LA SEMAFORICA

TECSEN

IR-TEC

Infrared Traffic Electronic Classifier

KEY FEATURES

IR-TEC is a device with infrared rays technology that allows the detection, traffic monitoring and classification of vehicles. Web TEC Console is the web interface which allows the configuration of the device and allows the user to access to traffic data simply by entering their login credentials.

IR-TEC can be used for fixed or temporary installations, thanks to its small size and its installation convenience. Available in two versions: IR-Sens-GR for guardrails and IR-B-Sens for poles, available in several colors that allow the camouflage of the device with its surroundings, thanks to the clean, linear design which guarantees absolute discretion. Used in streets, bicycle paths and pedestrian walkways.

BENEFITS

- Accurate, reliable and low maintenance
- Easy installation on the roadside, on the guardrails and on existing poles
- Web Server inside with TEC Console for local data store
- TEC-SMacs® for visualization and data analysis from Cloud Platform, without download from local
- Available for both temporary and permanent installations monitoring campaigns
- Highly immune to weather conditions
- Suitable for the detection of pedestrians and bicycles

PERFORMANCES

- IR-Sensor-GR: Aluminium bar 70x10x10 cm with double sensor for installation on a guard-rail or pole
- IR-Sens-B: Aluminum box 40x18x9,5 cm with double sensor for installation on poles
- Storage capacity of more than 100 million vehicles, vehicle by vehicle
- Vehicle by vehicle detection
- Each measurement includes lane, speed, headway, vehicle length and detection instant
- Classification scheme up to 8+1 vehicular classes
- Speed Range: from 1 km/h to 250 km/h
- Configured and interfaced with TEC-SMacs® to display and to analyse data from the Cloud Platform, without download from local
- Accuracy: Speed 98%, Counting 98%, Length +/- 0.5m
- Interface: Ethernet-USB
- Power: 10-28 VDC, < 2 VA
- Adjustable sensing range up to 6 meters
- It detects targets at relatively low reflectivity
- Ignore any other object placed on the background (beyond the maximum sensing distance, said point of cut-off)

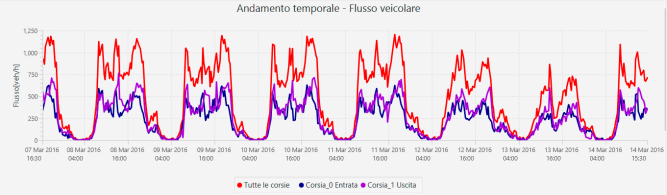
In order to offer the best possible service, La Semaforica and Tecsen reserve the right to modify at any moment and without any warning the features of the products described in this document. This document has the only purpose of illustrating the products. If you need detailed technical data, please do not hesitate to contact us.

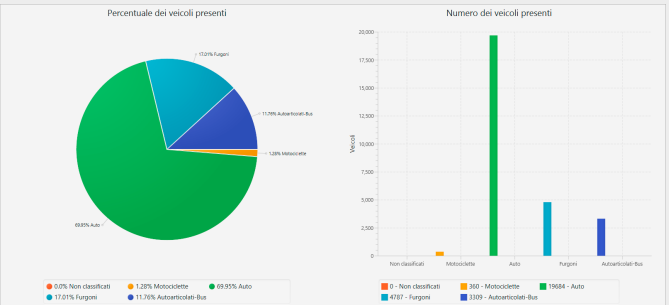
ARM UNIT TEC Traffic Electronic Classifier

Classifier unit ARM based on storage and local monitoring vehicle by vehicle with the following features:

- CPU ARCH ARM at 1GHz Cortex-A8
- Video Output: HDMI resolution 1280 x 1024 max (microHDMI)
- Temperature: -40° C + 70° C
- Power: 10-28 VDC, <2 VA
- Memory SDRAM: 512 MB 800 MHz DDR3L
- Flash EMMC 4 GB 8 bit
- SD MicroSD Slot
- Port data: 1xRS485, 1xRS232, 2xUSB
- I2C Bus for Sensor
- Real time clock: Battery backed real time clock ± 5 ppm precision
- LAN: Ethernet 10/100
- Wifi, Bluetooth, GPRS, 3G: Optional
- Input: 4 Optoisolated 200 mA@24 VDC
- Relay Output: 2 NO-NC 3A@24 VDC 3A@120 VAC
- Storage capacity of more than 100 Million vehicles, vehicle by vehicle
- Web server inside for direct communication or connection via LAN

Corsia	+	Velocità [km/h]	Lunghezza [m]	Headway [s]
0		27	3.14	16
1		57	0.75	24
1		56	8.29	0
0		54	4.64	1
1		49	3.33	11





SENSORS

- **IR-Sens-GR**: Rail 70x10x10 cm with double optical sensor
- **IR-Sens-B**: Box 40x18x9,5 cm with double optical sensor

STORAGE UNIT

- **TEC-Stationary** Data acquisition units on the ARM platform with Web-Server inside in outdoor IP65 VTR case (425x325x180 mm) designed for pole mounting including power supply and electric panel 230 VAC-12 VDC
- **TEC-Stationary-PL** Like TEC-Stationary, including charger and backup battery 12 VDC 18 Ah for overnight charging through the public lighting
- **TEC-Stationary-FTV** Like TEC-Stationary, including power Photovoltaic Kit, composed of charge controller, battery 12 VDC 18 Ah and 20 W photovoltaic panel fitted for pole mounting
- **TEC-Temporary** Data acquisition units on the ARM platform with Web-Server inside transportable container in outdoor IP65 (339x295x152 mm) designed for pole mounting including battery 12 VDC 33 Ah

COMMUNICATION UNIT

TEC-SMacs® GPRS interface for ITS platform TMacs-SMacs

TRAFFIC DATA ON WEB

TEC-SMacs® is a Cloud and modular ITS software platform for managing, controlling and monitoring traffic.

TEC-SMacs® offers an advanced web tool for remote consultation of traffic data collected from their stations in the dedicated Macs Analysis module.

Macs Analysis is the module that processes and manages the data obtained from the detection unit for the study of traffic trends. It's available real-time monitoring with trend of traffic flow [veh/h], TGM [veh/g] average daily traffic, vehicles number, average speed [km/h], 15th percentile [km/h], 85th percentile [km/h], average flow [veh/h], average density [veh/km]. All data are compared on an hourly, daily and on average last week.

It is also possible to perform historical searches on one or more lanes of vehicular depending on the classification scheme and the period chosen. It's available the download reports of studies carried out and save the data in csv and excel.

TEC-SMacs® communicates with the Web Server via GPRS modem or Ethernet port.

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