

- Noise detectors: for real time environmental noise .monitoring, establishing the correlation between traffic and noise.

- Still image cameras: for real time site visualization of traffic status.

Of course, both SafeRoad and DataCar systems can be combined according to customer needs.

All our METEODATA in-field remote data acquisition and transmission units have been designed having in mind the need of reducing power requirement to a minimum, in such a way that our road monitoring stations can operate connected to the mains of an existing lighting pole or autonomously, by means of the internal battery pack and an external solar panel; so they can be installed at any isolated secondary road without the need of mains availability at the remote site.

These secondary roads form an important part of all the national route networks, and it is precisely in this type of roads where most accidents occur, in contrast to motorways, highways or main roads. So with our Road Weather and Traffic Information solutions it becomes now possible to provide traffic information and road environmental conditions in all types of roads to improve road safety and reduce the number of accidents, on the main roads and particularly on secondary roads.

Ground transport is essential to every country's economic and social well-being and therefore the responsible authorities are required to implement the solutions that current technology offers in order to try to reduce the accident rate on the roads, increasing motorist safety, mobility and energy efficiencies.

In SafeRoad System data collected from all the meteorological sensors, pavement status sensors, vehicle detectors and still images captured by suitable cameras, etc. is stored in the Data Acquisition and Transmission Unit model METEODATA-3000C. All the information is transmitted in real-time to a central computer through diverse methods that are available (radio, optical fiber, GPRS/3G, INMARSAT Satellite Network or through the Internet), where said data is finally processed, and published on a WEBTRANS for general or restricted user access.

Data communications of ENEA Grupo® Road Traffic Information System is supported by different standard communication protocols such as NTCIP, DGT, etc..