RES-1

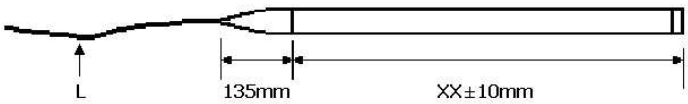
Trapezoidal resistive sensor

COMPLETELY CUSTOMIZED :

- ▹ Connecting cable length 2 to 100 meters.
- ▹ Active & inactive sections possible.
- ▹ Length customized to each site.
- ▹ Sensor can contain 1 to 2 sensitive elements.

RES-1-XX/L

XX: sensor length (in dm).
L: length of connecting cable (in m)



CHARACTERISTICS

- ▹ Speed detection of 0 and 80 km/h.
- ▹ Detection : ≥ 80 kg.
- ▹ Maximum weight: 20 tonnes/axle
- ▹ Insensitive to slab vibration.
- ▹ MTBF of more than 4 million axles.
- ▹ MTTR: 10 minutes
- ▹ Operating temperature: -20°C to +70°C
- ▹ Environment protection: IP 67

INSTALLATION

- ▹ Support measures 3mm thick for minimal protrusion.
- ▹ Support consists of folded stainless steel.
- ▹ Easy sensor removal and replacement.
- ▹ Sensor securely attached to support.
- ▹ European detector format for 2, 4 or 6 sensors.
  (Capella D2RF or D4RF board)
- ▹ Rail DIN box detector for 2 sensors:
  (CAPELLA module CR-2T)
- ▹ Support handles multiple sensors.

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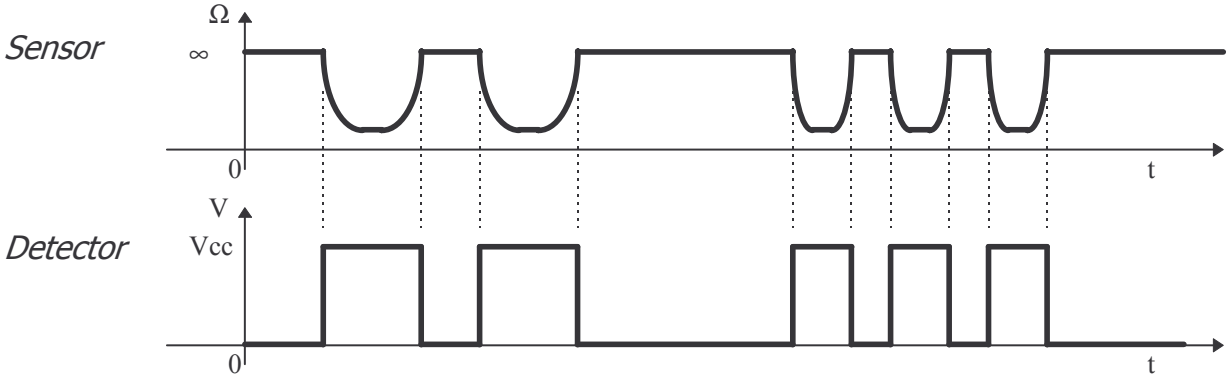
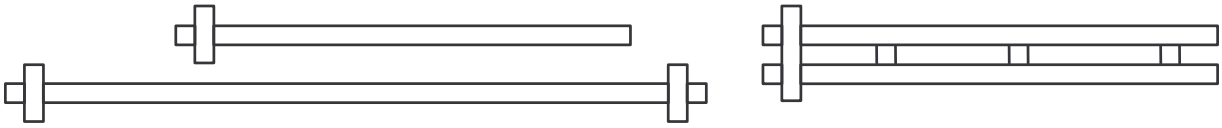
Principle : The Sensor - Support - Detector set is intended to detect the axles of vehicles with speeds of between **0 and 80 km/h** with the performance of 99,9 %. The sensor is installed in a stainless steel support, embedded in the roadway. The pressure exercised by one or several wheels of the vehicle produces a variation in its electrical resistance.
The illustrations below show the resistance variations of the sensor as well as the corresponding response of the detector during the passage of axles.:



Sensor : The cross-section is trapezoidal, and both its length and the length of the connecting cable are adapted to suit the requirements of the customer,. It is possible to have two sensitive elements in the same sensor or even sections active and others inactive. No metallic element moves or deforms inside the sensor. Its electrical resistance at rest is greater than **1 MΩ**, and when it is active this drops to below **40 KΩ**.

Support : The support is **3 mm-thick**, folded, stainless steel sheet embedded in the roadway, and a clamp guarantees retention of the sensor. Several types of supports are available ; single supports for one or two sensors, double supports, etc.



Detector : There are two types of detectors : for 2 or 4 sensors (DR2F or DR4F). Boards in 3U, 6TE European format, with rear DIN 41612 connector, and 12 VDC power supply. Detector operation is automatic, no programming is necessary. These detectors also exist in DIN rail casing (Module CAPELLA CR-2).

Examples of installations at toll gates :