SmartPK

SmartPK is a fixed equipment that performs vehicle speed measurement, with either an ostensive or a discrete version. The equipment records metrological and/or non-metrological violations. Vehicle speed is accurately calculated using the intrusive (loops) or non-intrusive (Doppler) sensors, and the violations can be recorded by wide- and narrow-view cameras.

Applications

Recommended for automatic monitoring and recording of violations on highways, expressways, arterial ways and local roads. Examples: Areas of heavy traffic of vehicles and/or pedestrians; before dangerous curves; road stretches with the presence of pedestrian routes; in the proximity of intersections either controlled or not controlled by traffic lights.

Features

- Vehicle identification and registration;
  - travelling over the speed limit;
  - running red light;
  - stopped over pedestrian crosswalk;
  - performing improper turns where prohibited by traffic signals;
  - performing U-turns where prohibited by traffic signals;
  - driving on the shoulder;
  - travelling the wrong way;
  - toll evasion;
  - in places and times not permitted by regulation;
  - in a lane designated exclusively for a given type of vehicle.
- Vehicle classification into categories;
- Front and rear vehicle license plate capture;
- Statistical survey of traffic on site;
- Display of the speed measured to the driver;
- Automatic license plate recognition (OCR).

- Statistical and violation records, including data such as:
  - speed;
  - direction, lane and location;
  - date and time;
  - vehicle category;
  - image of the narrow rear and/or front capture;
  - image of the wide-view capture;
  - equipment identification;
  - vehicle license plate identified;
  - specific data relative to the violation (when not metrological).

Display	
Number of digits:	• 2 digits – speed up to 99 km/h • 2 ½ digits – up to 199 km/h • 3 digits – up to 999 km/h
Luminous intensity:	• > 400 cd*
Active elements:	• > 300
Visibility:	• Over 100 m**
	** Display the digit 8;* *** In moderate fog and rain conditions*
Camera	
Color management:	• Day/night
Technology:	• IP
Resolution (pixels):	• Varied from 1 to 5 MP
Capture form	
Capture type:	• Front and/or rear
Lighting system	
Lighting:	• Infrared illuminator
Monitoring system	
Telemetry: *(The Telemetry System allows parameterizable actions to be configured for the secure shutdown based on monitored items)*	• Door open; • Equipment status; panel • temperature; • Detection of lack of electricity; • sensor operation; display • operation; camera operation; • illuminator operation; data link • operation;
Self-diagnosis:	• Performed on equipment boot and, when manually triggered, it is possible to check all systems monitored by telemetry.
Communications	
Standard data outputs:	• Ethernet and USB • TCP-IP standard modem
Communication devices: Supported Channels:	• Fiber optics • Radio loop • Satellite Link • XDSL • 3G/4G

Technical specifications

Sensors

Intrusive:
- Inductive loop (installed in the lane)

Number of samples: 1000 samples/second

Non-intrusive
- Doppler sensor

Equipment features

Supply voltage:
- AC Full Range (90 to 240 VAC)

Average power:
- 35 W to 80 W

Peak power:
- 50 W to 130 W

Energy consumption:
- 22 to 80 kWh/month

Electrical features of the Signaling Panel

Supply voltage:
- 127 or 220 VAC

Average power:
- 7 W to 28 W

Peak power:
- 14 W to 56 W

Energy consumption:
- 6 to 24 kWh/month

Note: Values per lane; variations according to vehicle flow and configurations.

Dimensions

Width:
- 0.42 m

Height (without post):
- 0,81 m

Depth:
- 0,39 m

Mass:
- 50 kg*

**Average value due to the presence of optional items*

Operating environmental conditions

Temperature:
- -10°C to +55°C

Degree of Protection:
- IP54

Regulation

INMETRO ordinances:
- 1086/2013; 283/2013; 014/2014; 033/2014; 072/2014; 164/2014; 544/2014

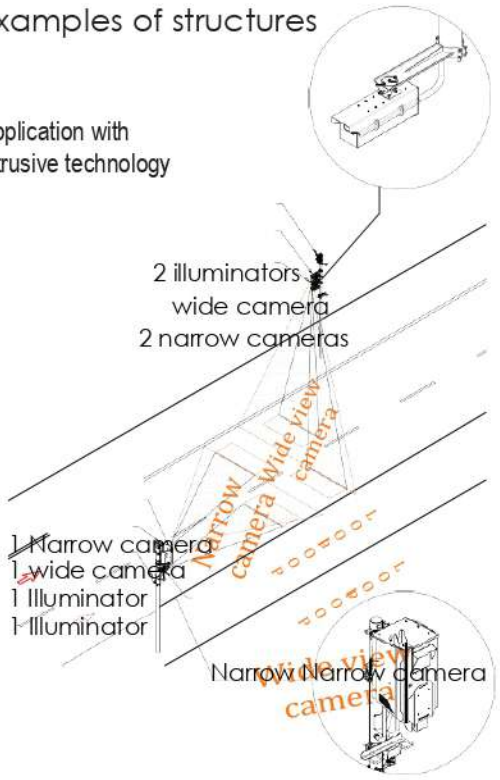
Standards met

Structural project:
- NBR8800; NBR6123; NBR14762; NBR6355; NBR8855; NBR9971; NBR5871; NBR10062; NBR8851; NBR10065

Electrical Project:
- IEC 61000-4-3; IEC 61000-4-4; IEC 60068-2-30; IEC 60068-2-1; IEC 60068-2-2; NR 10; NR 18; NBR 5410; NBR 5419

Examples of structures

Application with intrusive technology



Application with non-intrusive technology