

## Question: 1. Describe the principle of operation of a piezoelectric (vehicul...

See this question in the app

1. Describe the principle of operation of a piezoelectric (vehicular) traffic sensor.

2. Give two advantages and two disadvantages of piezoelectric (vehicular) traffic counter over Infrared based counters.

## Expert Answer ⓘ



Anonymous answered this  
173 answers

Was this answer helpful?



Page-1

1.)

- \* This piezoelectric traffic sensor works by comparing two pulses generated by a vehicle.
- \* By Comparing two pulses We can determine speed, length, acceleration, deceleration, direction of vehicle and number of vehicles.
- \* It is an amazing sensor which works almost perfectly.
- \* Many countries implemented this sensor as it gives accurate results as such.
- \* Unlike piezoelectric sensor IR based counters have many drawbacks.
- \* In middle of road two holes are made and they are filled with rubber (or) the sensor.

\* A produces one pulse and B produces other then they are compared.

Page-2

2.) Advantages:

- \* It is used to calculate speed, type of vehicle (by calculating distance), direction of vehicle.
- \* Accurate results in almost everything. Low cost of maintainance.
- \* Complexity of the circuit is very less.

Disadvantages:

- \* It is physical connection from road to the counter. If connection is removed by accident it will not count. In IR sensor, it is light.
- \* It is prone to physical damages.
- \* The pulses generated must be accurate with low error for the calculations.